NOTICES OF PROPOSED RULEMAKING
Initiated After January 1, 1995

Unless exempted by A.R.S. § 41-1005, each agency shall begin the rulemaking process by first filing a Notice of Proposed Rulemaking, containing the preamble and the full text of the rules, with the Secretary of State's Office. The Secretary of State shall publish the notice along with the Preamble and the full text in the next available issue of the *Arizona Administrative Register.*

Under the Administrative Procedure Act (A.R.S. § 41-1001 *et seq.*), an agency must allow at least 30 days to elapse after the publication of the Notice of Proposed Rulemaking in the *Register* before beginning any proceedings for adoption, amendment, or repeal of any rule. A.R.S. §§ 41-1013 and 41-1022.

NOTICE OF PROPOSED RULEMAKING

TITLE 9. HEALTH SERVICES

CHAPTER 13. DEPARTMENT OF HEALTH SERVICES
HEALTH PROGRAMS SERVICES: AMBULANCES/PARAMEDICS

PREAMBLE

1.

Sections Affected	Rulemaking Action
Article 2	Repeal
R9-13-201	Repeal
R9-13-203	Repeal
R9-13-204	Repeal
R9-13-205	Repeal
R9-13-206	Repeal
Article 3	Repeal
R9-13-301	Repeal
R9-13-302	Repeal
R9-13-303	Repeal
R9-13-304	Repeal
Article 4	Repeal
R9-13-401	Repeal
R9-13-402	Repeal
R9-13-403	Repeal
R9-13-404	Repeal
R9-13-405	Repeal
R9-13-406	Repeal
Article 5	Repeal
R9-13-501	Repeal
R9-13-502	Repeal
R9-13-503	Repeal
R9-13-504	Repeal
Article 6	Repeal
R9-13-601	Repeal
R9-13-602	Repeal
R9-13-603	Repeal
R9-13-604	Repeal
R9-13-605	Repeal
R9-13-606	Repeal
Article 7	Repeal
R9-13-701	Repeal
R9-13-702	Repeal
R9-13-703	Repeal
R9-13-704	Repeal
Article 8	Repeal
R9-13-801	Repeal
R9-13-802	Repeal
R9-13-803	Repeal

R9-13-804	Repeal
R9-13-805	Repeal
R9-13-806	Repeal

2. **The specific authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):**
   Authorizing statutes: A.R.S. §§ 36-136(F) and 36-2209(A)
   Implementing statutes: A.R.S. §§ 36-2202, 36-2204, and 36-2205

3. **The name and address of agency personnel with whom persons may communicate regarding the rulemaking:**
   Name: John D. Taska
   Address: Department of Health Services
   1651 East Morten, Suite 120
   Phoenix, Arizona 85020
   Telephone: (602) 255-1170
   Fax: (602) 255-1134

4. **An explanation of the rules, including the agency's reasons for initiating the rules:**
   We are repealing Articles 2 through 8 in Chapter 13 and adopting all new rules in a new Chapter 25.

5. **A showing of good reason why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:**
   Not applicable.

6. **The preliminary summary of the economic, small business, and consumer impact:**
   There will be no economic, small business, or consumer impact in the repeal of these rules. However, there will be in the adoption of the new rules in Chapter 25.

7. **The name and address of agency personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:**
   Name: John D. Taska
   Address: Department of Health Services
   1651 East Morten, Suite 120
   Phoenix, Arizona 85020
   Telephone: (602) 255-1170
   Fax: (602) 255-1134

8. **The time, place, and nature of the proceedings for the adoption, amendment, or repeal of the rule, or, if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rules:**
   Written comments will accepted through February 16, 1996, addressed to John D. Taska at the address listed above. Oral comments will be heard at the following locations and times:
   Date: February 13, 1996
   Time: 10 a.m.
   Location: University Medical Center College of Medicine
   1501 North Campbell, Eighth Floor
   Tucson, Arizona
   Nature: Oral and written proceedings

   Date: February 14, 1996
   Time: 10 a.m.
   Location: Parks and Recreation Department Community Center
   100 Park Avenue, Rooms 155/156
   Lake Havasu City, Arizona
   Nature: Oral and written proceedings

   Date: February 15, 1996
   Time: 10 a.m.
   Location: Little America
   2515 East Butler Avenue, American "A" Room
   Flagstaff, Arizona
   Nature: Oral and written proceedings

   Date: February 16, 1996
   Time: 10 a.m.
   Location: ADOT Human Resources Development Center
   1130 North 22nd Avenue, Rooms GC 1 and 2
   Phoenix, Arizona
   Nature: Oral and written proceedings

9. **Any other matters prescribed by statute that are applicable to the specific agency or to any specific rules or class of rules:**
   Not applicable.

10. Incorporations by reference and their locations in the rules:
None

11. The full text of the rules follows:

TITLE 9. HEALTH SERVICES

CHAPTER 13. DEPARTMENT OF HEALTH SERVICES HEALTH PROGRAMS SERVICES: AMBULANCES/PARAMEDICS

~~ARTICLE 2. ADVANCED LIFE SUPPORT BASE HOSPITAL CERTIFICATION~~

~~Section~~
~~R9-13-201. Definitions~~
~~R9-13-203. Supporting service agreements~~
~~R9-13-204. Responsibilities and requirements~~
~~R9-13-205. Suspension and revocation~~
~~R9-13-206. Medical control for automatic/semiautomatic defibrillation~~
~~R9-13-207. Repealed~~

~~ARTICLE 3. EMERGENCY PARAMEDIC TRAINING PROGRAM CERTIFICATION~~

~~Section~~
~~R9-13-301. Scope~~
~~R9-13-302. Certification~~
~~R9-13-303. Recertification~~
~~R9-13-304. Suspension and revocation~~

~~ARTICLE 4. EMERGENCY PARAMEDIC CERTIFICATION~~

~~Section~~
~~R9-13-401. Scope~~
~~R9-13-402. Authorized treatment activities~~
~~R9-13-403. Required documents~~
~~R9-13-404. General requirements~~
~~R9-13-405. Recertification~~
~~R9-13-406. Suspension and revocation~~

~~ARTICLE 5. INTERMEDIATE EMERGENCY MEDICAL TECHNICIAN TRAINING PROGRAM CERTIFICATION~~

~~Section~~
~~R9-13-501. Scope~~
~~R9-13-502. Certification~~
~~R9-13-503. Recertification~~
~~R9-13-504. Suspension and revocation~~

~~ARTICLE 6. INTERMEDIATE EMERGENCY MEDICAL TECHNICIAN CERTIFICATION~~

~~Section~~
~~R9-13-601. Scope~~
~~R9-13-602. Authorized treatment activities~~
~~R9-13-603. Required documents~~
~~R9-13-604. General requirements~~
~~R9-13-605. Recertification~~
~~R9-13-606. Suspension and revocation~~

~~ARTICLE 7. BASIC EMT TRAINING PROGRAM CERTIFICATION~~

~~Section~~
~~R9-13-701. Scope~~
~~R9-13-702. Certification~~
~~R9-13-703. Recertification~~
~~R9-13-704. Suspension and revocation~~

~~ARTICLE 8. BASIC EMERGENCY MEDICAL TECHNICIAN CERTIFICATION~~

~~Section~~
~~R9-13-801. Scope~~
~~R9-13-802. Authorized treatment activities~~
~~R9-13-803. Required documents~~
~~R9-13-804. General requirements~~
~~R9-13-805. Recertification~~
~~R9-13-806. Suspension and revocation~~

~~ARTICLE 2. ADVANCED LIFE SUPPORT BASE HOSPITAL CERTIFICATION~~

~~R9-13-201. Definitions~~
~~In Articles 2 through 13 of this Chapter, unless the context otherwise requires:~~

1. ~~"Administrative medical direction" means physician development of EMS policies, procedures, and programs related to education and evaluation of prehospital EMS personnel.~~
2. ~~"Advanced life support" or "ALS" means those authorized treatment activities described in Articles 4 and 6 of this Chapter for use by paramedics or IEMT's.~~
3. ~~"Advanced Life Support Base Hospital" or "ALS base hospital" or "Emergency Center" means a health care institution offering general medical and surgical services which has been certified by the Director as an ALS base hospital and which is affiliated by written agreement with licensed ambulance service, municipal rescue service, fire department, fire district, or health district for medical direction, evaluation, and control of paramedics, IEMT'S or BEMT's qualified under R9-13-802(C).~~
4. ~~"ALS ambulance" means a registered ambulance staffed by ALS personnel and equipped with ALS equipment, pursuant to Article 11 of these regulations.~~
5. ~~"ALS base hospital/IEMT" means a health care institution offering general medical and surgical services which has been certified by the Director as an ALS base hospital/IEMT and is affiliated by written agreement with a licensed ambulance service, municipal rescue service, fire department, fire district, or health services district for medical direction, evaluation, and control of IEMT's.~~
6. ~~"ALS base hospital medical director" means an emergency physician appointed by an ALS base hospital to be responsible for administrative medical direction of paramedics, IEMT's, or BEMT's assigned to that ALS base hospital.~~
7. ~~"ALS system hospital" means a health care institution offering general medical and surgical services, without 24-hour/in-house physician staffing in the emergency department which is affiliated by written agreement with an ALS base hospital or ALS base hospital/IEMT for administrative medical direction and evaluation of IEMT's or BEMT's practicing within their service area.~~
8. ~~"Air ambulance attendant" means a person licensed or certified by the State of Arizona as a registered nurse, physician's assistant or paramedic, who meets the qualifications described in R9-13-901 and who is responsible for the care of patients on an aircraft.~~
9. ~~"Air ambulance mechanic" means a licensed airframe and power plant mechanic with two years experience responsible for repair and maintenance of rotor wing aircraft.~~

10. ~~"Air ambulance medical director" means a physician licensed by the State of Arizona responsible for an air ambulance service.~~
11. ~~"Ambulance pilot" means an individual who is responsible for the operation of an air ambulance and who is licensed by the appropriate federal agency.~~
12. ~~"Ambulance registration certificate" means a certificate issued to a person by the Director for the operation of a surface, water or air ambulance.~~
13. ~~"Ambulance service license" means authorization, in written form issued by the Director to a person to furnish, operate, conduct, maintain, advertise or otherwise engage in providing pre-hospital and inter-hospital emergency medical transportation of patients as a part of a regular course of doing business, either paid or voluntary.~~
14. ~~"Automatic defibrillator" means a device which automatically evaluates a patient's cardiac rhythm and, if the heart is in ventricular fibrillation, automatically charges and discharges an electrical current through the patient's heart, without human intervention.~~
15. ~~"Automatic/semiautomatic defibrillation" means the act of discharging an electrical current into the heart of a patient experiencing ventricular fibrillation, using an automatic or semiautomatic defibrillator.~~
16. ~~"Basic life support" or "BLS" means those authorized treatment activities described in Article 8 of this Chapter for use by BEMT's.~~
17. ~~"BEMT" means basic emergency medical technician.~~
18. ~~"BLS ambulance" means a registered ambulance staffed by BLS personnel and equipped with BLS equipment pursuant to Article 11 of these regulations.~~
19. ~~"Catchment area" means the response or service area of the providers who elect to employ IEMT's or BEMT's authorized to perform automatic/semiautomatic defibrillation.~~
20. ~~Certificate of training and proficiency" means a document issued by the ALS base hospital medical director to an individual attesting to the successful completion of a defibrillation training course.~~
21. ~~"Communications protocols" mean written guidelines which define:~~
    a. ~~Backup procedures for communications equipment failures,~~
    b. ~~Choice of facility to exercise on-line medical supervision for a given emergency, and~~
    c. ~~The circumstances and patient conditions which require on-line medical supervision.~~
22. ~~"Department" means the Department of Health Services.~~
23. ~~"Direct communication" means information and medical direction conveyed by person-to-person, two-way radio, or telephone conversation.~~
24. ~~"Director" means the Director of the Department.~~
25. ~~"Director for Emergency Medical Services" means the person appointed by the Director pursuant to A.R.S. § 36-2202(A)(1).~~
26. ~~"Emergency center" is the equivalent of "ALS base hospital" and means a health care institution offering general medical and surgical services which has been certified by the Director as an emergency center and is affiliated by written agreement with a licensed ambulance service, municipal rescue service, fire department, fire district, or health services district for medical direction, evaluation, and control of paramedics, IEMT's and BEMT's qualified under R9-13-802(C).~~
27. ~~"Emergency department nurse" means a registered nurse currently certified in advanced cardiac life support by the American Heart Association or other agency with substantially similar standards.~~
28. ~~"Emergency medical patient" means a person who is suffering from a condition which requires immediate medical care or hospitalization, or both, in order to preserve the person's health, life or limb.~~
29. ~~"Emergency Medical Services" or "EMS" means those services following an accident or an emergency medical situation requiring:~~
    a. ~~On-site emergency medical care.~~
    b. ~~The transportation of the sick or injured by a registered surface, water or air ambulance.~~
    c. ~~The use of emergency communications media.~~
    d. ~~The use of emergency receiving facilities.~~
    e. ~~The administering of initial care and preliminary treatment procedures by certified emergency medical technicians.~~
30. ~~"EMS provider" means a rescue unit, fire department or licensed ambulance service which renders on-scene emergency medical services.~~
31. ~~"Emergency paramedic training program" means a program certified by the Department pursuant to Article 3 of this Chapter for the instruction and training of paramedics.~~
32. ~~"Emergency physician" means a physician licensed by the State of Arizona currently certified in advanced cardiac life support by the American Heart Association or other agency with substantially similar standards.~~
33. ~~"Emergency physician's assistant" means a physician's assistant currently certified in advanced cardiac life support by the American Heart Association or other agency with substantially similar standards.~~
34. ~~"Emergency room", "emergency department" or "emergency receiving facility" means a licensed health care institution offering emergency medical services which is staffed twenty-four hours a day and has a physician on call.~~
35. ~~"Emergency vehicle unit" means a vehicle which is equipped for advanced live support.~~
36. ~~"EMSCOM" means Emergency Medical Services Communications.~~
37. ~~"First care form" means a record of patient care activities, to be completed by ambulance attendant personnel, to include pre-hospital events of field care, as well as transportation documentation.~~
38. ~~"IEMT cardiac" means an individual who has successfully completed an IEMT training program featuring cardiac resuscitation, that has been recommended by the State EMS Council and that has been certified by the Director, and who is authorized to perform the skills which are detailed in R9-13-602(A) and (B) and defibrillation.~~
39. ~~"IEMT training program" means a program certified by the Department pursuant to Article 5 of this Chapter for the instruction and training of intermediate emergency medical technicians.~~
40. ~~"Indirect communication" means information and medical supervision conveyed by an intermediary.~~
41. ~~"Intermediate emergency medical technician" or "IEMT" means a person who has been trained in an intermediate emergency medical technician training program certified by the Director, pursuant to Article 5 of this Chapter or in an equivalent training program certified by another state and who is certified to render the services pursuant to A.R.S. § 36-2204 and Article 6 of this Chapter.~~
42. ~~"Local EMS coordinating system" means an agency responsible for the management of a regional EMS system in a given area, pursuant to A.R.S. § 36-2210.~~

~~43. "Medical control authority" means an emergency physician who is designated to render on-line medical supervision of paramedics, IEMT's and BEMT's.~~

~~44. "Office of Emergency Medical Services" or "OEMS" means the Office which functions in the lead role for the Department in identifying the need for enforceable standards, and in establishing, maintaining and upgrading the standards, which promote accessibility, affordability, and quality of prehospital emergency medical care.~~

~~45. "Medical Director for Emergency Medical Services" means the person appointed by the Director pursuant to A.R.S. § 36-2202(A)(1).~~

~~46. "Medical flight crew" means paramedics, registered nurses, physician assistants, who are ALS trained, pursuant to Article 10 of this Chapter.~~

~~47. "On-line medical supervision" means physician supervision of emergency paramedics or IEMT's via direct or indirect communications.~~

~~48. "Person" means any individual, firm, partnership, corporation or group of individuals acting together for a common purpose including the state or any agency, municipality, city, town, county or political subdivision of the state.~~

~~49. "Responsible party" means any individual within the emergency medical services system requesting EMS.~~

~~50. "Political subdivision" means any county, municipality, fire district, or other special districts of this state.~~

~~51. "Semiautomatic defibrillator" means a device which requires human intervention to discharge an electrical current through the patient's heart after the machine has assessed that the heart is in ventricular fibrillation.~~

~~52. "Standing orders" mean written orders signed by the ALS base hospital medical director which authorize emergency paramedics, IEMT's or BEMT's to render certain treatment modalities prior to initiation of direct communication.~~

~~53. "Training program medical director" means a physician experienced in pre-hospital care who is responsible for medical direction, evaluation, and control of such training program.~~

~~54. "Treatment protocols" means statements which define the circumstances under which authorized treatments may be used within an emergency medical services system.~~

~~55. "Triage protocols" means guidelines for the selection of a receiving facility to which emergency patients are transported. Triage protocols shall include provision for:~~

~~a. The patient's choice,~~

~~b. The nature and severity of the illness or injury,~~

~~c. The availability of special treatment facilities, and~~

~~d. The expected transport time.~~

~~R9-13-203. Supporting service agreements~~

~~A. A health care institution applying for certification as an emergency center shall provide for paramedic staffing through one of the following procedures:~~

~~1. The health care institution shall employ and pay wages or salaries of emergency paramedics through its regular payroll procedures.~~

~~2. The health care institution shall provide, through a written agreement with an agency authorized to provide paramedic services pursuant to A.R.S. § 36-2201, for both on-line medical supervision and administrative medical direction of emergency paramedics employed by such agency.~~

~~B. A health care institution applying for certification as an emergency center shall submit to the Department written documentation to provide:~~

~~1. An emergency vehicle unit to be available at all times, staffed by emergency paramedics, for the purpose of delivering emergency medical care to the sick and injured at the scene of an emergency. Such vehicle need not be physically based at the emergency center.~~

~~2. That emergency vehicle units assigned to the applicant emergency center shall not be assigned concurrently to any other facility for administrative medical direction of the emergency paramedics staffing the unit.~~

~~3. That on-line medical supervision shall be exercised according to specific procedures consistent with these regulations.~~

~~4. A policy that, when ALS paramedic skills have been instituted, a paramedic shall remain with the patient until transfer of care to the staff of an emergency receiving facility, emergency center, or another comparably staffed ALS equipped emergency vehicle unit.~~

~~5. Prompt replenishment of and compensation for medical and pharmacy supplies expended by emergency paramedics during treatment of a patient who is transported to any facility.~~

~~6. At least 24 hours per year experience on emergency vehicle units for all individuals who function as the emergency center's medical control authorities or intermediaries in order to gain pre-hospital experience, to observe pre-hospital conditions and procedures, and to evaluate performance of paramedics.~~

~~7. A system for on-going evaluation, monitoring, and continuing education of paramedics by the emergency center and its medical control authorities.~~

~~R9-13-204. Responsibilities and requirements~~

~~A. Necessary approvals and reviews of applications — an applicant for certification as an emergency center shall:~~

~~1. Submit a written endorsement of the hospital's application by the hospital's governing board or board of trustees which reflects the consideration of the medical staff, including the emergency department medical director.~~

~~2. In regions where a local emergency medical services coordinating system has been designated, submit documented review by that system commenting on the appropriateness of the application in regards to that system's plan for medical control of advanced life support.~~

~~B. Staffing requirements — emergency centers shall:~~

~~1. Have physically present at all times in the emergency department an emergency physician who functions as the medical control authority.~~

~~a. Such physician shall be knowledgeable of the capabilities and limitations of paramedics as well as established standing orders, treatment, triage, and communication protocols.~~

~~b. The emergency physician may designate an emergency department nurse or emergency physician's assistant who may function as an intermediary for on-line medical supervision under the direction of the emergency physician.~~

~~2. Identify as ALS base hospital medical director an emergency physician who is responsible for administrative medical direction of the emergency center.~~

~~3. Appoint an emergency physician, emergency department nurse, or emergency physician's assistant to act as coordinator for all ALS pre-hospital activities and responsibilities of the emergency center.~~

~~C. Operating procedures — an emergency center shall:~~

~~1. Procure operational ratio and biotelemetry equipment, compatible with the Department of Public Safety state-~~

~~wide EMS communications system and any local EMS communications system approved by the Department of Public Safety. Such equipment shall be located in the emergency department for the purpose of providing direct communication with emergency paramedics.~~

~~2. Provide a dedicated telephone line for pre-hospital emergency care personnel to contact the emergency center.~~

~~3. When a patient is to be transported to another receiving facility, immediately communicate all pertinent patient management information to the responsible physician or nurse at the receiving facility. If the receiving facility is also a certified emergency center, care of the patient and direct communication with paramedics rendering that care may be transferred to the receiving medical control authority at the discretion of the sending medical control authority.~~

~~4. Utilize and adhere to medical control plans adopted by the local EMS coordinating system. In regions where no medical control plans have been adopted, they will be provided by the Department at the recommendation of the Emergency Medical Services Advisory Council. The medical control plans may include standing orders and shall include the following:~~

~~a. Treatment protocols.~~

~~b. Triage protocols.~~

~~c. Communications protocols.~~

~~D. Quality control and education commitment — an emergency center shall:~~

~~1. Provide for supervised clinical training for paramedic continuing education.~~

~~2. Assist with or conduct continuing education programs as required for emergency paramedic recertification.~~

~~3. Provide monthly a minimum of two hours of formal pre-hospital care review and pre-hospital care continuing education for emergency physicians, nurses, and paramedics.~~

~~4. Appoint a pre-hospital care committee representative of the ALS base hospital medical director, the ALS base hospital coordinator, an emergency physician, an emergency department registered nurse, an administrative representative, a paramedic, and a paramedic employer representative. This committee shall:~~

~~a. Ensure that the medical, administrative, emergency physician, and nursing staffs are oriented to the program.~~

~~b. Establish and implement a system for critiquing and evaluating the results of paramedic responses and auditing the quality of medical care provided.~~

~~c. Establish and implement a system for identifying continuing educational needs of paramedics.~~

~~d. Assure case reviews of every paramedic encounter carried out under on-line medical supervision.~~

~~e. Establish and implement a written procedure which will identify methods for resolving problems which may arise concerning the performance, competence, or medical inter-relationships of emergency paramedics, emergency physician's assistants, emergency department nurses, and emergency physicians.~~

~~E. Reporting requirements — an emergency center shall:~~

~~1. Submit monthly reports and requested information to the Department on forms approved by the Department.~~

~~2. Cooperate with and assist the Department in collecting statistics and evaluating performance and costs relating to utilization of paramedics.~~

~~F. Term of certification and recertification~~

~~1. Application for certification and recertification as an emergency center shall be made to the Department on forms specified by the Department.~~

~~2. Certification as an emergency center shall be for a period of two years provided that the conditions of A.R.S. § 36-2201 et seq. and this Article are met throughout the certification period.~~

~~3. Application for recertification shall be submitted at least ninety days prior to the expiration date of the current certificate.~~

~~**R9-13-205. Suspension and revocation**~~

~~A. After notice and opportunity to be heard is given according to the procedures described in A.R.S. Title 41, Chapter 6, Article 1 and in Chapter 1, Article 1 of this Title, certification may be suspended or revoked upon the following grounds:~~

~~1. That the emergency center has in any way provided false information to the Department for the purpose of evaluation or certification.~~

~~2. That the emergency center has failed to conform with the applicable requirements of A.R.S. Title 36, Chapter 21.1, Article 1 or the regulations in this Article.~~

~~B. If, in the opinion of the Director, there is sufficient information indicating that the emergency center has engaged in the activities described in subsection (A), the Director may request an informal interview with the medical director of the emergency center concerned. If he refuses such invitation, or if the interview is attended and if the results of such interview indicate suspension or revocation of certification might be in order, then a complaint may be issued and a formal hearing may be held in compliance with A.R.S. Title 41, Chapter 6, Article 1 and Chapter 1, Article 1 of this Title~~

~~**R9-13-206. Medical control for automatic/semiautomatic defibrillation**~~

~~A. If an ALS base hospital elects to provide medical control for IEMT's and BEMT's to perform automatic/semiautomatic defibrillation, it shall enter into a written agreement with the EMS provider employing such personnel for administrative medical direction and training.~~

~~B. The ALS base hospital medical director shall be responsible for:~~

~~1. Implementing an automatic/semiautomatic defibrillator training course approved by the Department and submitting a roster of IEMT's and BEMT's who complete the course. The curriculum shall include:~~

~~a. Review of basic life support;~~

~~b. Assessment of cardiac patient;~~

~~c. Instructions for the attachment of device to patient;~~

~~d. Principles of automatic/semiautomatic defibrillation;~~

~~e. Procedures for automatic/semiautomatic defibrillation;~~

~~f. Assessment of post-automatic/semiautomatic defibrillation status;~~

~~g. Appropriate course of action upon failure of device;~~

~~h. Overview of medical control requirements;~~

~~i. Overview of statutes, rules and administrative codes and protocols; and~~

~~j. Maintenance of device.~~

~~2. Establishing a written plan for withdrawing the medical control of an IEMT or BEMT to defibrillate, pending retraining and subsequent re-evaluation, including notification of the OEMS of the withdrawal of such sponsorship.~~

~~3. Monitoring the performance of an automatic/semiautomatic defibrillator program in a catchment area to ensure the continued competence of the IEMT or BEMT trained to defibrillate.~~

~~4. Issuing the standing orders which clearly delineate the emergency care procedures performed by the IEMT or BEMT and the circumstances under which these activities may occur. Such orders shall:~~

a. Allow the IEMT or BEMT to initiate automatic/semiautomatic defibrillation treatment prior to any contact with medical control personnel;
b. Not require telemetric transmission of electrocardiographic tracings to medical control personnel prior to automatic/semiautomatic defibrillator treatment; and
c. Stress the importance of initial cardiac assessment and shock delivery for patients in ventricular fibrillation. Cardiac assessment and shock treatment take precedence over other basic life support interventions with the exception of patient and technician safety.

5. Ensuring the documentation of each event involving EMT automatic/semiautomatic defibrillation for quality control review by:
a. Requiring a First Care Form and either voice and electrocardiogram data recordings or an electrocardiogram recording of each event;
b. Reviewing the voice and electrocardiogram data recordings or electrocardiogram data record with the First Care Form from each automatic/semiautomatic defibrillation event with the EMT; and
c. Submitting data on the event, on a form approved by the Department, to the OEMS not later than 20 working days after the event. This form shall not state the patient's name, address or other information that may reveal the identity of the patient; however, it shall include the following:
i. Times of EMS dispatch, response and arrival at the scene;
ii. Times of patient treatment, departure, arrival and treatments en route;
iii. Patient's medical management information;
iv. Defibrillation data;
v. Documentation on ALS intervention; and
vi. Hospital data.

ARTICLE 3. EMERGENCY PARAMEDIC TRAINING PROGRAM CERTIFICATION

R9-13-301. Scope
The regulations in this Article provide minimum standards for training of emergency paramedics.

R9-13-302. Certification
A. Minimum standard curriculum
1. All certified emergency paramedic training programs shall conform to the minimum standard emergency paramedic training program curriculum as maintained and on file with the Department of Health Services. The Department will promptly notify all emergency paramedic training programs of any changes to the curriculum.
2. All training in addition to that described in the minimum standard curriculum shall be reviewed and approved by the Department prior to instruction.
3. Training conducted by a certified emergency paramedic training program shall be consistent with R9-13-402 and shall include medical control plans as adopted by the local EMS coordinating system or as provided by the Department.

B. Emergency paramedic training program instructional and coordinative staff.
1. Medical Director — an emergency paramedic training program shall have a Medical Director who shall be an emergency physician and shall be certified as an advanced cardiac life support instructor by the American Heart Association or other agency approved by the Department. The Medical Director shall approve all lesson plans to assure that they are consistent with the minimum standard curriculum and current medical standards.
2. Program coordinator — an emergency paramedic training program shall have a program coordinator who shall be responsible for scheduling training programs and various lecturers, equipment, and facilities needed for each class. The program coordinator shall also be responsible for counseling each trainee with regard to special instructional needs. The program coordinator shall have the following qualifications:
a. Current status as an emergency physician, emergency department nurse, or emergency physician's assistant, or current certification as an emergency paramedic.
b. At least two years of pre-hospital emergency medical experience at the current licensure or certification level which shall include on-vehicle experience.
c. Current certification as an advanced cardiac life support instructor by the American Heart Association or other agency approved by the Department.
d. At least 25 hours of classroom training experience at the emergency paramedic level or above, accumulated within two years prior to the emergency paramedic training program application date and verified by the Medical Director for the training program.
3. Lecturer — an emergency paramedic training program may utilize lecturers whose areas of expertise relate specifically to the lesson or lessons they will instruct. All lecturer lesson plans shall be approved by the program's Medical Director prior to instruction.

C. General requirements
1. Supporting service agreements.
a. An emergency paramedic training program shall enter into written agreements with all health care institutions where trainees are scheduled for clinical experience.
b. When classroom facilities are not available to the emergency paramedic training program, the program shall enter into a written agreement with an agency, organization, or individual for adequate classroom facilities.
c. When emergency vehicle units are not owned or operated by the training program, the training program shall enter into a written agreement with a licensed ambulance service, municipal rescue service, fire department, fire district, or health services district to provide for sufficient emergency vehicle units to be used for on-vehicle training and experience.
2. A copy of the application shall be submitted by the applicant to the local EMS coordinating system for review and comment at the time of application.
3. Training program information — the training program shall provide all trainee applicants with the following information prior to acceptance and collection of fees:
a. Copies of Articles 2 and 4 of this Chapter.
b. A listing of equipment and supplies which the student must purchase during the training program.
4. Records and documents.
a. Applicant shall submit the following documents at least two weeks prior to the proposed initiation of training:
i. A completed application form provided by the Department.
ii. A projected course schedule indicating the date, hours, location, instructor, and topic for each

~~class and the dates, hours, location, and clinical supervisor for each student's clinical and on-vehicle experience.~~

~~iii. A copy of the written entrance examination, a narrative description of the panel interview format, and a list of the names of panel members.~~

~~iv. Complete resumes of the program coordinator and Medical Director.~~

~~b. Subdivisions (ii) and (iii) above shall be submitted at least two weeks prior to the initiation of subsequent classes offered during the certification period.~~

~~c. The following records and documents shall be available for inspection by the Department at any time during the term of certification:~~

~~i. Student attendance and performance records including written and practical exam grades.~~

~~ii. Lesson plans for each class reported in subparagraph (a), subdivision (ii) up to those classes given on the date of inspection.~~

~~iii. A list of all lecturers with brief statements of the qualifications of each.~~

~~iv. Contracts for program funding.~~

~~5. A course completion report shall be submitted to the Department within 30 days after completion of each course on forms provided by the Department.~~

~~6. Class size — each paramedic training program class shall have no more than 20 students.~~

~~7. Trainee prerequisites.~~

~~a. A trainee shall be certified as a Basic EMT or Intermediate EMT by the Department.~~

~~b. The trainee shall have at least one year of Basic EMT field experience or equivalent as determined by the criteria established by the training program.~~

~~c. The trainee shall undergo a written examination, approved by the Department, and a panel interview presented by the training program which will evaluate the training program applicant's motivation, medical technical expertise, ability to perform mathematic calculations, and ability to read, write, and speak the English language prior to acceptance into the training program.~~

~~8. Trainee supervision.~~

~~a. The training program shall assure that a physician, physician's assistant, or nurse is available to supervise paramedic trainees during clinical training in a health care institution.~~

~~b. The training program shall assure that an emergency physician, emergency physician's assistant, emergency department nurse, or a certified paramedic with at least two years of experience is available to supervise paramedic trainees during on-vehicle training.~~

~~D. Term of certification — paramedic training program certification shall be for a period of two years.~~

~~**R9-13-303. Recertification**~~

~~A. Application for recertification of an emergency paramedic training program shall be accompanied by a proposed training schedule and submitted at least 90 days prior to the expiration of the current certificate on forms specified by the Department.~~

~~B. Applicants for emergency paramedic training program recertification must have conducted at least one course during the certification period.~~

~~**R9-13-304. Suspension and revocation**~~

~~A. After notice and opportunity to be heard is given according to the procedures described in A.R.S. Title 41, Chapter 6, Article 1 and in Chapter 1, Article 1 of this Title certification may be suspended or revoked upon the following grounds:~~

~~1. That the program has in any way falsified any document provided to the Department for the purpose of evaluation or certification.~~

~~2. That the program has failed to conform with the applicable requirements of A.R.S. Title 36, Chapter 21.1, Article 1 or the regulations in this Article.~~

~~B. If, in the opinion of the Director, there is sufficient information indicating that the program has engaged in the activities described in subsection (A), the Director may request an informal interview with the medical director of the program concerned. If he refuses such invitation, or if the interview is attended and if the results of such interview indicate suspension or revocation of certification might be in order, then a complaint may be issued and a formal hearing may be held in compliance with A.R.S. Title 41, Chapter 6, Article 1 and Chapter 1, Article 1 of this Title.~~

~~**ARTICLE 4. EMERGENCY PARAMEDIC CERTIFICATION**~~

~~**R9-13-401. Scope**~~

~~The regulations in this Article provide for the certification of emergency paramedics. Persons certified by the Director as emergency paramedics are authorized to provide emergency medical care to the sick and injured as provided in A.R.S. § 36-2201 et seq. and this Article.~~

~~**R9-13-402. Authorized treatment activities**~~

~~A. Persons certified as emergency paramedics shall be competent in all aspects of basic and intermediate emergency medical technology as described in Articles 6 and 8 of this Chapter. In addition, the emergency paramedic shall be competent in advanced life support techniques, advanced physical assessment techniques, parenteral drug therapy, and certain other therapeutic procedures outlined in this Article.~~

~~B. For the purpose of carrying out the above competencies, the emergency paramedic may, where direct or indirect communication with the medical control authority is maintained, upon order of the medical control authority, do any of the following:~~

~~1. Airway management via endotracheal intubation, insertion of an esophageal obturator airway, and cricothyrotomy.~~

~~2. Gastric suction.~~

~~3. Initiate and maintain peripheral intravenous fluid therapy.~~

~~4. Administer medications as determined by the Department.~~

~~5. Phlebotomy.~~

~~6. Needle thoracostomy.~~

~~7. Defibrillation.~~

~~8. Synchronized cardioversion.~~

~~9. Intracardiac injections.~~

~~C. Authorized treatment activities listed in subsections (A) and (B) may be used only as permitted by medical control plans adopted by the local EMS coordinating system or as provided by the Department.~~

~~D. Additionally, the following procedures may be authorized by the Department only if the local medical control treatment protocols determine their use and documents are provided by the Department showing that personnel are adequately trained to perform them. These procedures shall not be part of the minimum standard curriculum and shall not be authorized by standing orders.~~

~~1. Blood administration.~~

~~2. Insertion of a McSwain Dart™ or equivalent.~~

~~3. Pericardiocentesis.~~

~~4. Transthoracic cardiac pacing.~~

~~5. Intravenous therapy via central routes.~~

~~**R9-13-403. Required documents**~~

~~An applicant for certification as an emergency paramedic shall submit the following items to the Department:~~

~~1. Evidence of:~~

~~a. Successful completion of an emergency paramedic training program which has been certified by the Director; or~~

~~b. Successful completion of an emergency paramedic training program, equivalent to the minimum standard for training programs in Article 3 of this Chapter, which has been certified by another state; or~~

~~c. Successful completion by a certified IEMT of a training program approved by the Department which includes those modules of the paramedic training curriculum not covered in the IEMT training program.~~

~~2. Documentation on forms provided by the Department attesting to the applicant's health status completed by a licensed physician within three months prior to the application date.~~

~~3. Current certification in advanced cardiac life support by the American Heart Association or equivalent program approved by the Department.~~

~~**R9-13-404. General requirements**~~

~~A. An applicant for certification as an emergency paramedic shall:~~

~~1. Be at least 18 years of age.~~

~~2. Not be addicted to the use of alcohol or drugs.~~

~~3. Be able to speak, read, and write the English language.~~

~~4. Submit an application on forms specified by the Department.~~

~~B. Applicants must attain a passing grade on the following examinations administered or approved by the Department.~~

~~1. A written examination.~~

~~2. A practical examination administered or approved by the Department which shall include the following testing stations:~~

~~a. Trauma management.~~

~~b. Cardiology with drug therapy.~~

~~c. Cardiac arrest skills.~~

~~d. Cardiopulmonary resuscitation.~~

~~e. Fracture immobilization.~~

~~3. A standard oral examination administered or approved by the Department.~~

~~C. Examinations~~

~~1. Applicants shall be given three opportunities to attain passing grades as indicated below on all examinations within one year of the application date.~~

~~a. Written examination—75%.~~

~~b. Practical examination—acceptable demonstration of skills at all stations.~~

~~c. Oral examination—70%.~~

~~2. An applicant who does not pass all three of the above examinations need only repeat the failed examination(s) on subsequent attempts.~~

~~3. An applicant who fails any examination on all three attempts must repeat a certified emergency paramedic training program prior to reapplication.~~

~~D. Emergency paramedic certification shall be valid for the period of two years provided that the conditions of A.R.S. § 36-2201 et seq. and this Article are met throughout the certification period.~~

~~**R9-13-405. Recertification**~~

~~A. An applicant for emergency paramedic recertification shall submit to the Department:~~

~~1. Evidence of successful completion of a paramedic refresher training program or successful completion of a program of continuing medical education approved by the Department. Criteria utilized by the Department for approval or disapproval of continuing education programs shall be made available to all certified emergency paramedics.~~

~~2. Evidence of current certification in advanced cardiac life support by the American Heart Association or other agency approved by the Department.~~

~~3. A letter of recommendation from the Medical Director of the emergency center who has been responsible for medical direction of the applicant during the previous certification period.~~

~~4. Evidence that the applicant has attained at least 60 hours of on-vehicle paramedic experience during each six-month interval of the previous certification period.~~

~~B. Applicants for recertification are required to submit the materials listed in subsection (A) during the 90 days prior to the expiration of the current certificate.~~

~~C. Applicants for recertification who have not met the requirements of subsection (A) by the time of expiration of their current certificate may be required to pass oral and practical examinations after complying with subsection (A).~~

~~**R9-13-406. Suspension and revocation**~~

~~A. After notice and opportunity to be heard is given according to the procedures described in A.R.S. Title 41, Chapter 6, Article 1 and in Chapter 1, Article 1 of this Title, certification may be suspended or revoked upon the following grounds:~~

~~1. That the paramedic has in any way falsified any document provided to the Department for the purpose of evaluation or certification.~~

~~2. That the paramedic has failed to conform with the applicable requirements of A.R.S. Title 36, Chapter 21.1, Article 1 or the regulations in this Article.~~

~~3. That the paramedic is incompetent, has engaged in unprofessional conduct, or is physically or mentally unable to safely engage in the rendition of services. Examples of the foregoing include:~~

~~a. Addiction to drugs including alcohol.~~

~~b. Conviction of a felony.~~

~~c. Professional discipline in another jurisdiction.~~

~~B. If, in the opinion of the Director, there is sufficient information indicating that the paramedic has engaged in the activities in subsection (A), the Director may request an informal interview with the paramedic concerned. If the paramedic refuses such invitation or if the paramedic accepts the same and if the results of such interview indicate suspension or revocation of certification might be in order, then a complaint may be issued and a formal hearing may be held in compliance with A.R.S. Title 41, Chapter 6, Article 1 and Chapter 1, Article 1 of this Title.~~

~~ARTICLE 5. INTERMEDIATE EMERGENCY MEDICAL TECHNICIAN TRAINING PROGRAM CERTIFICATION~~

~~**R9-13-501. Scope**~~

~~The regulations in this Article provide minimum standards for training of intermediate emergency medical technicians (IEMT's) in the state of Arizona.~~

~~**R9-13-502. Certification**~~

~~A. Minimum standard curriculum~~

~~1. All IEMT training programs shall be conducted in accordance with a minimum standard IEMT training program curriculum as maintained and on file with the Department. The Department will promptly notify all IEMT training programs of any changes to the curriculum.~~

~~2. Training conducted by a certified IEMT training program shall be consistent with R9-13-602 and shall include medical control plans as adopted by the local EMS coordinating system or as provided by the Department.~~

3. ~~All training in addition to that described in the minimum standard curriculum shall be approved in writing by the Department prior to instruction.~~
4. ~~The Department may recommend textbooks and training aids to be utilized by the training program.~~
5. ~~IEMT training programs shall not provide training in those authorized treatment activities which are not specifically designated as IEMT authorized treatment activities in Article 6 of this Chapter.~~

B. ~~IEMT training program instructional and coordinative staff~~

1. ~~Training program medical director — an IEMT training program shall have a training program medical director who shall be responsible for review and approval of the course outline, lesson plans, and activities of the training program coordinator during the course of each training program.~~
2. ~~Training program coordinator — an IEMT training program shall have a training program coordinator who shall have a minimum of two years of recent experience in emergency medical care, and who shall be responsible for scheduling training programs and the various lecturers needed for each class. The training program coordinator will also be responsible for documented counseling of each trainee with regard to special instructional needs. A training program coordinator shall be any of the following:~~
   a. ~~A physician licensed by the state of Arizona who is experienced in emergency medicine.~~
   b. ~~A registered nurse licensed by the state of Arizona who is experienced in emergency nursing.~~
   c. ~~An emergency paramedic certified by the Department with a minimum of two years field experience.~~
   d. ~~An IEMT certified by the Department with a minimum of two years field experience.~~
   e. ~~A physician's assistant certified by the state of Arizona with a minimum of two years experience in emergency medicine.~~
3. ~~The training program medical director and training program coordinator shall jointly certify the successful completion of the course by each IEMT trainee graduating from the program.~~
4. ~~A physician or registered nurse who is appointed by the training program medical director shall directly supervise the activities of each IEMT trainee during clinical training.~~
5. ~~IEMT trainees shall be supervised during on vehicle training by any of the personnel described in R9-13-502(B)(2).~~
6. ~~Lecturer — an IEMT training program may utilize lecturers whose areas of expertise relate specifically to the lessons they will instruct.~~

C. ~~General requirements~~

1. ~~Supporting service agreements~~
   a. ~~An IEMT training program applicant for certification shall enter into written agreements with other institutions where training is intended to be given and with ambulance or rescue services which may participate in the training program.~~
   b. ~~Copies of all contracts for program funding shall be submitted to the Department with the application for program certification.~~
   c. ~~Where classroom facilities are not available to the IEMT training program, copies of contracts or agreements for classroom facilities shall be submitted to the Department with the application for program certification.~~
2. ~~A copy of the application for program certification shall be submitted by the applicant to the local EMS coordinating system for review and comment at the time of application.~~
3. ~~Training program information — the training program shall provide all applicants with at least the following information prior to acceptance into the training program:~~
   a. ~~That all applicants for intermediate emergency medical technician certification must undergo written, oral, and practical examinations administered by the Department.~~
   b. ~~A general description of the training program curriculum and the types of clinical exposure required for graduation.~~
   c. ~~A listing of equipment and supply items which the student must purchase during the training program.~~
   d. ~~That in order to be eligible for certification, the applicant must complete the IEMT training program within two years after initiation of training.~~
   e. ~~A copy of Article 6 of this Chapter.~~
4. ~~Records and documents.~~
   a. ~~The following documents shall be submitted at least two weeks prior to the proposed initiation of training.~~
      i. ~~A completed application form provided by the Department.~~
      ii. ~~A projected course schedule indicating date, hours, location, topic, and instructor for each class.~~
      iii. ~~A copy of the written entrance examination, a narrative description of the panel interview format, and a list of the names of panel members.~~
      iv. ~~Complete resumes of the medical director and program coordinator.~~
   b. ~~The following records and documents shall be maintained and made available for review by the Department for a period of one year:~~
      i. ~~Student attendance and performance records including written and practical examination grades.~~
      ii. ~~All examinations and quizzes used by the program.~~
      iii. ~~Lesson plans for each class reported in subparagraph (a), subdivision (ii), including classes given on the date of inspection.~~
      iv. ~~A list of all lecturers with a brief description of the qualifications of each.~~
5. ~~A course completion report shall be submitted to the Department within 30 days after completion of each course on forms provided by the Department.~~
6. ~~Class size — an IEMT training program shall limit each class to no more than 20 students.~~
7. ~~Trainee prerequisites.~~
   a. ~~All trainees shall be certified as Basic EMT's by the Department.~~
   b. ~~The trainee shall have at least one year of experience in emergency medical services at the Basic EMT level or equivalent as determined by the criteria established by the training program.~~
   c. ~~The trainee shall undergo both written and oral examinations presented by the IEMT training program which will test the trainee's motivation, medical technical expertise, ability to perform mathematic calculations, and ability to read, write, and speak the English language prior to entrance into the training program.~~
8. ~~Trainee limitations — while participating in an IEMT training program, an intermediate emergency medical technician trainee may, under the direction of a physician and supervision of a registered nurse, physician's assistant, certified paramedic, or an IEMT with one year of field~~

~~experience perform any or all functions specified in Article 6.~~

~~D. Term of certification~~

~~1. IEMT training program certification shall be for a period of two years.~~

~~2. The training program shall notify the Department if there is a change of training program medical directors.~~

~~**R9-13-503. Recertification**~~

~~A. Application for recertification of the training program on Department forms and accompanied by a proposed training schedule for the next class must be submitted at least 90 days prior to the expiration of the current certificate.~~

~~B. The training program must have conducted at least one course during the certification period.~~

~~**R9-13-504. Suspension and revocation**~~

~~A. After notice and opportunity to be heard is given according to the procedures described in A.R.S. Title 41, Chapter 6, Article 1 and in Chapter 1, Article 1 of this Title, certification may be suspended or revoked upon the following grounds:~~

~~1. That the program has in any way falsified any document provided to the Department for the purpose of evaluation or certification.~~

~~2. That the program has failed to conform with the applicable requirements of A.R.S. Title 36, Chapter 21.1, or Article 1 of the regulations in this Article.~~

~~B. If, in the opinion of the Director, there is sufficient information indicating that the program has engaged in the activities described in subsection (A), the Director may request an informal interview with the medical director of the program concerned. If he refuses such invitation, or if the interview is attended and if the results of such interview indicate suspension or revocation of certification might be in order, then a complaint may be issued and a formal hearing may be held in compliance with A.R.S. Title 41, Chapter 5, Article 1 and Chapter 1, Article 1 of this Title.~~

~~**ARTICLE 6. INTERMEDIATE EMERGENCY MEDICAL TECHNICIAN CERTIFICATION**~~

~~**R9-13-601. Scope**~~

~~The regulations in this Article provide for the certification of intermediate emergency medical technicians. Persons certified as intermediate emergency medical technicians by the Director are authorized to provide emergency medical care to the sick and injured as provided in A.R.S. § 36-2205.~~

~~**R9-13-602. Authorized treatment activities**~~

~~A. Persons certified as intermediate emergency medical technicians (IEMT's) shall be competent in all aspects of basic emergency medical technology as stated in Article 8, R9-13-802, subsections (A) and (B). In addition, the certified IEMT shall be competent in certain advanced physical assessment techniques, pre-hospital communications with medical control authority, advanced airway maintenance techniques, intravenous fluid therapy, and parenteral drug therapy.~~

~~B. For the purpose of carrying out the above competencies, the IEMT may perform advanced physical assessment techniques by inspection, palpation, and auscultation. Where direct or indirect communication with a licensed physician is maintained, IEMT's may, upon order of the licensed physician, perform any of the following activities:~~

~~1. Airway management via endotracheal intubation, insertion of an esophageal obturator airway, and cricothyrotomy.~~

~~2. Gastric suction.~~

~~3. Initiate and maintain peripheral intravenous fluid therapy.~~

~~4. Administer medications as approved by the Department.~~

~~5. Phlebotomy.~~

~~6. Needle thoracostomy.~~

~~C. Authorized treatment activities listed in subsections (A) and (B) may be used only as permitted by medical control plans adopted by the local EMS coordinating system or as provided by the Department.~~

~~D. A certified IEMT shall be authorized by the Department to use automatic/semiautomatic defibrillation under the conditions specified in R9-13-802(C).~~

~~**R9-13-603. Required documents**~~

~~An applicant for certification as an IEMT shall submit the following items to the Department:~~

~~1. Evidence of:~~

~~a. Successful completion of an IEMT training program which has been certified by the Director, or successful completion of an IEMT training program equivalent to the minimum standard for training programs in Article 5 of this Chapter, which has been certified by another state.~~

~~b. Current certification in basic cardiac life support by the American Heart Association, American Red Cross, or other agency approved by the Department.~~

~~2. Documentation on forms provided by the Department attesting to the applicant's good health completed by a licensed physician within three months prior to the date of application.~~

~~**R9-13-604. General requirements**~~

~~A. An applicant for certification as an intermediate emergency medical technician shall:~~

~~1. Be at least 18 years of age.~~

~~2. Not be addicted to the use of alcohol or drugs.~~

~~3. Be able to speak, read, and write the English language.~~

~~4. Submit an application on forms specified by the Department.~~

~~B. Examinations~~

~~1. Applicants must attain passing grades as indicated below on all examinations administered or approved by the Department.~~

~~a. Written examination – 75%.~~

~~b. Practical examination – acceptable demonstration of skills at all stations.~~

~~c. Oral examination – 70%.~~

~~2. Applicants will be given three opportunities to pass all exams within a one-year period after the date of application.~~

~~3. An applicant who passes one or two, but not all examinations, need only retake the failed examination(s) on subsequent attempts.~~

~~4. An applicant who fails any examination on all three attempts must repeat an IEMT training program prior to reapplication.~~

~~C. Intermediate emergency medical technician certification shall be valid for a period of two years provided that the conditions of this Article are met throughout the certification period.~~

~~**R9-13-605. Recertification**~~

~~A. An applicant for IEMT recertification shall submit to the Department:~~

~~1. Evidence of successful completion of an IEMT refresher training program developed or approved by the Department, or evidence of successful completion of a program of continuing medical education as approved by the Department. Criteria utilized by the Department for approval or disapproval of continuing education programs shall be made available to all certified IEMT's.~~

2. Evidence of current certification in basic cardiac life support by the American Heart Association, American Red Cross, or other agency approved by the Department.
3. A statement issued within the previous 90 days recommending recertification and signed by the physician who has been responsible for medical direction of the applicant during the previous certification period.

B. Applicants for recertification as IEMT's shall attain a passing grade of 75% on a written examination administered or approved by the Department. Only those applicants in compliance with subsection (A) shall be allowed to take the recertification examination.

C. Applicants for recertification are required to submit the materials listed in subsections (A) and (B) during the 90 days prior to the expiration of the current certificate.

D. Applicants who apply for recertification more than 90 days after expiration of their current certificate may be required to pass written, oral, and practical examinations as described in R9-13-604, subsection (B), after having completed requirements under R9-13-605, subsections (A) and (B).

E. Applicants for recertification who have previously met the requirements to use automatic/semiautomatic defibrillators shall attain a passing grade of 75% on a written defibrillation examination administered by the Department. Applicant shall be given two opportunities to take and pass this examination.

F. The defibrillation examination process shall be successfully completed within 90 days after expiration of the applicant's certificate. Applicants who fail to complete the examination process within 90 days after expiration of their certificates shall repeat the defibrillation training course in order to become eligible for retesting.

R9-13-606. Suspension and revocation

A. After notice and opportunity to be heard is given according to the procedures described in A.R.S. Title 41, Chapter 6, Article 1 and in Chapter 1, Article 1 of this Title, certification may be suspended or revoked upon the following grounds:
1. That the IEMT has in any way falsified any document provided to the Department for the purpose of evaluation or certification.
2. That the IEMT has failed to conform with the applicable requirements of A.R.S. Title 36, Chapter 21.1, Article 1 or the regulations in this Article.
3. That the IEMT is incompetent, has engaged in unprofessional conduct, or is physically or mentally unable to safely engage in the rendition of services. Examples of the foregoing include:
a. Addiction to drugs including alcohol.
b. Conviction of a felony.
c. Professional discipline in another jurisdiction.

B. If, in the opinion of the Director, there is sufficient information indicating that the IEMT has engaged in the activities in subsection (A), the Director may request an informal interview with the IEMT concerned. If the IEMT refuses such invitation or if the IEMT accepts the same and if the results of such interview indicate suspension or revocation of certification might be in order, then a complaint may be issued and a formal hearing may be held in compliance with A.R.S. Title 41, Chapter 6, Article 1 of this Title.

ARTICLE 7. BASIC EMT TRAINING PROGRAM CERTIFICATION

R9-13-701. Scope

The regulations in this Article provide minimum standards for training of basic emergency medical technicians in the state of Arizona.

R9-13-702. Certification

A. Minimum standard curriculum
1. All certified basic EMT training programs shall be conducted in accordance with a minimum standard basic emergency medical technician training program curriculum as maintained and on file with the Department. The Department will promptly notify all basic EMT training programs of any changes to the curriculum.
2. Basic EMT training programs shall not provide training in those authorized treatment activities which are specifically designated as intermediate EMT or paramedic authorized treatment activities in Articles 4 and 6 of this Chapter.

B. Basic EMT instructional staff
1. Instructor – each basic EMT training course shall have an instructor approved by the Department who shall have the following qualifications:
a. Current certification or licensure as an emergency medical technician (any level), registered nurse, physician, or physician's assistant.
b. Current certification as a basic life support instructor by the American Heart Association, American Red Cross, or other agency approved by the Department.
c. Previous training experience at the basic EMT or equivalent level, within two years of request for instructor approval. The minimum training experience requirement shall be:
i. The duration of one training course as an instructor aide, or
ii. Successful completion of a basic EMT training orientation course conducted or approved by the Department.
2. Lecturer – a basic EMT training program may utilize lecturers whose areas of expertise relate specifically to the lesson or lessons they will instruct. All lesson plans shall be reviewed and approved in advance by the instructor.
3. Instructor aide – a basic EMT training program may utilize instructor aides to assist during practical demonstrations and evaluations. All instructor aides must be certified EMT's or licensed nurses, physicians, or physician assistants.

C. General requirements
1. Supporting service agreements.
a. A basic EMT training program shall enter into written agreements with hospitals where in hospital observation and training is to be conducted.
b. If the basic EMT training program should choose to provide on vehicle training, the training program shall enter into a written agreement with any ambulance service or EMS rescue service on whose vehicles trainees are to obtain on vehicle observation and training.
2. Certification information – the training program shall provide all trainees with the following information prior to acceptance and collection of fees. A program graduate wishing to be certified as a basic EMT must:
a. Provide documentation on forms provided by the Department attesting to the applicant's good health completed by a physician within three months prior to the date of application.
b. Attain passing grades on written and practical examinations.
3. Records and documents – the following records and documents for each basic EMT course presented by the training program shall be maintained on file and may be inspected by the Department:

a. A projected course schedule indicating the date, hours, instructor, and topic for each class.
b. Student attendance and performance records including written and practical examination grades.
c. Records regarding:
i. The number of students successfully completing each course.
ii. The number of students successfully completing in hospital observation and training.
iii. The total annual cost of the training program including salaries, operating costs, consulting costs, and equipment purchases.
d. A list of all lecturers with brief statements of the qualifications of each.

D. Term of certification
1. Basic EMT training program certification shall be for the period of two years.
2. Application for certification as a basic EMT training program shall be submitted to the Department on forms specified by the Department.

R9-13-703. Recertification

A. Application for recertification of a basic EMT training program shall be submitted at least 90 days prior to the expiration of the current certificate on forms specified by the Department.
B. Applicants for basic EMT training program recertification must have conducted at least one basic EMT training course during the certification period.

R9-13-704. Suspension and revocation

A. After notice and opportunity to be heard is given according to the procedures described in A.R.S. Title 41, Chapter 6, Article 1 and in Chapter 1, Article 1 of this Title, certification may be suspended or revoked upon the following grounds:
1. That the program has in any way falsified any document provided to the Department for the purpose of evaluation or certification.
2. That the program has failed to conform with the applicable requirements of A.R.S. Title 36, Chapter 21.1, Article 1 or the regulations in this Article.
B. If, in the opinion of the Director, there is sufficient information indicating that the program has engaged in the activities described in subsection (A), the Director may request an informal interview with the administrator(s) of the program concerned. If he refuses such invitation or if the interview is attended and if the results of such interview indicate suspension or revocation of certification might be in order, then a complaint may be issued and a formal hearing may be held in compliance with A.R.S. Title 41, Chapter 6, Article 1 and Chapter 1, Article 1 of this Title.

ARTICLE 8. BASIC EMERGENCY MEDICAL TECHNICIAN CERTIFICATION

R9-13-801. Scope

The regulations in this Article provide for the certification of basic emergency medical technicians. Persons certified as basic emergency medical technicians are authorized to provide emergency medical care to the sick and injured as provided in A.R.S. § 36-2201 et seq. and this Article.

R9-13-802. Authorized treatment activities

A. Persons certified as basic emergency medical technicians (EMT's) shall be competent in the recognition, assessment, and management of emergency medical situations; performance of basic life support; extrication; coordination with agencies involved in patient care and transportation; documentation and communication of pertinent medical information; and maintenance and preparation of emergency care equipment and supplies.
B. For the purpose of carrying out the competencies described in subsection (A), the certified basic EMT is authorized to perform the following activities:
1. Recognize emergencies of the following general activities:
a. Medical.
b. Environmental.
c. Obstetrical.
d. Traumatic.
e. Surgical.
2. Obtain and interpret diagnostic signs and symptoms.
3. Perform basic cardiac life support.
4. Control hemorrhage and bandage wounds.
5. Stabilize and splint fractures.
6. Administer oxygen.
7. Care for behavioral emergencies.
8. Assist in childbirth.
9. Extricate, lift, move, position, and otherwise handle patients to minimize discomfort and additional injury.
10. Apply Medical Anti-Shock Trousers (MAST).
C. A certified BEMT shall be authorized by the Department to use automatic/semiautomatic defibrillation under the following conditions:
1. Be employed by an emergency medical services provider which is offering such procedure and has a written and signed provider agreement with an ALS base hospital medical director to provide training and medical control for the BEMT;
2. Have a certificate of training and proficiency for automatic/semiautomatic defibrillation issued by the ALS base hospital medical director responsible for such training;
3. Only use the type of automatic/semiautomatic defibrillator on which the person has been trained; and
4. Pass a written examination administered by the Department with a passing score of 75%. Unless the BEMT passes the test within one year after successfully completing the training program required by paragraph (2) of this subsection, the BEMT shall repeat the training program.

R9-13-803. Required documents

An applicant for certification as a basic EMT shall submit the following items to the Department:
1. Evidence of:
a. Successful completion of a basic emergency medical technician training program which has been certified by the Director and which was completed within one year prior to the date of application, or successful completion of an equivalent basic EMT training program certified by another state.
b. Current certification in basic cardiac life support by the American Heart Association, American Red Cross, or other agency approved by the Department.
2. Documentation on forms provided by the Department attesting to the applicant's health status completed by a licensed physician within three months prior to the application date.

R9-13-804. General requirements

A. An applicant for certification as a basic EMT shall:
1. Not be addicted to the use of alcohol or drugs.
2. Be able to speak, read, and write the English language.
3. Submit an application on forms specified by the Department.
B. Applicants shall attain a passing grade on the following examinations administered or approved by the Department:
1. A written examination administered by the Department.
2. A practical examination administered or monitored by the Department which includes the following stations:
a. Bandaging and splinting.

~~b. Head and spine immobilization.~~
~~c. Lifting and moving patients.~~
~~d. Patient assessment and interpretation of vital signs.~~
~~e. Application of Medical Anti-Shock Trousers (MAST).~~
~~f. Utilization of adjuncts to airway management.~~

~~C. Examinations~~

~~1. Applicants shall be given three opportunities to pass both examinations as indicated below within one year of the application date.~~
~~a. Written examination – 75%.~~
~~b. Practical examination – acceptable demonstration of skills at all stations.~~

~~2. An applicant who passes one but not both examinations need only repeat the failed examination on subsequent attempts.~~

~~3. An applicant who fails either or both examinations on all three attempts must repeat a basic EMT training program prior to reapplication.~~

~~D. Basic EMT certification shall be valid for the period of two years provided that the conditions of A.R.S. § 36-2201 et seq. and this Article are met throughout the certification period.~~

~~**R9-13-805. Recertification**~~

~~A. An applicant for basic emergency medical technician recertification shall submit to the Department:~~

~~1. Evidence of successful completion of a standard basic emergency medical technician refresher training program or evidence of successful completion of a program in continuing medical education approved by the Department. Criteria utilized by the Department for approval or disapproval of continuing education programs shall be made available to certified EMT's upon request.~~

~~2. Current certification in basic life support by the American Heart Association, American Red Cross, or other agency approved by the Department.~~

~~B. Applicants for recertification as a basic emergency medical technician shall attain a passing grade of 75% on a written examination administered or approved by the Department. Applicants shall be given two opportunities to take and pass this examination.~~

~~C. Applicants for recertification are required to submit evidence of successful completion of the requirements listed in subsection (A) within 90 days after expiration of the current certificate. Applicants who apply for recertification after the 90-day period or who do not meet the requirements in subsections (A) and (B) within the 90-day period will be required to repeat a basic emergency medical technician refresher training program prior to reapplication.~~

~~D. Applicants for recertification who have previously met the requirements to use automatic/semiautomatic defibrillators shall attain a passing grade of 75% on a written defibrillation examination administered by the Department. Applicants shall be given two opportunities to take and pass this examination.~~

~~E. The defibrillation examination process shall be successfully completed within 90 days after expiration of the applicant's certificate. Applicants who fail to complete the examination process within 90 days after expiration of their certificates shall repeat the defibrillation training course in order to become eligible for retesting.~~

~~**R9-13-806. Suspension and revocation**~~

~~A. After notice and opportunity to be heard is given according to the procedures described in A.R.S. Title 41, Chapter 6, Article 1 and in Chapter 1, Article 1 of this Title, certification may be suspended or revoked upon the following grounds:~~

~~1. That the EMT has in any way falsified any document provided to the Department for the purpose of evaluation or certification.~~

~~2. That the EMT has failed to conform with the applicable requirements of A.R.S. Title 36, Chapter 21.1, Article 1 or the regulations in this Article.~~

~~3. That the EMT is incompetent, has engaged in unprofessional conduct, or is physically or mentally unable to safely engage in the rendition of services. Examples of the foregoing include:~~
~~a. Addiction to drugs including alcohol.~~
~~b. Conviction of a felony.~~
~~c. Professional discipline in another jurisdiction.~~

~~B. If, in the opinion of the Director, there is sufficient information indicating that the EMT has engaged in the activities described in subsection (A), the Director may request an informal interview with the EMT concerned. If the EMT refuses such invitation or if the results of such interview indicate suspension or revocation of certification might be in order, then a complaint may be issued and a formal hearing may be held in compliance with A.R.S. Title 41, Chapter 6, Article 1 and Chapter 1, Article 1 of this Title.~~

NOTICE OF PROPOSED RULEMAKING

TITLE 9. HEALTH SERVICES

CHAPTER 25. DEPARTMENT OF HEALTH SERVICES
EMERGENCY MEDICAL SERVICES

PREAMBLE

1. Sections Affected	Rulemaking Action
Article 1.	New Article
R9-25-101	New Section
Article 2.	New Article
R9-25-201	New Section
R9-25-202	New Section
R9-25-203	New Section
R9-25-204	New Section
R9-25-205	New Section
R9-25-206	New Section
R9-25-207	New Section
R9-25-208	New Section
R9-25-209	New Section
R9-25-210	New Section
R9-25-211	New Section
R9-25-212	New Section
R9-25-213	New Section
R9-25-214	New Section
Article 3.	New Article
R9-25-301	New Section
R9-25-302	New Section
R9-25-303	New Section
R9-25-304	New Section
R9-25-305	New Section
R9-25-306	New Section
R9-25-307	New Section
R9-25-308	New Section
R9-25-309	New Section
R9-25-310	New Section
R9-25-311	New Section
Article 4.	New Article
R9-25-401	New Section
R9-25-402	New Section
R9-25-403	New Section
R9-25-404	New Section
R9-25-405	New Section
R9-25-406	New Section
R9-25-407	New Section
R9-25-408	New Section
R9-25-409	New Section
R9-25-410	New Section
R9-25-411	New Section
Article 5.	New Article
R9-25-501	New Section
R9-25-502	New Section
R9-25-503	New Section
R9-25-504	New Section
R9-25-505	New Section
R9-25-506	New Section
R9-25-507	New Section
R9-25-508	New Section
R9-25-509	New Section
R9-25-510	New Section
R9-25-511	New Section
R9-25-512	New Section

R9-25-513	New Section
R9-25-514	New Section
R9-25-515	New Section
Article 6.	New Article
R9-25-601	New Section
R9-25-602	New Section
R9-25-603	New Section
R9-25-604	New Section
R9-25-605	New Section
R9-25-606	New Section
R9-25-607	New Section
R9-25-608	New Section
R9-25-609	New Section
R9-25-610	New Section
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R9-25-612	New Section
R9-25-613	New Section
R9-25-614	New Section
R9-25-615	New Section
R9-25-616	New Section
Exhibit A	New Exhibit
Exhibit B	New Exhibit
Exhibit C	New Exhibit
Exhibit D	New Exhibit
Exhibit E	New Exhibit
Exhibit G	New Exhibit
Exhibit H	New Exhibit
Exhibit I	New Exhibit
Exhibit K	New Exhibit
Exhibit L	New Exhibit
Exhibit M	New Exhibit
Exhibit N	New Exhibit
Exhibit O	New Exhibit
Exhibit R	New Exhibit
Exhibit S	New Exhibit
Exhibit T	New Exhibit
Exhibit V	New Exhibit
Exhibit X	New Exhibit
Exhibit Y	New Exhibit
Exhibit Z	New Exhibit
Exhibit AA	New Exhibit
Exhibit BB	New Exhibit
Exhibit CC	New Exhibit
Exhibit DD	New Exhibit
Exhibit EE	New Exhibit
Exhibit FF	New Exhibit
Exhibit GG	New Exhibit

2. The specific authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):

Authorizing statute: A.R.S. §§ 36-136(F) and 36-2209(A)
Implementing statute: A.R.S. §§ 36-2202, 36-2204, and 36-2205

3. The name and address of agency personnel with whom persons may communicate regarding the rulemaking:

Name:	John D. Taska
Address:	Department of Health Services 1651 East Morten, Suite 120 Phoenix, Arizona 85020
Telephone	(602) 255-1170
Fax:	(602) 255-1134

4. An explanation of the rules, including the agency's reasons for initiating the rules:

A.R.S. § 36-136(F) provides the general authority for the Department to make or amend rules. A.R.S. § 36-2209(A) specifically authorizes the Director to adopt rules which are necessary for the operation of the Division of Emergency Medical Services (EMS) and for carrying out the provisions of A.R.S. Chapter 21.1. A.R.S. § 36-2204(1) through (7) authorize the Medical Director and EMS Council to recommend standards to the Director in the following areas: training, certification and recertification of emer-

gency medical technicians (EMTs), testing, standards for EMT training programs, criteria for EMT continuing education, standards for emergency receiving facilities and advanced life support (ALS) base hospitals, standards for the decertification of EMTs, ambulance attendants and ALS base hospitals. A.R.S. § 36-2202(A)(3) requires the Director to adopt rules pursuant to those standards. A.R.S. § 36-2202 (A)(4) charges the Director to adopt rules pursuant to the chapter, identifying sections and subsections of the statute under which the rule was formulated.

The proposed rules establish standards for clearer definitions relating to Articles 2 through 6 (Article 1); ALS Base Hospital certification (Article 2); Basic Life Support (BLS) training programs (Article 3); certification of ALS training programs (Article 4); and certification of BLS and ALS personnel (Articles 5 and 6). Construction of the proposed rules has been altered to enable users to follow the rule in the general order of the certification being sought.

The ALS Base Hospitals rules contain a basis for denial with identification of the bases for denial. The rule also creates a quality improvement process linking the ALS Base Hospital and EMS agencies with whom the hospital contracts. The rules also creates clearer criteria for continuing medical education for the EMS personnel assigned to the hospital and clarifies the responsibilities of the base hospital medical director, the prehospital manager, base hospital physicians, and nurse intermediaries.

The BLS and ALS Training Program rules, Articles 3 and 4, respectively, clarify the application procedure required and assure that all training complies with federal standards for protection from human pathogens. The rule establishes clear grounds under which an application may be denied. The rule establishes the role of BLS training program medical director, which previously existed only in ALS training programs, and outlines the responsibilities for the role. It expands the description of the position identified in the current rules as the BLS Training Program Coordinator, renaming it as the BLS training program director to more clearly define the roles and responsibilities of the position. As ALS training programs are more complex, Article 4 defines a course manager, whose responsibilities focus on-site supervision to assure that the classroom schedule, hospital, and vehicular schedules are kept current. The role of BLS course Instructors, which exist in the current rules, and Preceptors, which are newly identified, are defined more clearly.

Physical requirements for the class area, equipment available for each class section, and class size are more clearly explained. Current rules for applicants for ALS training programs allow for testing and interviewing prior to acceptance. The proposed rules clarify those selection requirements.

Current rules only identify that the training program curricula are "on file with the Secretary of State." Further, those curricula do not reflect the changes in scope of practice and technology that have occurred since the current rules were adopted. The proposed rules contain new curricula that reflect the changes. The proposed BLS curriculum is the National Standard Curriculum developed by the U.S. Department of Transportation. The Intermediate and Paramedic curriculum are specifically tailored to the needs of Arizona.

Course applicant prerequisites are more clearly established in the proposed rules. Those prerequisites include standardized testing of reading proficiency and documentation of immunization for Rubella and Rubeola. The course also has responsibilities to the applicants to provide a clear explanation of the program, a complete list of equipment, books, etc., that the student must obtain, a clear explanation of the physical demands that will be placed on the individual by virtue of the certification, and program requirements with respect to absences, grading, and other issues.

A significant component of both the ALS and BLS Training Program Rules is establishment of a Quality Management Program, a prospective and participatory quality improvement process between the Department and the training program. The Quality Management Program includes evaluations of the training by the Department, the program, and systematic customer service surveys of students, instructors, preceptors, and agencies with students in the class.

Articles 5 and 6 relate to Basic and Advanced Life Support certification. Again, the structure of the proposed rules is based upon the flow of the individual's application. General application requirements are followed by the applicant screening process, grounds for denial, and the examination process. Within these first sections are much clearer definitions of the physical and character requirements to become an EMT. Because EMTs are placed in circumstances where citizens are extremely vulnerable, individuals who have been convicted of serious crimes may not become certified except through a specified process.

The examination of applicants for BLS and ALS certification shall be through examinations developed by the National Registry of EMTs, a nationally recognized test development, validation, and certification entity. Applicants from outside Arizona must complete a specified training program that assures competency in areas of training that are not nationally uniform. The use of National Registry as the testing process was recommended by the Auditor General in a 1988 report on the Office of EMS. While the Registry has been used at the ALS level, it has yet to be incorporated into the BLS level. The proposed rules also acknowledge and specify the nature of accommodations that may be granted applicants with disabilities, consistent with the Americans with Disabilities Act.

As the scope of practice of BLS and ALS level EMTs is expanding, the proposed rules provide a basis for specified additional training and higher levels of care for EMTs who take the training and are given appropriate examinations. At the BLS level, the additional training includes advanced airway management via endotracheal intubation. At the ALS level, it includes administration of immunizations to healthy children.

Continuing medical education and recertification are addressed in more specific detail, to allow EMTs and their ALS base hospitals to plan for well-rounded professional education. The proposed rules also provide a mechanism for individuals who, for medical reasons, require an inactive status for up to 24 months.

Unprofessional conduct is given a clear definition for both ALS and BLS EMTs. EMTs affiliated with an employer who provide

patient care are required to complete a first care form documenting the medical care they provide for each patient they encounter while working.

Most of the rules currently in force were adopted July 16, 1981, and have undergone no major modification since then. In 1981, there were approximately 400 paramedics, about 300 Intermediate EMTs, and about 5,000 Basic EMTs. Over 350 of the paramedics were located in Phoenix and Tucson. Between 30 and 35 ALS Base Hospitals existed, nearly all in Phoenix and Tucson. Intermediate EMTs functioned in the rural areas as the highest level of care.

A number of specific treatment modalities are identified in the current rules which have either been proven ineffective, hazardous to perform in the field, or utilize equipment that has been withdrawn from the market. In addition, the rules used terminology which has been effectively rendered void due to either vagueness or new state and federal laws such as the Americans with Disabilities Act. Terms such as "unprofessional conduct", "addiction", and "incompetent", among others, have no clear definition anywhere in EMS rules. In the new rules package, those terms have either been defined, replaced with words that are clearly defined, or replaced in concept to accommodate changes in the Federal law, e.g., Americans with Disabilities Act.

Specific weaknesses found in Article 2, ALS Base Hospital rules, include definitions that are obsolete or words, phrases or standards that have no definition. The rule's construction does not track with the application process, forcing applicants to jump between Sections to understand the application process and requirements. Recertification is outlined in only cursory fashion, and no provision exists for amendment of the certification, transfer, or for denial. ALS base hospitals carry a significant portion of the responsibility for continuing education of EMTs, but the current rule provides no clear guidance on how that is to be accomplished. Qualifications and responsibilities of the ALS base hospital medical director and prehospital manager are not clearly outlined.

Articles 3, 5, and 7 cover Paramedic, Intermediate, and Basic Training Programs. There is substantial repetition in the paramedic and intermediate articles, which led to their consolidation in the proposed rules. These articles, like Article 2, are not structured to carry an applicant through the application process. None of the articles includes the forms, curricula and documents required by the articles. None of the articles provides a mechanism for cooperative review between the Department and the training program to review training being performed and assess needs and areas of improvement. Articles 3 and 5 address the instructional and coordinative staff in cursory fashion, listing some criteria for selection but making minimal reference to their responsibilities. No mention is made of how to provide opportunities for EMTs from other states to work within Arizona's ALS training programs to acquire skills required of Arizona personnel.

Articles 4, 6, and 8 cover Paramedic, Intermediate and Basic EMT certification. Substantial repetition exists in Articles 4 and 6, which does not contribute to improved understanding of the requirements. The articles are not structured to carry the individual applicant through the application process. Treatment activities listed in the 3 articles include therapies no longer used in the field and equipment that is either obsolete or no longer on the market. The 3 articles provide conflicting or inconsistent language about who is to be able to physically provide the test. Recertification requirements are vague; no information on the number of hours or subjects required is provided. Statutory changes in recertification testing requirements for ALS personnel are not reflected in the current rules.

5. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

Not applicable.

6. The preliminary summary of the economic, small business, and consumer impact:

A. ECONOMIC IMPACT

Additional professional requirements established in Article 2 for licensed hospital professional staff, recordkeeping, and quality improvement programs have not been assessed. Articles 3 and 4 pertaining to EMT training program certification establish more specific time lines for application, identify specific positions accountable for the training program, the nature of the curriculum, trainee prerequisites, disclosure documents, and the quality management program. Some economic impact will occur in new requirements for a BLS Training Program Medical director, trainee prerequisites, document disclosure, and the quality management program. However, the extent of the impact has not been assessed. Articles 5 and 6, EMT certification articles, have the following areas which may have some economic impact: enhanced specificity of physical requirements, increased specificity of criminal history backgrounds, and accommodation for applicants with disabilities. No specific assessment is currently available in those areas.

B. SMALL BUSINESS

The Department anticipates no small business impact on Article 2. Articles 3, and 4 will impact small businesses whose primary focus is EMT training. The greatest impact will be Basic EMT training programs which will have an additional administrative requirement in the form of acquisition of a training program medical director (physician), and additional training equipment--particularly a semiautomatic external defibrillator. Articles 5 and 6 will increase costs to small business category EMS providers who pay for the testing expenses of their employees. Such expenses under Article 5 will be $15/employee and $35/employee under Article 6. Additional expenses will be incurred by small businesses who pay for recertification classes for employees. However, no information is available on the cost for such a training program. Small businesses in EMT training will also be required to meet the "reasonable accommodation" standards for testing of applicants meeting ADA guidelines outlined in the articles. However, no evaluation of that cost is currently available.

C. CONSUMER

The Department anticipates no economic impact to consumers as a result of Article 2, 3, or 4. Applicants for certification under Article 5 and 6 may incur additional costs as a result of the increased specificity of physical examination requirements and good character requirements. No assessment of those costs is currently available. Applicants from out of state who desire certification in Arizona as EMTs will be required to complete a challenge course. No such courses are currently taught, and no estimate of the cost is currently available. Consumers may be required to assume additional costs as a result of the training program medical director for BLS training programs, as well as testing costs outlined in the Small Business section.

7. The name and address of agency personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:

Name: John D. Taska

Address: Department of Health Services
1651 East Morten, Suite 120
Phoenix, Arizona 85020

Telephone: (602) 255-1170

Fax: (602) 255-1134

8. The time, place, and nature of the proceedings for the adoption, amendment, or repeal of the rule or, if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rule:

Written comments will be accepted from now through February 16, 1996, addressed to John D. Taska at the address listed in question 3. Oral comments will be heard at the following locations and times:

Date: February 13, 1996

Time: 10:00 a.m.

Location: University Medical Center, College of Medicine
1501 N. Campbell, 8th Floor
Tucson, Arizona

Nature: Oral and Written Proceedings

Date: February 14, 1996

Time: 10:00 a.m.

Location: Parks and Recreation Department Community Center
100 Park Avenue, Rooms 155/156
Lake Havasu City, Arizona

Nature: Oral and Written Proceedings

Date: February 15, 1996

Time: 10:00 a.m.

Location: Little America

2515 East Butler Avenue, American "A" Room
Flagstaff, Arizona

Nature: Oral and Written Proceedings

Date: February 16, 1996

Time: 10:00 a.m.

Location: ADOT Human Resource Development Center
1130 North 22nd Avenue, Rooms GC 1 & 2
Phoenix, Arizona

Nature: Oral and Written Proceedings

9. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:

Not Applicable

10. Incorporations by reference and their location in the rules:

Not answered.

11. The full text of the rules follows:

TITLE 9. HEALTH SERVICES

CHAPTER 25. DEPARTMENT OF HEALTH SERVICES EMERGENCY MEDICAL SERVICES

ARTICLE 1. EMERGENCY MEDICAL SERVICES DEFINITIONS

R9-25-101. Definitions (Authorized by A.R.S. §§ 36-2202(A)(2), (3), (4), 36-2204(1)-(7))

ARTICLE 2. ADVANCED SUPPORT BASE HOSPITAL CERTIFICATION

R9-25-201. General Requirements (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(6))
R9-25-202. Application Procedure (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(5) and (6)
R9-25-203. Denial of Application (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(5) and (6)
R9-25-204. Amendment of the Certificate (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(6)
R9-25-205. Transfer of Certificate (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(5) and (6)
R9-25-206. Base Hospital Authority and Responsibilities (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(6)
R9-25-207. Medical Director (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(5) and (6)
R9-25-208. Prehospital Manager (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(5) and (6)
R9-25-209. Base Hospital Physician (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(5) and (6)
R9-25-210. Nurse Intermediary (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(5) and (6)
R9-25-211. Required Records, Reports, and Notifications (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(5) and (6)
R9-25-212. Department Oversight (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(6).
R9-25-213. Letter of Censure, Probation, Suspension, Revocation of Certificate (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(6) and (7)

ARTICLE 3. BLS TRAINING PROGRAM CERTIFICATION

R9-25-301. BLS Training Program Certificate (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-302. Operating Authority (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-303. Medical Director (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-304. BLS Training Program Director (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-305. Instructor (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-306. Preceptor Qualifications (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-307. BLS Training Program Course Requirements (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-308. Trainee Prerequisites (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-309. Disclosure Documents (Authorized by A.R.S. § 36-2202(A)(4)
R9-25-310. Quality Management Program (Authorized by A.R.S. § 36-2202(A)(4)
R9-25-311. Letter of Censure, Probation, Suspension, Revocation of Certificate (Authorized by A.R.S. § 36-2202(A)(4)

Article 4. ALS TRAINING PROGRAM CERTIFICATION EMT-INTERMEDIATE AND EMT-PARAMEDIC

R9-25-401. ALS Training Program Certificate (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-402. Operating Authority (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-403. Medical Director (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-404. ALS Training Program Director (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-405. Course Manager (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-406. Faculty and Preceptor (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-407. ALS Training Program Course Requirements (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-408. Trainee Prerequisites (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3)
R9-25-409. Disclosure Documents (Authorized by A.R.S. § 36-2202(A)(4)
R9-25-410. Quality Management Program (Authorized by A.R.S. § 36-2202(A)(4)
R9-25-411. Letter of Censure, Probation, Suspension, Revocation of Certificate (Authorized by A.R.S. § 36-2202(A)(4)

Article 5. BASIC LIFE SUPPORT CERTIFICATION

R9-25-501. Certification Application Requirements (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1) and (6)
R9-25-502. Applicant Screening Process (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1) and (6)
R9-25-503. Denial of Application (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1) and (6)
R9-25-504. Examinations for Initial Certification (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (2), and (6)
R9-25-505. Duration of Certification (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1) and (6)
R9-25-506. Out-of-state Applicants (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (2), and (6)
R9-25-507. Applicants with Disabilities (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (2), and (6)
R9-25-508. Scope of Practice (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (6), and (8), and 36-2205
R9-25-509. Special Skills Certification (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1)

R9-25-510. Recertification Requirements for EMT-Basic (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (4), and (6)
R9-25-511. Recertification for EMT-Basic Special Skills (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (4), and (6)
R9-25-512. Extension of Recertification (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (2), and (3)
R9-25-513. Inactive Status Due to Temporary Medical Condition (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(6)
R9-25-514. Reporting Requirements (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1) and (6)
R9-25-515. Enforcement Actions (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (6), and (7)

Article 6. ADVANCED LIFE SUPPORT CERTIFICATION

R9-25-601. Certification Application Requirements (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1) and (6)
R9-25-602. Applicant Screening Process (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1) and (6)
R9-25-603. Denial of Application (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1) and (6)
R9-25-604. Examinations for Initial Certification (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (2), and (6)
R9-25-605. Duration of Certification (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1) and (6)
R9-25-606. Out-of-state Applicants (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (2), and (6)
R9-25-607. Applicants with Disabilities (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (2), and (6)
R9-25-608. Scope of Practice (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (6), and (8) and 36-2205)
R9-25-609. Extended Scope of Practice Training Requirements (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1)
R9-25-610. Paramedic Recertification Requirements (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (4), and (6)
R9-25-611. Immediate Recertification Requirements (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (4), and (6)
R9-25-612. Extension of Recertification Application Requirements (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (4), and (6)
R9-25-613. Inactive Status Due to Temporary Medical Condition (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(6)
R9-25-614. Downgrading of Certification (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1) and (6)
R9-25-615 Reporting Requirements (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1) and (6).
R9-25-616. Enforcement Actions (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (6), and (7)
Exhibit A New Exhibit
Exhibit B New Exhibit
Exhibit C New Exhibit
Exhibit D New Exhibit
Exhibit E New Exhibit
Exhibit G New Exhibit
Exhibit H New Exhibit
Exhibit I New Exhibit
Exhibit K New Exhibit
Exhibit L New Exhibit
Exhibit M New Exhibit
Exhibit N New Exhibit
Exhibit O New Exhibit
Exhibit R New Exhibit
Exhibit S New Exhibit
Exhibit T New Exhibit
Exhibit V New Exhibit
Exhibit X New Exhibit
Exhibit Y New Exhibit
Exhibit Z New Exhibit
Exhibit AA New Exhibit
Exhibit BB New Exhibit
Exhibit CC New Exhibit
Exhibit DD New Exhibit
Exhibit EE New Exhibit
Exhibit FF New Exhibit
Exhibit GG New Exhibit

ARTICLE 1. EMERGENCY MEDICAL SERVICES DEFINITIONS

R9-25-101. Definitions (Authorized by A.R.S. §§ 36-2202(A)(2), (3), (4), 36-2204(1)-(7))

In Articles 2 through 6 of this Chapter, unless the context otherwise requires:

1. "Active course roster" means a roster submitted upon completion of a screening process which indicates all students enrolled in the course.
2. "Addendum roster" means an official roster submitted after the official course completion date to add the names of those students who completed clinical or vehicular requirements after the official course completion date.
3. "Administrative medical direction" means supervision of prehospital EMTs by the base hospital medical director.
4. "Advanced cardiac life support" or "ACLS" means invasive, pharmacologic, and mechanical electrical cardiovascular care.
5. "Advanced cardiac life support instructor" or "ACLS instructor" means an individual who has successfully completed an American Heart Association Advanced Cardiac Life Support Instructor Course.
6. "Advanced cardiac life support provider" or "ACLS provider" means an individual who has successfully completed an advanced cardiac life support provider course and has demonstrated competency in: rhythm interpretation, advanced airway management, peripheral and central intravenous lines, thoracostomy, pharmacologic and mechanical electrical dysrhythmia therapy.
7. "Advanced life support" or "ALS" means those medical treatments, procedures, including assessment, and techniques which may be administered or performed by ALS personnel established pursuant to A.R.S. 36-2205.
8. "Agency" means an organization that provides prehospital emergency medical services.
9. "ALS personnel" means a paramedic, or an intermediate certified under Article 6 of this Chapter.
10. "Basic cardiac life support" or "BCLS" means non-invasive external cardiovascular care.

11. "Basic cardiac life support instructor" or "BCLS instructor" means an individual who has successfully completed an American Heart Association, American Red Cross, Medic First Aid or Save-a-Life basic cardiac life support instructor course.
12. "Basic cardiac life support provider" or "BCLS provider" means an individual who has successfully completed a basic life support provider course and has demonstrated competency in 1 and 2 rescuer cardiopulmonary resuscitation and obstructed airway management for adults, children and infants.
13. "Basic life support" or "BLS" means those medical treatments, procedures and techniques which may be administered or performed by a basic emergency medical technician.
14. "Basic life support medical director" means a physician licensed pursuant to A.R.S. Title 32, Chapter 13 or 17, in good standing, who provides administrative medical direction to basic emergency medical technicians.
15. "Challenge course" means a course that prepares and enables specified individuals to apply for and take certification exams in Arizona without repeating an entire training course.
16. "Clinical" means providing direct patient care.
17. "Competency" means ability to perform a skill to the standard of care.
18. "Communication protocols" means written guidelines that provide:
    a. The circumstances and patient conditions which require on-line medical direction;
    b. The facility which will exercise on-line medical direction for a given emergency;
    c. Backup procedures for communications equipment failure.
19. "Conference/Didactic/Lecture session" means a continuing medical education presentation by an individual or a presentation utilizing printed, electronic or audiovisual media that incorporates a post training assessment.
20. "Current status" means successful renewal of advanced and basic cardiac life support training every 2 years.
21. "Designed to exclude bias" means a process that prevents discrimination of individuals based on age, race, religion, sex, ethnic or national origin, or disabilities.
22. "Direct communications" means information and medical direction conveyed by person-to-person, 2-way radio, or telephone conversation.
23. "Distractors" means incorrect answers incorporated in multiple choice test design.
24. "Documented" means a written record.
25. "Emergency medical patient" means an individual who may require: immediate prehospital medical assessment, trauma assessment, treatment, transportation, or evaluation by a physician.
26. "Emergency medical service patient contacts" means patients received by the ALS base hospital from an EMS agency and patient encounters documented by EMT personnel assigned to the base hospital.
27. "EMS" means emergency medical services.
28. "EMSCOM" means the emergency medical services communications system operated by the Arizona Department of Public Safety.
29. "EMT" means Emergency Medical Technician, including:
    a. Paramedics (EMT-P);
    b. Intermediate Emergency Medical Technicians (EMT-I);
    c. Basic Emergency Medical Technicians (EMT-B).
30. "Enrolled" means accepted and registered in a course.
31. "Excused absence" means a leave approved by the training program medical director or training program director.
32. "Field experience" means prehospital assessment and treatment of patients.
33. "Field incident report form" or "First care form" means a record of emergency response activities, completed by an EMT, that includes documentation of the prehospital patient assessment, treatment and transportation.
34. "Good standing" means current and valid certification or licensure that is not under order of probation, suspension or revocation, or under investigation.
35. "Health care provider" means an individual licensed or certified to render medical care to a patient.
36. "Indirect communications" means information and medical direction conveyed by an intermediary from within a certified ALS base hospital.
37. "Instructor intern" means an individual who assists an instructor in teaching in an EMT training program course and assumes, under direct supervision, the instructional and administrative functions of the course.
38. "Local EMS coordinating system" means an agency responsible for the coordination of a regional EMS system in a given area pursuant to A.R.S. § 36-2210.
39. "Medical direction authorities" means a base hospital physician, nurse intermediary or field incident communication nurse who is designated to render on-line medical direction to prehospital EMS personnel from within a certified ALS base hospital.
40. "Official course roster" means a list of all students who successfully complete a training program course.
41. "On-line medical direction" means supervision of prehospital EMS personnel by medical direction authorities through direct or indirect communications from a certified ALS base hospital.
42. "Pediatric advanced life support provider" means an EMT-P who has successfully completed a pediatric advanced life support provider course and has demonstrated competency in pediatric: rhythm interpretation, advanced airway management, peripheral and central intravenous lines, intraosseous infusion, thoracostomy, pharmacologic and electrical dysrhythmia therapy.
43. "Personal relationship" means a spouse, child, grandchild, parent, grandparent, brother or sister of the whole or half blood and their spouses and the parent, brother or sister of the spouse.
44. "Prehospital case reviews" means continuing education conducted by the ALS base hospital under the direction of the base hospital medical director and ALS base hospital prehospital manager for the purpose of reviewing and evaluating field and base hospital personnel performance of the prehospital EMS personnel assigned to the ALS base hospital.
45. "Prehospital provider" means emergency medical technicians and those individuals licensed or certified to render on-scene emergency medical care.
46. "Standing orders" means written orders which authorize prehospital personnel to render certain treatment modalities prior to initiation of direct communication with the ALS base hospital.

47. "Supervised clinical training" means documented experience of an EMT which details the EMT's in-hospital patient care performance supervised by a physician, emergency nurse, or another EMT at the same or higher level of certification.
48. "Supervised vehicular training" means documented experience of an EMT which details the EMT's prehospital patient care performance supervised by a vehicular preceptor.
49. "Tardiness" means arriving after the designated starting time.
50. "Trauma patient management" means a competency based course in prehospital emergency care that includes training in: prehospital emergency scene management, trauma patient assessment, triage standards, emergency transportation criteria, communication, documentation, mechanism of injury, trauma airway management, and shock resuscitation.
51. "Treatment protocols" means prehospital guidelines for utilizing treatments which are adopted pursuant to A.R.S. § 36-2205.
52. "Triage protocols" means prehospital guidelines for the selection of an emergency receiving facility to which emergency patients are transported.
53. "Unexcused absence" means leave that is not approved by the medical director or training program director.
54. "Vehicular preceptor" means a person employed by a base hospital or training program to observe, evaluate, supervise and assist EMTs in the performance of skills during vehicular training.
55. "Vehicular preceptor experience" means observing, evaluating, supervising or assisting EMTs in the performance of skills during vehicular training.
56. "Vehicular ride-along experience" means experience on an emergency vehicle unit to gain prehospital experience, observe the prehospital environment, operational procedures, and to evaluate the performance of EMTs.
57. "Verification" or "verified statement" means a signed document attesting to the validity of statements or claims.

ARTICLE 2. ADVANCED LIFE SUPPORT BASE HOSPTAL CERTIFICATION

R9-25-201. General Requirements (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(6))

A. Each certificate for an advanced life support base hospital shall contain the name and address of the health care institution, health care institution administrator, base hospital medical director, prehospital manager, and the expiration date.
B. The certificate shall be conspicuously posted in the base hospital.
C. The certificate is valid only for the location identified on the certificate.
D. Each base hospital certificate shall be the property of the Department and shall be returned to the Department immediately upon suspension or revocation of the certificate, or upon termination of base hospital services by the health care institution indicated on the certificate.
E. A certificate is valid for a period of 2 years provided the base hospital complies with the standards established in this Article.
F. The health care institution shall immediately notify the Department if it receives notice of Medicare termination, a life safety code violation or is issued a provisional license.
G. The base hospital shall not operate without a medical director or prehospital manager who meets the qualifications established in these rules.

R9-25-202. Application Procedure (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(5), (6))

A. Application for certification and recertification shall be made on a form provided by the Department as shown in Exhibit A. Submission of the application shall constitute permission for a representative from the Division of Emergency Medical Services to audit the applicant's qualifications, as established in this Article.
B. Initial application: The applicant shall submit the following documentation to the Department with the initial application form:
   1. A copy of its current Arizona health care institution license;
   2. Written endorsement of the application by the hospital's governing board or board of trustees;
   3. The curriculum vitae of the base hospital medical director;
   4. The curriculum vitae of the prehospital manager;
   5. A list of all base hospital physicians, and nurse intermediaries responsible to provide prehospital medical direction;
   6. A letter of intent between the applicant and an agency that employs emergency medical technicians, who require medical direction, for the applicant to serve as the agency's base hospital once certification is obtained;
   7. A verified statement that the applicant shall assure the physical presence of a base hospital physician in the hospital to be immediately available to the emergency department to provide on-line medical direction 24 hours a day, 7 days a week;
   8. In regions in which a local emergency medical services coordinating system operates, the applicant may request and submit a written recommendation for certification as a base hospital from the local emergency medical services coordinating system.
C. Recertification application
   1. The applicant shall submit the recertification application to the Department at least 60 days prior to the expiration date of its current certificate.
   2. The applicant shall submit the following documents with the recertification application form:
      a. A copy of its current license as a health care institution;
      b. Written endorsement of the application by the hospital's governing board or board of trustees;
      c. Written verification that the information contained in subsections (B)(3) through (7) of this Section remains unchanged; or, documents required by subsections (B)(3) through (B)(7) of this Section that have changed since submission of the last certification application.
D. Department Audit: Subsequent to the submission of an application for certification or recertification, the Department shall conduct an audit according to the following procedures:
   1. The Department shall verify that the agreements, policies, procedures, plans, programs, equipment and standards required by R9-25-206 are in place, satisfy the requirements of the rule and that the equipment is operational.
   2. The Department shall verify that the information contained in the application and that the base hospital staff meet the qualifications of this Article.
   3. The Department shall notify the applicant in writing of any deficiencies.
   4. The applicant shall have 1 opportunity to correct the deficiencies and have the Department perform a re-audit.

R9-25-203. Denial of Application (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(5),(6))

The director shall deny the application if the applicant:

1. Failed to conform to the requirements of these rules;
2. Filed information that could not be verified.

R9-25-204. Amendment of the Certificate (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(6))

A. The base hospital shall file a written request to amend its certificate within 30 days after a change of address, change in health care institution administrator, base hospital medical director, or prehospital manager.

B. The application shall include:
   1. For a change of address, notification of the new address and the effective date of the relocation;
   2. For a change in health care institution administrator, the name of the new administrator and the effective date of employment;
   3. For a change in base hospital medical director or prehospital manager, the name of the new medical director or prehospital manager, a curriculum vitae, and the effective date of employment.

C. The Department shall issue an amended certificate upon notification of a change of address or change of health care institution administrator. The Department shall issue an amended certificate containing the name of the new medical director or prehospital manager provided the candidate satisfies all required qualifications.

R9-25-205. Transfer of Certificate (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(5),(6))

A. The Health Care Institution may transfer the base hospital certificate if ownership of the institution changes. The transferee shall not begin operation as a base hospital until it receives written notice from the Department that the transfer is approved.

B. The Health Care Institution shall submit an application to the Department at least 60 days prior to the date on which the transfer will occur that contains:
   1. The name of the transferee;
   2. The date of the proposed transfer;
   3. Verification that the health care institution administrator, base hospital medical director, and prehospital manager shall remain the same; or the names of the new administrator, base hospital medical director and prehospital manager and a curriculum vitae of the medical director and prehospital manager;
   4. Verification from the transferee that it has received and shall comply with the rules governing the base hospital operation.

C. The Department shall transfer the certificate without a hearing if the application is complete and the medical director and prehospital manager satisfy the qualifications established in these rules. The certificate shall expire on the expiration date of the certificate that was transferred.

D. The Department shall deny an application that is incomplete or if the medical director or prehospital manager do not satisfy the qualifications mandated in these rules. The applicant may request a hearing to have the denial reviewed. The request shall be made in writing and shall be filed with the Department's Office of Administrative Counsel within 30 days of receipt of denial.

E. The Health Care Institution may correct the deficiencies identified and may resubmit an application to transfer a certificate.

R9-25-206. Base Hospital Authority and Responsibilities (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(6))

A. A certified base hospital shall provide:
   1. Administrative medical direction to emergency medical technicians who require medical direction.
   2. On-line medical direction to emergency medical technicians who require medical direction.
   3. Continuing education that meets the standards established in R9-25-510, R9-25-610 and R9-25-611. Prior Department approval is not required.

B. A certified base hospital may:
   1. Provide advanced skills training, ALS and BLS Refresher Training if it meets the standards established in subsection (I) of this rule.
   2. Utilize Nurse Intermediaries according to the standards established in R9-25-210.

C. Supporting Service Agreement: The Base Hospital shall execute a written contract with an agency which employs emergency medical technicians in a prehospital setting. The contract shall:
   1. Require the base hospital to provide both administrative and on-line medical direction to the prehospital emergency medical technicians who are employed by the agency;
   2. Be reviewed and updated yearly. The Base Hospital shall maintain written verification that the yearly review and update was performed;
   3. Contain an addendum or exhibit that lists the unit number and name of each emergency medical technician assigned to the base hospital;
   4. Require the agency to verify that only emergency medical technicians with current certification are assigned to the base hospital;
   5. Require the agency to notify the base hospital in writing within 30 days of termination, transfer or addition of an emergency medical technician to the base hospital for medical direction. The notification shall include the name, certification expiration date of the emergency medical technician and the effective date of employment, transfer or termination;
   6. Require the base hospital to provide and replenish drug box items;
   7. Contain a provision that restricts the items included in the drug box to those identified in Exhibit B;
   8. Contain a provision that requires adherence to the drug box implementation procedures as shown in Exhibit B;
   9. Establish a procedure to replace disposable, medical and pharmaceutical supplies on the transport vehicle after patient care has been terminated by the agency;
   10. Contain a provision that assures the disposal of contaminated waste meets federal and state requirements;
   11. Contain a provision that adopts a conflict resolution procedure specific to the agency that:
      a. Investigates and resolves patient, physician, prehospital manager, and nurse intermediary complaints about the agency, its procedures and agency personnel; and
      b. Investigates and resolves agency complaints about the base hospital, its procedures, the medical director, emergency physicians, nurse intermediaries, prehospital manager or other base hospital personnel.
   12. Require the agency to have working communication equipment that allows base hospital medical direction to communicate with emergency medical technicians in the field.

13. Contain a provision that establishes a written procedure to withdraw, suspend and establish requirements for medical direction for emergency medical technicians; and, establishes a written procedure for notifying the employing agency and the emergency medical technician of the withdrawal or suspension of medical direction and the requirements for medical direction.

D. The Base Hospital and the agency shall jointly develop and implement:
1. Written policies and procedures that all emergency medical technicians must follow. These policies and procedures shall include:
   a. The form and content of required documentation for each emergency medical service incident;
   b. The procedures that each category of emergency medical technician must follow in patient assessment;
   c. Communication procedures for requesting, providing and receiving medical direction; and
   d. A plan to provide patient outcome data to the agency with a supporting service agreement that protects confidentiality and considers budget constraints.
2. A written quality improvement plan that shall include:
   a. At least 1 continuing quality improvement committee representative of each agency representing the levels of certification for which the base hospital provides medical direction. The committee shall meet at least semi-annually, keep regular meeting minutes, evaluate complaints, develop continuing education courses, cooperatively work on quality management issues and provide updates on prehospital issues which affect the base hospital or agencies with supporting service agreements with the base hospital.
   b. A yearly requirement that the medical director, prehospital manager, physicians, nurses, all base hospital staff and prehospital personnel review and document the review of all protocols adopted pursuant to A.R.S. § 36-2205 and procedures established by the base hospital.
   c. A protocol for identifying emergency medical patients who pose a high-risk because of medical condition, site or complexity of injury.
   d. A system to review the following categories of prehospital patient encounters to assure that both prehospital and base hospital personnel followed established protocols and base hospital procedures:
      i. All refusals to treat;
      ii. All code arrests;
      iii. All "do not resuscitate" cases;
      iv. All emergency medical technician-defibrillator cases; and,
      v. Random review of 5% per month to a maximum of 1000 advanced life support encounters per year with a minimum of 5% or 30 encounters per quarter.
   e. A process and documentation procedure to develop a corrective action plan when review of cases indicates a lapse in protocol or procedure.
3. A process for EMTs assigned to the base hospital to follow for submission of recertification applications to the base hospital prior to filing with the Department.
4. A written process for evaluating the prehospital activities of each EMT to assess the EMT's competency. The process shall require this evaluation to be completed prior to signing the application supporting recertification. The process shall also permit the base hospital medical director to elect to have the EMT-P or EMT-I pass an examination approved by the Department as a prerequisite to recertification if the medical director makes the request in writing submitted with the application. The process shall require the base hospital physician to specify if the EMT-P or EMT-I recertification examination shall contain a written component, practical component or both components.

E. The base hospital shall establish an orientation program for the medical director, prehospital manager, nurse intermediaries and base hospital physicians, that includes:
1. Review of emergency medical service treatment and triage guidelines, policies, and procedures;
2. Review of communication equipment available at the base hospital;
3. Review of prehospital personnel levels of certification, treatment and patient care capabilities;
4. Review of prehospital continuing quality improvement policies;
5. Review of prehospital policy if concerns are identified or complaints are received about the base hospital;
6. Review of Department rules, protocols governing prehospital treatment, and the drug box list;
7. Review of the state and regional emergency medical service system; and,
8. Review of the base hospital continuing education requirements for nurse intermediaries, and base hospital physicians employed at or assigned to the base hospital.

F. The base hospital shall:
1. Assure that all emergency physicians who provide online medical direction to prehospital personnel meet the requirements established in R9-25-209;
2. Assure that all medical direction authorities complete the orientation program bi-annually and all newly hired physicians, nurses, and staff attend the orientation program within 30 days of beginning employment at the base hospital.

G. The base hospital shall provide the necessary communications equipment.
1. The radio equipment shall be operational and compatible with the Arizona Department of Public Safety EMSCOM communications system or a local EMS communication system with a frequency and list of channels approved by the Department of Public Safety. The base hospital shall have communications equipment approved by the Arizona Department of Public Safety compatible with that of the prehospital emergency medical service agency.
2. The equipment shall be operational at all times and be located in the emergency department permitting direct communication with emergency medical service personnel.
3. The base hospital shall provide a dedicated telephone line to enable emergency prehospital care personnel to contact the base hospital directly.
4. All telephone and radio communication between the base hospital and prehospital emergency medical service personnel for the purpose of medical direction shall be recorded. The recording shall be kept for a minimum of 3 months. Should the medical director or prehospital manager identify a potential problem with the prehospital provider's reporting or if a review is required according to the Continuing Quality Improvement Plan, the base hospital shall keep the tape a minimum of 24 months from the date of the event. The tape may be destroyed if the

base hospital makes a written report of the event. The base hospital shall maintain the written report for 24 months from the date of the event.

5. Requirements for the use of biotelemetry equipment may be established by the advanced life support base hospital medical director in the medical control plan for the base hospital.

H. The base hospital shall establish the following communication procedures:

1. Provisions to notify a receiving facility of an incoming patient upon authorizing transport to that facility;
2. A written plan for alternative communications with field personnel in the event of disaster, communication equipment breakdown or repair, power outages, or malfunction.

I. The base hospital shall provide education and training.

1. The Base Hospital shall provide 24 clock hours of continuing education per year that may be offered over 9 months per year.
2. The courses shall follow the Department's requirements as described in Articles 5 and 6 for continuing education for each level of EMT.
3. The base hospital shall provide training for any new Department approved required treatment, protocol, or drug within 90 days of receiving notification that the training has been adopted in rule.
4. The base hospital shall provide facilities, equipment, and audio-visual aids for the continuing education required by this rule.
5. The base hospital shall include prehospital case reviews in the 24 clock hours of continuing education per year. Prehospital case reviews may be incorporated into didactic or clinical skills. The base hospital shall require the review to be prepared under the direction of the prehospital manager and medical director.
6. The ALS Base Hospital may:
   a. Provide advanced training, if it meets the standards established in Exhibit C;
   b. Provide ALS Refresher training that meets the requirements of the Arizona Advanced Life Support Refresher and Challenge Curriculum as shown in Exhibit D. The ALS Base Hospital shall comply with all provisions of R9-25-403, R9-25-404(B), R9-25-406(A), R9-25-407(C), (E), (K), and (L), and R9-25-410;
   c. Provide BLS Refresher training that meets the requirements of the Arizona BLS Refresher Curriculum, 1994, as shown in Exhibit E. The ALS Base Hospital shall comply with all provisions of R9-25-303, R9-25-304(B), R9-25-305, R9-25-307(B), (D), (H), (I), (J), and R9-25-310.

J. Drug Control. The base hospital shall:

1. Establish a written drug box security plan and documentation system;
2. Develop a written narcotic wastage plan.

R9-25-207. Medical Director (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(5),(6))

A. Qualifications.The medical director shall:

1. Be currently licensed in good standing in the state of Arizona as a physician pursuant to A.R.S. Title 32 Chapter 13 or 17; and,
2. Be board-certified in Emergency Medicine by the American Board of Emergency Medicine or the American College of Osteopathic Emergency Physicians, or maintain current provider status in:
   a. Advanced Cardiac Life Support,
   b. Advanced Trauma Life Support according to the American College of Surgeons Committee on Trauma, and
   c. Pediatric Advanced Life Support or American College of Emergency Physicians' pediatric advanced life support,
3. Provide a verified statement indicating at least 24 clock hours teaching experience in prehospital medicine;
4. Have at least 2,000 hours of clinical or administrative time in the 24 months in Emergency Medicine prior to appointment;
5. Not be a base hospital medical director for more than 1 health care institution simultaneously.

B. Responsibilities. The medical director shall:

1. Spend at least 2,000 hours of clinical or administrative time every 24 months in Emergency Medicine;
2. Coordinate the base hospital emergency medical services system, administrative medical direction, on-line medical direction and administrative medical direction of the advanced life support base hospital staff;
3. Complete, within 1 month of beginning employment, the base hospital physician orientation program;
4. Sign a verified statement that the medical director has reviewed the base hospital physician orientation program every 24 months assuring that it meets with the standards of R9-25-206(E) and (F);
5. Provide at least 8 hours per year of continuing education for base hospital personnel assigned to the base hospital. This may be in didactic presentation, skill training, individual counseling about prehospital documentation, run review, patient care, patient assessment, or prehospital procedures and skills;
6. Institute protocols adopted pursuant to A.R.S. § 36-2205.
7. Maintain yearly written verification confirming review of:
   a. Prehospital emergency medical services personnel, policies and procedures;
   b. The medical control plan for the base hospital which includes the following:
      i. Local, regional, and state treatment protocols;
      ii. Local, regional, and state triage protocols;
      iii. Local and regional communication protocols;
8. Review, approve and implement the continuing quality improvement plan that meets the standards established in R9-25-206(D)(2);
9. Establish, review, approve, and implement a plan for evaluating the performance of emergency medical technicians that meets the standards established in R9-25-206(D)(3) and (4);
10. Monitor the performance of all prehospital emergency medical service personnel assigned to the base hospital to insure complete patient assessment and documentation. This review shall be conducted according to the quality improvement plan established pursuant to R9-25-206(C).

R9-25-208. Prehospital Manager (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(5),(6))

A. Qualifications. The prehospital manager shall:

1. Be a registered nurse currently licensed in good standing in the State of Arizona.
2. Have completed courses in advanced cardiac life support, trauma patient management (as shown in Exhibit G) and pediatric advanced life support within the 24 months prior to appointment.
3. Have worked at least 2000 hours in emergency prehospital or critical care, with at least 120 hours in the last 12 months.

4. Have at least 24 hours of teaching experience in prehospital medicine to first responders, basic life support personnel, advanced life support personnel, nurses or physicians within the 36 months prior to appointment.

B. Responsibilities. The prehospital manager shall:
1. Complete a course in advanced cardiac life support and pediatric advanced life support every 24 months.
2. Work at least 1000 hours of clinical, critical care or administrative time in emergency or prehospital nursing every 2 years.
3. Complete the base hospital orientation program within 30 days after beginning employment and yearly thereafter.
4. Maintain yearly written verification confirming review and understanding of:
   a. Prehospital emergency medical services personnel policies and procedures; and,
   b. Medical control plan for the base hospital which includes the elements established in R9-25-206(E).
5. Prepare for and participate in the review of prehospital case reviews.
6. Study and evaluate prehospital emergency medical service safety and efficacy using patient outcome data of patients treated at the base hospital.
7. Participate in establishing and coordinating the Continuing Quality Improvement Plan required by R9-25-206(D)(2).
8. Participate in establishing and coordinating the plan adopted pursuant to R9-25-206(D) to provide for recertification competency of the emergency medical service personnel assigned to the base hospital.
9. Document and review knowledge of continuing education requirements of all levels of emergency medical technicians, nurse intermediaries, and base hospital physicians employed by or assigned to the base hospital.
10. Participate in local and state emergency medical service system design and development.

R9-25-209. Base Hospital Physician (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(5), (6))

A. Qualifications. The Base Hospital Physician shall be licensed in good standing in the State of Arizona as a physician pursuant to Title 32 Chapter 13 or 17 and be board certified in Emergency Medicine by the American Board of Emergency Medicine or the American College of Osteopathic Emergency Physicians; or maintain provider status in:
1. Advanced Cardiac Life Support;
2. Advanced Trauma Life Support according to the American College of Surgeons Committee on Trauma; and,
3. Pediatric Advanced Life Support or American College of Emergency Physicians' pediatric advanced life support course.

B. Responsibilities. The Base Hospital Physician shall:
1. Be responsible for medical direction of pre-hospital emergency medical technicians and base hospital staff.
2. Complete the base hospital orientation program within 30 days after beginning employment at the base hospital.
3. Sign and provide the base hospital administrator with a yearly verified statement confirming review and understanding of:
   a. State, Regional and Local Treatment and Triage Protocols;
   b. Regional and Local Communication Protocols;
   c. The base hospital policies and procedures for prehospital personnel; and,
   d. Base hospital physician requirements.
4. Complete 24 clock hours of vehicular ride-along time within the first year as a base hospital physician, 12 of which shall be within the first 3 months of employment.
5. After the first year of employment, complete any combination of the following that equals 24 clock hours of base hospital continuing education or vehicular experience every 24 months:
   a. Ride-along vehicular time observing prehospital care. 1 hour of ride-along time equals 1 hour of continuing education.
   b. Prepare and teach prehospital continuing education. Each 1 hour session of prehospital continuing education teaching equals 4 hours of continuing education.
   c. Participate in prehospital continuing education that meets the requirements of R9-25-510 and R9-25-610. 1 hour of participation equals 1 hour of continuing education.

R9-25-210. Nurse Intermediary (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(5), (6))

A. Qualifications. The Nurse Intermediary shall:
1. Be a registered nurse currently licensed in good standing in the State of Arizona.
2. Have completed a course in advanced cardiac life support within the last 24 months prior to appointment.
3. Have completed the base hospital orientation program.

B. Responsibilities. The Nurse Intermediary shall:
1. Receive information from the pre-hospital emergency medical technicians and relay on-line medical direction from the base hospital physician to the pre-hospital emergency medical technicians.
2. Maintain current status as an advanced cardiac life support provider.
3. Maintain yearly written verification which confirms:
   a. Review of prehospital emergency medical services personnel policies and procedures of the base hospital.
   b. Review of medical control plan for the base hospital which includes the elements required by R9-25-206(E).
   c. Compliance with continuing education requirements of nurse intermediaries in accordance with R9-25-209(B)(4) and (5).

R9-25-211. Required Records, Reports, and Notifications. (Authorized by A.R.S. §§ 36-2202 (A)(3), (4), 36-2204(5), (6))

The base hospital shall:
1. Maintain written verification of the base hospital's annual review of the supporting service agreements.
2. Notify the Department in writing within 30 days of executing or terminating a supporting service agreement.
3. Notify the Department in writing within 30 days of any termination, withdrawal or suspension of medical direction from an emergency medical technician. Copies of these notifications shall be provided concurrently to the affected EMT and the employing agency.
4. Verify and maintain on file documentation that the medical director, prehospital manager, base hospital physicians, and nurse intermediaries attend the base hospital orientation program required by R9-25-206(E).
5. Provide the Department with a copy of recorded prehospital communications required by R9-25-206, if available, and any documentation or verification required by these rules if requested by the Department in writing.

6. Maintain a yearly log of all patches received by the base hospital. The base hospital shall retain the log for 3 years from the ending date of the log.
7. Maintain a file documenting satisfaction of the medical director and prehospital director qualifications listed in R9-25-207(A) and R9-25-208(A).
8. Maintain written verifications required by R9-25-207(A) and (B) and R9-25-208(A) and (B).

R9-25-212. Department Oversight (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(6))

A. Issuance of the certificate granting base hospital status authorizes the Department to review the required documents, verifications, policies and procedures, personnel qualifications, equipment and operation of the base hospital.
B. The Department may attend any continuing education session offered by the base hospital without prior notification.

R9-25-213. Letter of Censure, Probation, Suspension, Revocation of Certificate (Authorized by A.R.S. §§ 36-2202(A)(3), and (4), and 36-2204(6) and (7))

A. The Director may issue a letter of censure, place on probation suspend or revoke an advanced life support base hospital certification, in whole or in part, if its owners or operators, officers, agents or employees:
   1. Violate any of the rules in this Article;
   2. Submit information required by this Article that it knew or should have known was false;
   3. Refuse Department personnel the right to inspect facilities, equipment or documents as provided in this Article.
B. The Department may request an informal interview with the Base Hospital, if it determines the Base Hospital may have violated subsection (A).
C. The Director may take the following action against the base hospital certificate if a violation of subsection (A) is substantiated:
   1. Issue a letter of censure or an order of probation; or
   2. Suspend or revoke a certificate after notice and opportunity to be heard is provided according to A.R.S. Title 41, Chapter 6 Article 1 and 9 A.A.C. 1, Article 1.

ARTICLE 3. BLS TRAINING PROGRAM CERTIFICATION

R9-25-301. BLS Training Program Certificate (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(1), (3))

A. General Requirements
   1. A BLS Training Program shall obtain a certificate from the Department prior to initiating any EMT-Basic, EMT-Basic refresher, and EMT-Basic special skills training.
   2. Each certificate shall contain the name of the BLS Training Program, the name of the Program Medical Director, the mailing address of the program's administrative office, the certificate number, and the certificate expiration date.
   3. The certificate shall be conspicuously posted in the program's administrative office.
   4. The program shall not transfer the certificate.
   5. The certificate issued to the Training Program shall be the property of the Department and shall be returned to the Department immediately upon suspension or revocation.
   6. A certificate is valid for a period of 2 years provided that the program complies with the conditions of this Article throughout the certification period.
   7. A BLS Training Program shall not conduct training without a Medical Director who meets the qualifications of R9-25-303. A certificate shall be amended and reissued upon notification of a change of Training Program Medical Director.
   8. The certificate shall name only 1 agency and 1 Medical Director.
   9. The BLS Training Program shall maintain a current certificate for the duration of all courses and for 6 months after the course completion date for all courses if the provisions in R9-25-307(I) apply.
B. Initial Certification Application
   1. A BLS Training Program applying for initial certification shall submit the following documents to the Department at least 45 days prior to the projected commencement date of a course:
      a. An application for certification on a form provided by the Department as shown in Exhibit H.
      b. An application for initial certification and recertification shall be signed by an individual with authority to act on behalf of and legally bind the named agency, as applicant.
      c. A copy of all agreements with institutions for use of facilities, use of equipment and for training. To be valid, an agreement shall be in writing and signed by the authorized agent for the BLS Training Program and the institution or service.
      d. A copy of all agreements with ambulance or rescue services for vehicular training when the Training Program offers special skills training.
      e. A curriculum vitae for the Training Program Medical Director and Training Program Director.
      f. A list of all instructors to include the following: name, contact telephone number, State of Arizona certification or licensure number and expiration date, agency or institution where employed or affiliated, summary of teaching experience relating to emergency medicine, critical care or prehospital care that demonstrate compliance with the instructor qualifications listed in R9-25-305.
      g. A copy of disclosure documents required by R9-25-309.
      h. A list of medical equipment owned or leased by the BLS Training Program that meets the quantity specified in the BLS Training Program Equipment List, as shown in Exhibit I.
      i. An inventory of medical supplies identified in the BLS Training Program Equipment List, as shown in Exhibit I, in sufficient quantities to enable each student to successfully accomplish the lesson objectives. The BLS Training Program shall assure that each student has adequate personal protection to meet OSHA and CDC standards for Body Substance Isolation, described in Bloodborne Pathogens 29 C.F.R. § 1910.1930, revised July 1, 1993 §§ II and IV of "The Guidelines for Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Health Care and Public Safety Workers," published by the U.S. Department of Health and Human Services, February 1989, incorporated by reference, and on file with the Secretary of State.
      j. A certificate of insurance from a company licensed to do business in the State of Arizona or proof of self insurance for $500,000 malpractice and $500,000 liability protecting students, instructors, and training facilities.
      k. Copies of behavioral objectives for clinical rotations for all courses that comply with the curriculum requirements in R9-25-307(E) and behavioral objec-

tives for vehicular rotations for special skills courses that comply with the curriculum requirements in R9-25-307(I)(4).

2. The Department shall not accept an incomplete application and shall return the incomplete application to the applicant for completion and resubmission.
3. The BLS Training Program shall not begin training students until the certificate is issued.

C. Amendment of Certificate
1. The BLS Training Program shall notify the Department within 5 working days if its Medical Director resigns, is terminated or is otherwise unable to perform the duties required under R9-25-303(B).
2. The BLS Training Program shall file a written request with the Department to have its certificate amended upon the change of the Training Program Medical Director.
3. The request shall include:
   a. The name of the new Medical Director.
   b. A copy of the new Medical Director's curriculum vitae.
4. The BLS Training Program shall cease training until a new Medical Director is appointed who meets the qualifications of R9-25-303 and receives verbal or written approval by the Department. The Department shall then issue an amended certificate.

D. Renewal of Certificate
1. A BLS Training Program shall submit an application for recertification to the Department at least 45 days prior to the expiration of its current certificate, on a form provided by the Department and shown in Exhibit H.
2. The application shall contain the documents identified in R9-25-301(B)(1) that were amended, revised, or added since initial certification; or, a written verification that revised documents are not submitted because the information submitted with the initial application is unchanged.
3. An applicant for BLS Training Program recertification shall have conducted at least 1 EMT-Basic, or EMT-Basic refresher course during the previous certification period.
4. A BLS Training Program which instituted a corrective action plan or is on probation may apply for renewal of its certificate. The Director may issue a renewal certificate and order that the BLS Training Program complete the terms of the corrective action plan or probation as a condition of the issuance of the renewal certificate.

E. Denial of Application
1. The Department shall deny an application that does not meet the requirements for initial certification or renewal.
2. The Director may deny an initial or renewal application for a BLS Training Program certificate if its owners or operators have held a previous certificate and they, their officers, agents or employees:
   a. Intentionally violated any of the rules in this Article.
   b. Knowingly aided, permitted, or abetted the commission of any crime involving medical and health related services.
   c. Submitted to the Department information required by this Article that it knew or should have known was false.
   d. Refused Department personnel access to inspect facilities, equipment or required documents.

R9-25-302. Operating Authority (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(1), (3))

Scope: A BLS Training Program may conduct EMT-Basic and EMT-Basic refresher courses, and EMT-Basic special skills courses.

1. A BLS Training Program shall make all notifications and maintain all documentation required by R9-25-307 and R9-25-304(B)(4) separately, for each course.
2. The BLS Training Program shall not allow students to transfer between courses of different levels.
3. The BLS Training Program may allow students to attend didactic presentations in another concurrent course as long as the total number of students attending the didactic presentation is in accordance with R9-25-307(B)(2)(a).
4. Clinical and vehicular rotations shall be conducted utilizing institutions, agencies and preceptors that are currently licensed or certified in the State of Arizona.

R9-25-303. Medical Director (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(1), (3))

A. Qualifications: The Medical Director of a BLS Training Program shall:
1. Be licensed as a physician pursuant to Title 32 Chapter 13 or 17, in good standing, in the State of Arizona and maintain licensure for the term of the training program certificate.
2. Be board certified by the American College of Emergency Physicians or the American College of Emergency Osteopathic Physicians, or have worked a minimum of 1000 clinical hours in the emergency department of a licensed health care institution.

B. Responsibilities: The Medical Director of a BLS Training Program shall:
1. Review and approve all course outlines and lesson plans in writing to assure they are consistent with the Arizona Basic Life Support Curriculum, 1994, as shown in Exhibit N; and Arizona Special Skills Curriculum, 1994, as shown in Exhibit K, and do not exceed the scope of practice established pursuant to A.R.S. § 36-2205.
2. Complete and sign the BLS Training Program Course Completion Report as shown in Exhibit L, verifying course completion and skill competency for all students.

R9-25-304. BLS Training Program Director (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(1), (3))

A. Qualifications: The BLS Training Program Director shall:
1. Be currently licensed or certified for a minimum of 1 year and in good standing in the State of Arizona as a physician, registered nurse, intermediate or paramedic and maintain licensure or certification for the term of the Training Program certificate.
2. Have successfully completed a course in advanced cardiac life support within the preceding 24 months and every 24 months thereafter.
3. Have at least 1000 hours of clinical experience or 80 hours teaching experience as a physician, registered nurse, intermediate or paramedic in prehospital care, emergency medicine, or critical care within the last 2 years.

B. Responsibilities: The BLS Training Program Director shall:
1. Schedule classes, instructors, preceptors, facilities, clinical/vehicular rotations and equipment for each class.
2. Assure that classes, clinical and vehicular rotations are conducted as scheduled and adhere to the lesson plans and objectives and all requirements in R9-25-307.
3. Assure that instructors and equipment are present at each class.
4. Require and maintain the following records that contain the certificate number of the BLS Training Program and the names of the Medical Director and Training Program Director:

a. Attendance logs that include the class title, location, date, length of lecture and the name of each student who attended the lecture.
b. A gradebook for each course that includes each student's grade for all exams, projects and evaluations. The gradebook shall indicate if a student dropped, withdrew or was issued an incomplete.
c. Clinical rotation logs for each student rotation that include the student's name, clinical area. For special skills courses, the logs shall contain the student's name, clinical area, a description of the skills completed by the student and shall be signed and dated by the preceptor responsible for the rotation.
d. Vehicular logs for each student's rotation in special skills courses that include the student's name, agency's name, unit number, field incident number, a description of skills completed by the student and identification of each call as BLS or ALS. The logs shall be signed and dated by the preceptor responsible for the rotation.
e. All examinations taken and graded in each class.
f. A Course schedule that shall include the location, date, time, topic, duration and instructor for each class.
g. Skills evaluation sheets required by R9-25-307(C)(4).
h. For special skills courses, a copy of the EMS field incident report forms completed and signed by the student or preceptor and co-signed by the student and preceptor for all patient assessments, medical care, communications or treatments provided by the student.
i. For special skills courses, performance evaluations for each student completed and signed by the Training Program Director or instructor responsible for the course and the student. These evaluations shall be conducted at least once during the course and shall include: the student's name, date of evaluation, attendance record, grades, areas of proficiencies and deficiencies and a plan for improvement, if deficiencies were noted.
j. Assigned written projects.
k. Instructor evaluation forms completed by students for each course instructor teaching over 10 hours.
l. Lesson Plans that cover the objectives in the Arizona Basic Life Support Curriculum, 1994, as shown in Exhibit N; and Arizona Special Skills Curriculum, 1994, as shown in Exhibit K.

5. Complete the BLS Training Program Course Completion Report as shown in Exhibit L, verifying course completion and skill competency for all students.
6. Within 10 working days after completion of each course, submit to the Department an official course roster and a course completion report on forms provided by the Department as shown in Exhibits L and M, respectively. The course roster shall contain only the names of students that complete all didactic and clinical requirements outlined in the Arizona Basic Life Support Curriculum, 1994, as shown in Exhibit N. The BLS Training Program may submit addendum rosters up to 6 months after the course for students who complete all requirements after the official course completion date.
7. For Specialized Skills courses, the course roster shall contain only the names of students that complete all didactic, clinical and vehicular requirements outlined in Arizona Special Skills Curriculum, 1994, as shown in Exhibit K.
8. Prepare or review a written evaluation of each student and instructor at least once during a course.
9. Assist each student in completing the application process as necessary for the State and National Registry certification examinations.
10. Coordinate with the Department for administration of all state required testing.
11. Coordinate and schedule the National Registry Examination in compliance with The National Registry of Emergency Medical Technicians Basic Level Examination Coordinator's Manual, May 1992, and no other amendments, incorporated herein by reference and on file with the office of the Secretary of State.

R9-25-305. Instructor (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(1), (3))

A. Each BLS course shall be taught by an instructor or team of 2 instructors who meet the following qualifications:
   1. Hold current licensure or certification in the State of Arizona as a physician, registered nurse, intermediate or paramedic.
   2. Maintain current BCLS instructor status for EMT-Basic.
   3. Have successfully completed a course in advanced cardiac life support within the preceding 24 months and every 24 months thereafter.
   4. Have at least 500 hours of clinical experience or 40 hours teaching experience as a physician, registered nurse, intermediate or paramedic in prehospital care, emergency medicine, or critical care within the last 2 years.
   5. Complete an EMT instructional strategies program that meets the requirements of Instructional Strategies for EMS Instructors as shown in Exhibit O.
   6. Have served as an instructor intern for 1 complete BLS training course at the level for which they will instruct.
B. Responsibilities: The Instructor shall:
   1. Assure adherence to the lesson plans and objectives of the didactic portion of the course by attending all didactic and skills presentations.
   2. For special skills courses, meet with the department head of the institution and service which provides the clinical and vehicular rotations prior to beginning the rotation to provide and review the behavioral objectives, preceptor qualifications and responsibilities for each rotation.
   3. Collect and forward documents required under R9-25-304(B)(4) to the Training Program Director.

R9-25-306. Preceptor Qualifications (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(1), (3))

A. Clinical Preceptors shall be a registered nurse, physician, paramedic or intermediate licensed or certified by the State of Arizona.
B. For special skills courses, vehicular preceptors shall be:
   1. An intermediate with defibrillation status or paramedic with current Arizona state certification and at least 2 years of field experience within the last 5 years.
   2. A physician with 2 years of pre-hospital, emergency medicine or critical care experience within the last 5 years.
   3. A registered nurse who has:
      a. Either:
         i. Received instruction from the Medical Director in advanced airway management and has dem-

onstrated competency in endotracheal intubation utilizing the standards of the National Registry of Emergency Medical Technicians, incorporated herein by reference and on file with the Secretary of State, as verified by the medical director, or

ii. Performs endotracheal intubation as a part of their current nursing practice;

b. And either:

i. 2080 hours emergency medicine, critical care or pre-hospital care clinical or teaching experience within the last 2 years; or

ii. 200 hours experience as an instructor in a BLS training Program with continuing vehicular preceptor experience within the last 2 years.

R9-25-307. BLS Training Program Course Requirements (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(1), (3))

A. Department Notifications

1. The BLS Training Program shall include its certificate number on all correspondence with the Department.

2. At least 45 days prior to commencing each course, the BLS Training Program shall submit to the Department:

a. A course approval application as shown in Exhibit H.

b. For special skills courses, a prospective course roster listing all students to be screened for the course on the form as shown in Exhibit M.

c. A course schedule that satisfies the minimum hourly requirements listed in paragraph (C) of this section to include: the date of each class, the module of Arizona Basic Life Support Curriculum to be covered in each class, topic, class duration, class location and the identity of the instructor for each lecture. The Department shall notify the BLS Training Program in writing within 30 days after it receives of the course schedule whether the schedule satisfies the curriculum requirements or has deficiencies. The Department shall reject a schedule that does not satisfy the requirements in paragraph (C) of this section and shall notify the BLS Training Program of the deficiencies in writing. The BLS Training Program shall submit an amended schedule within 14 days after receiving the notification. The BLS Training Program shall not commence training until it submits a course schedule that complies with paragraph (C) of this section and is approved by the Department in writing.

3. The BLS Training Program shall notify the Department of any changes in the Training Program Director or instructor within 10 working days of the change.

B. Class Structure

1. Facility Requirements: The BLS Training Program shall ensure that each didactic session be held in a facility that provides:

a. Restrooms within the building or campus, accessible or key available in the classroom during class hours.

b. A minimum of 1 chair and desk or table space per student.

c. A temperature range between 65 degrees Fahrenheit and 85 degrees Fahrenheit.

d. Lighting that evenly illuminates the room to allow the student to function within the classroom setting.

e. An environment that is free of visual and auditory distractions.

2. Class size:

a. Didactic: Each BLS Training Program course shall be limited to 24 students. In the lecture format, the BLS Training Program may combine 2 EMT-Basic courses for a maximum of 48 students. This combined group of 2 courses shall not exceed 15 hours of the total didactic curriculum. The Training Program shall not allow students enrolled in a refresher course to attend EMT-Basic courses.

b. Skills: Skills instruction and evaluation shall be limited to a maximum ratio of 8 students to 1 instructor. The BLS Training Program shall not combine courses for skills instruction or evaluation.

3. Classroom management: The BLS Training Program shall prohibit students not enrolled in a course from attending didactic or skills instruction and evaluation.

C. Curriculum Requirements

1. Each course conducted by the BLS Training Program shall adhere to the requirements of the Arizona Basic Life Support Curriculum, 1994, as shown in Exhibit N.

2. Training for additional or subsequent protocols adopted pursuant to A.R.S. § 36-2205 shall not be implemented until the written training is adopted or amended in rule pursuant to the Arizona Administrative Procedure Act.

3. The BLS Training Program shall assure total completion of the course by offering make-up sessions for all classes required for certification that are cancelled during a course.

4. The BLS Training Program shall utilize all Basic Level Practical Examination forms developed by The National Registry of Emergency Medical Technicians, incorporated herein by reference and on file with the Secretary of State, for skills evaluations.

D. Body Substance Isolation:

The BLS Training Program shall assure compliance with all OSHA requirements for instructors and students while in didactic, skills, clinical and vehicular training as described in Bloodborne Pathogens, 29 C.F.R. § 1910.1030, revised July 1, 1993, and §§ II and IV of "The Guidelines for Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Health Care and Public Safety Workers", incorporated herein by reference and on file with the Secretary of State.

E. Clinical Rotation Requirements for EMT-Basic.

1. The BLS Training Program shall assure that each student receives the required hours in each clinical area described in the Arizona Basic Life Support Curriculum, 1994, as shown in Exhibit N for the training course in which the student is enrolled.

2. After completion of specific didactic and skills modules, all EMT-Basic students shall complete 4 sets of vital signs during clinical rotations and the following skills, if the opportunity presents itself and under the direct supervision of the clinical preceptor:

a. Bag-Valve-Mask ventilation.

b. 1 and 2 person cardiopulmonary resuscitation.

c. 1 and 2 person pediatric resuscitation.

d. Infant resuscitation.

e. Adult, pediatric, and infant foreign body airway obstruction techniques.

f. Pneumatic anti-shock garment removal under the direction and supervision of a physician.

g. Initial patient assessment.

h. Assist with monitoring intravenous lines.

i. Facilitation of patient medication.

j. Application of automatic or semiautomatic defibrillation.

3. The EMT-Basic student shall not perform patient care documentation on the hospital or institution record unless authorized by and performed under the direct supervision of the clinical preceptor.
4. The BLS Training Program shall require that clinical preceptors be present and directly observe all student related patient care.
5. The BLS Training Program shall require that the clinical preceptors sign the student's clinical attendance and evaluation forms verifying completion of the rotation.
6. The BLS Training Program shall assure that procedures and techniques administered by the student are authorized pursuant to A.R.S. § 36-2205.

F. Examinations for EMT-Basic courses.
1. The BLS Training Program may develop and shall keep on file course examinations, in addition to the final examination, given at the discretion of the Training Program Director or Medical Director.
2. The BLS Training Program shall develop and administer final comprehensive written and practical examinations to all students prior to the completion of the course that meet the following standards:
a. Written Examination
i. EMT-Basic: The final exam shall consist of 150 multiple choice questions utilizing 1 absolutely correct answer, 1 incorrect answer and 2 distractors neither of which is "all of the above" or "none of the above." The examination shall cover the learning objectives of the Arizona Basic Life Support Curriculum, 1994, as shown in Exhibit N, in the following proportions:

Medicolegal, Patient Handling and Transportation	10 questions
Anatomy and Physiology and Patient Assessment	10 questions
Breathing, Resuscitation and CPR	25 questions
Wounds, Bleeding, Shock, Pneumatic Anti-shock Garments	10 questions
Medical Emergencies	10 questions
Injuries to the Head, Neck, Spine, Abdomen and Genitalia	15 questions
Fractures and Dislocations	10 questions
Environmental Emergencies and Hazardous Materials	10 questions
Emergency Childbirth	10 questions
Psychological Aspects	10 questions
Medication Administration	10 questions
I.V. Monitoring	10 questions
Automatic/Semiautomatic Defibrillation	10 questions

ii. The minimum passing grade on the final written comprehensive examination shall be no less than 75%.
iii. The BLS Training Program may allow a student a maximum of 3 attempts to pass the final written, comprehensive examination. If the student does not attain the minimum passing grade on the written comprehensive examination on the final attempt, the student shall be considered ineligible to complete the program. To be eligible for certification, the ineligible student shall reapply to, be accepted into, and successfully complete an entire training program.
b. Practical Examination
i. The BLS Training Program shall administer a final comprehensive, practical skills examination utilizing the forms required by R9-25-307(C)(4).
ii. The minimum passing grade on the final, comprehensive practical skills examination shall be 80% of possible points in each skill. Performing any of the elements listed in the critical criteria section of the testing form shall result in automatic failure of that station, regardless of the total of points accumulated.
iii. The BLS Training Program may allow a student a maximum of 3 attempts to pass each skill of the final comprehensive practical examination. If the student does not attain the minimum passing grade on the practical examination on the final attempt, the student shall be considered ineligible to complete the program. To be eligible for certification, the ineligible student shall reapply to, be accepted into and successfully complete an entire training program.

G. Course Completion Requirements: The BLS Training Program shall allow students who have failed to complete clinical requirements no more than 6 months from the official course completion date to complete the requirements. The BLS Training Program shall fail students who do not complete all requirements within 6 months. If the student does not complete all requirements within 6 months, the student shall be considered ineligible to complete the course. To be eligible for certification, the ineligible student shall reapply to, be accepted into and successfully complete an entire training program.

H. Refresher courses: The BLS Training Program may offer refresher courses that meet the requirements of the Arizona BLS Refresher Curriculum, 1994, as shown in Exhibit E.

I. Special Skills Courses.
1. The BLS Training Program may offer special skills courses for individuals certified as EMT-Basic in good standing. The special skills courses shall be separate from all other BLS Training Courses.
2. Student qualifications: Prospective students shall be currently certified in the State of Arizona as an EMT-Basic and in good standing.
3. Special skills curriculum:
a. The BLS Training Program shall assure that medications, treatments, procedures and techniques administered by the student are authorized pursuant to A.R.S. § 36-2205.

b. The BLS Training Program shall assure that each special skills course adheres to the didactic and vehicular requirements contained in the Special Skills Course Curriculum, 1994, as shown in Exhibit K.

c. The BLS Training Program shall permit special skills students to begin the vehicular rotation only after all skills and didactic components of the course are successfully completed.

4. Vehicular Rotation Requirements.

a. The BLS Training Program shall assure that each student receives the minimum required vehicular objectives and hours of vehicular training described in the Arizona Basic Life Support Curriculum - Special Skills Vehicular Requirements, 1994, as shown in Exhibit R.

b. The BLS Training Program offering the EMT-Basic special skills course shall assure that a ratio of 1 preceptor to 1 student is maintained for all vehicular rotations.

c. The BLS Training Program shall require that the preceptor be present and observe all student related patient care and co-sign the field incident report form.

d. The BLS Training Program shall assure that medications, treatments, procedures and techniques administered by the student are authorized pursuant to A.R.S. § 36-2205.

5. Special skills courses examinations: The BLS Training Program shall administer final written and practical examinations to all students prior to completion of the course that meet the following standards:

a. Written examination

i. The final exam shall consist of 50 multiple choice questions utilizing 1 absolutely correct answer, 1 incorrect answer and 2 distractors neither of which is "all of the above" or "none of the above." The examination shall cover the learning objectives of the Arizona Special Skills Curriculum, 1994, as shown as Exhibit K, in the following proportions:

Medical-Legal, patient handling and transportation	10 questions
Anatomy and Physiology and Patient Assessment	10 questions
Airway, breathing, resuscitation and CPR	5 questions
Trauma	10 questions
Airway Adjuncts	5 questions
Intubation	10 questions

ii. The minimum passing grade on the final written comprehensive exam shall be no less than 75%.

iii. The BLS Training Program may allow a student a maximum of 3 attempts to pass the final written, comprehensive examination. If the student does not attain the minimum passing grade on the written comprehensive examination on the final attempt, the student shall be considered ineligible to complete the program. To be eligible for certification, the student shall reapply, be accepted into, and successfully complete the training program.

b. Practical Examinations:

i. The BLS Training Program shall administer a final comprehensive, practical skills examination utilizing the forms identified in the National Registry of Emergency Medical Technicians' EMT-Basic Practical Examination Users Guide, May 1992, incorporated herein by reference and on file with the Secretary of State, following completion of the didactic component of the course.

ii. The minimum passing grade on the final, comprehensive practical skills examination shall be 80% of possible points in each skill. Performing any of the elements listed in the critical criteria section of the testing form shall result in automatic failure of that station.

iii. The BLS Training Program may allow a student a maximum of 3 attempts to pass each skill of the final comprehensive practical examination. If the student does not attain the minimum passing grade on the practical examinations on the final attempt, the student shall be considered ineligible to complete the program. To be eligible for certification, the student shall reapply, be accepted into, and successfully complete the training program.

J. Records Maintenance: The BLS Training Program shall archive all student records from all BLS courses for 2 years from course commencement. These records shall include: the student's name, attendance record, grades, practical skills evaluations including clinical and vehicular records, course schedules and master copies of all examinations.

R9-25-308. Trainee Prerequisites (Authorized by A.R.S. §§ 36-2202(A)(3), (4), 36-2204(1), (3))

A. Each applicant shall be at least 18 years of age prior to applying to the BLS Training Program.

B. Each applicant shall have a current Healthcare Provider level CPR card prior to applying to the BLS Training Program.

C. Each applicant shall demonstrate proficiency in reading at the ninth grade level. Prospective students shall demonstrate reading proficiency by scoring at the ninth grade level or higher on the Nelson-Denney Examination or ABEL Examination or by attaining a minimum score of 41 on the Assessment of Skills for Successful Entry and Transfer (ASSET) Examination.

D. Each applicant shall provide proof of:

1. TB testing or chest x-ray with a negative result within 6 months prior to application.

2. Immunity to Rubella (German Measles) determined as follows:

a. Persons born before January 1, 1942 are considered immune to Rubella (German Measles).

b. Persons born after January 1, 1942 are considered immune to Rubella if:

i. The person has a documented record of having received 1 dose of live Rubella vaccine since June 1, 1969 on or after their first birthday, or

ii. Documented laboratory confirmation of immunity to Rubella. Physician diagnosis is not acceptable.

3. Immunity to Rubeola (Measles) determined as follows:

a. Persons born before January 1, 1957, are considered immune to Rubeola and Mumps.

b. Persons born on or after January 1, 1957, are considered immune to Rubeola if:
   i. The person has a documented record of having received 2 doses of live measles vaccine since January 1, 1968, on or after their first birthday, or
   ii. Documented laboratory confirmation of immunity to Rubeola. Physician diagnosis is not acceptable.

R9-25-309. Disclosure Documents (Authorized by A.R.S. § 36-2202(A)(4))

A. The BLS Training Program shall provide all trainee applicants with the following information in writing:
   1. A description of the BLS Training Program curriculum and graduation requirements.
   2. A list of books, equipment and supplies that the student must purchase.
   3. A notification that the ability to perform certain physical activities is a mandatory requirement for both graduation and state certification and that the inability to perform these activities may disqualify the student from both graduation from the BLS Training Program and state certification.
   4. A notification that it is the responsibility of the applicant to complete the BLS Training Program course, including final testing, within 6 months of the course completion date in order to be eligible for graduation.
   5. Copies of BLS Training Program policies and procedures that govern student conduct. The minimal requirements acceptable for Program Policy and Procedure Manuals shall be:
      a. Attendance
         i. Unexcused absences from didactic classes or clinical or vehicular rotations shall render the student ineligible to complete the course.
         ii. Excused absences and tardiness shall not exceed 16 hours.
         iii. Excused absences and tardiness during the didactic portion of the program shall be made up under the direction of the instructor through individual instruction or documented self study projects.
         iv. Clinical and vehicular excused absences shall be rescheduled either prior to the course completion date or according to the time constraints in R9-25-307(G). A student shall arrange to make up clinical and vehicular excused absences or tardiness through the Program Director.
         v. Students who contract a contagious disease identified in subsection (14) of this rule during the course shall not participate in didactic, clinical or vehicular activities until they provide written documentation from their physician that they are no longer contagious. If the excused absence exceeds 16 didactic hours, the student shall not be eligible to complete the course.
      b. Grading - The Program shall establish a grading policy that requires a minimum score no less than 75% proficiency in didactic and 80% proficiency in practical skills testing.
   6. Notification that an EMT-Basic applicant shall successfully complete written and practical examinations and all clinical rotations for State certification.
   7. Notification that the requirements for EMT-Basic, and special skills certification are located in the Arizona Administrative Code Article 5, and can be found in public libraries.
   8. Notification that the Department does not regulate or insure the financial viability of the BLS Training Program.
   9. Notification that the student is required to maintain a current CPR card throughout the training course or else be expelled from the course.
   10. Notification that for special skills courses, the student shall maintain current Arizona EMT certification and a current CPR card throughout the special skills course or be expelled from the course.
   11. Notification of required proof of immunity or immunization and negative TB test as defined in R9-25-308(D).
   12. Notification that a student shall provide evidence of annual TB testing while enrolled in the program.
   13. Notification that a student who contracts Tuberculosis, Rubella, Rubeola, Mumps or Hepatitis during the course, shall not be allowed to participate in didactic, clinical or vehicular activities until they provide written documentation from their physician that they are no longer contagious.
   14. Notification that a student may be required to submit to a drug screening or meet other requirements before beginning a clinical rotation.

R9-25-310. Quality Management Program (Authorized by A.R.S. § 36-2202(A)(4))

A. Application by the BLS Training Program for certification or recertification shall constitute agreement for participation in the quality management program.
B. During the term of certification, the Department's representatives may evaluate the quality of the Training Program pursuant to the rules established in this Article.
C. Evaluation shall consist, in whole or in part, of the following components:
   1. Site visit
      a. Each site visit shall consist of the Department's representative attending a scheduled class to: observe the training scheduled to occur, review the required records, interview students and inspect equipment, supplies and the physical location. The Department shall notify the Training Program Director of the site visit at least 24 hours prior to the visit.
      b. During the visit, the Training Program Director or instructor shall make available to the Department's representative all requested records pertaining to the class.
      c. During the site visit the Department's representative shall evaluate:
         i. Records Management - The accuracy and currency of all records and paperwork required by this Article.
         ii. Classroom Structure - The physical conditions in the classroom required in R9-25-307(B).
         iii. Equipment and supplies as required in R9-25-301 subsection (B), paragraphs (1)(g) and (h).
         iv. Instructor compliance with the learning objectives of the Arizona Basic Life Support Curriculum, 1994, as shown in Exhibit N; and Arizona Special Skills Curriculum, 1994, as shown in Exhibit K, for each class.
         v. At the conclusion of each site visit, the Department's representative shall meet with the assigned instructor and verbally review the

evaluation, including feedback and recommendations of the Department's representative. The Department shall prepare and make a written report of the site visit for the Training Program Director within 10 working days after completion of the site visit. If the written report contains a request for a corrective action plan, the report shall refer to the applicable section of the rules for guidance.

2. Analysis of State certification examination results: The BLS Training Program shall maintain a cumulative pass/fail ratio for all students taking the certification examination. The minimum ratio of students passing the certification examination shall be at least 70%.
3. Customer Service Surveys:
   a. The Department shall conduct customer service surveys of students, instructors, preceptors, and agencies contracted with the training program to provide clinical or vehicular rotations.
   b. The surveys shall contain:
      i. The BLS Training Program's name.
      ii. The Training Program Director's name.
      iii. The Training Program Medical Director's name.
      iv. The name and contact phone number of the survey respondent.
      v. A statement that the survey respondent shall remain anonymous unless the respondent authorizes their identity be revealed to the BLS Training Program.
      vi. Questions relevant to the role of the respondent to determine compliance with this Article.
   c. The survey question design shall elicit a "yes" or "no" response with space for comments.
   d. The Department shall maintain the results of each survey and shall forward a copy to the BLS Training Program.
   e. Any survey that is returned with a "no" response shall be investigated by the Department to determine whether a rule violation has occurred. If a violation occurred, the Department shall notify the BLS Training Program who shall develop a corrective action plan as described in this rule.

D. If corrective action is necessary, the BLS Training Program shall develop a corrective action plan within 20 working days of notification by the Department. The BLS Training Program shall submit this corrective action plan to the Department for approval. An acceptable corrective action plan shall include:
   1. The specific program deficiency including the rule violated, completed by the Department.
   2. The plan for correction of the deficiency and the time line for implementation of the correction, completed by the BLS Training Program.
   3. A step by step procedure that the BLS Training Program shall follow to comply with the rule and a time line for implementation that corrects the deficiency without delay.

E. If the Training Program develops a corrective action plan that does not comply with this rule or the Training Program is unable to meet the terms of the plan, the Department may initiate administrative proceedings against the Training Program's certificate. These proceedings may result in a letter of censure, probation, suspension or revocation of the Training Program's certificate.

R9-25-311. Letter of Censure, Probation, Suspension, Revocation of Certificate (Authorized by A.R.S. § 36-2202(A)(4))

A. The Director may issue a letter of censure, place on probation, suspend or revoke a BLS Training Program certificate, in whole or in part, if its owners or operators, officers, agents or employees:
   1. Violate any of the rules in this Article.
   2. Knowingly commit, aid, permit, or abet the commission of any crime involving medical and health related services.
   3. Submit to the Department information required by this Article that it knew or should have known was false.
   4. Refuse Department personnel access to inspect facilities, equipment and documents.

B. The Department may request an informal interview with the BLS Training Program, if it determines the BLS Training Program may have violated Subsection (A) of this rule.

C. The Director may take the following action against the certificate if a violation of paragraph (A) is substantiated:
   1. Issue a letter of censure, or an order of probation.
   2. Suspend or revoke a certificate after notice and opportunity to be heard is given according to the procedures described in Title 41, Chapter 6, Article 1 and Chapter 1, Article 1 of this Title.

D. The Department may suspend or revoke the certificate of a BLS Training Program during an active training course for failure to conform to the rules of this Article. In the event that the BLS Training Program's certificate is suspended or revoked during an active training course, the Department reserves the right to refuse to certificate graduates of that Training Program if it determines that the graduates did not satisfy all course requirements. If such a determination is made, all students and graduates of the program shall be so notified in writing by the Department.

ARTICLE 4. ALS TRAINING PROGRAM CERTIFICATION EMT-INTERMEDIATE AND EMT-PARAMEDIC

R9-25-401. ALS Training Program Certificate (Authorized by A.R.S. §§ 36-2202(A)(3) and (4), 36-2204(1) and (3))

A. General Requirements
   1. An ALS training program shall provide training only after obtaining a certificate from the Department.
   2. Each certificate shall contain the name of the ALS training program, the name of the program medical director, the mailing address of the program's administrative office, the certificate number, and the certificate expiration date.
   3. The certificate shall be conspicuously posted in the program's administrative office.
   4. The program shall not transfer the certificate.
   5. The certificate issued to the training program shall be the property of the Department and shall be returned to the Department immediately upon suspension or revocation.
   6. A certificate is valid for a period of 2 years provided that the program complies with the conditions of this Article throughout the certification period.
   7. An ALS training program shall not conduct training without a Medical Director who meets the qualifications of R9-25-403. A certificate shall be amended and reissued upon notification of a change of Training Program Medical Director.
   8. The certificate shall name only 1 agency and 1 Medical Director.

9. The ALS Training Program shall maintain a current certificate for the duration of all courses and for 6 months after the course completion date for all courses if the provisions in R9-25-407(I) apply.

B. Initial Certification Application
1. An ALS Training Program applying for initial certification shall submit the following documents to the Department at least 45 days prior to the projected commencement date of a course:
a. An application for certification on a form provided by the Department as shown in Exhibit S.
b. An application for initial certification shall be signed by an individual with authority to act on behalf of and legally bind the named agency as applicant.
c. A copy of all agreements with institutions, ambulance or rescue services for use of facilities, use of equipment and for training. To be valid, an agreement shall be in writing and signed by the authorized agent for the ALS Training Program and the institution or service.
d. A curriculum vitae for the Training Program Medical Director and Training Program Director.
e. A list of all faculty to include the following: name, contact telephone number, State of Arizona certification or licensure number and expiration date, agency or institution where employed or affiliated, summary of teaching experience relating to emergency medicine, critical care or prehospital care that demonstrate compliance with the faculty qualifications listed in R9-25-406.
f. A copy of disclosure documents required by R9-25-409.
g. A list of medical equipment owned or leased by the ALS Training Program that meets the quantity specified in the ALS Training Program Equipment List, as shown in Exhibit T.
h. An inventory of medical supplies identified in the ALS Training Program Equipment List, as shown in Exhibit T, in sufficient quantities to enable each student to successfully accomplish the lesson objectives. The ALS Training Program shall assure that each student has adequate personal protection to meet OSHA standards for Body Substance Isolation, described in Bloodborne Pathogens 29 C.F.R. § 1910.1930, revised July 1, 1993, and §§ II and IV of The Guidelines for Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Health-Care and Public-Safety Workers published by the U.S. Department of Health and Human Services, February 1989, incorporated by reference, and on file with the Secretary of State.
i. A certificate of insurance from a company licensed to do business in the State of Arizona or proof of self insurance for $500,000 malpractice and $500,000 liability protecting students, instructors, and training facilities.
j. Copies of behavioral objectives for clinical and vehicular rotations that comply with the curriculum requirements in R9-25-407(F) and (G).
2. The Department shall not accept an incomplete application and shall return the incomplete application to the applicant for completion and resubmission.
3. The ALS Training Program shall not begin training students until the certificate is issued.

C. Amendment of Certificate
1. The ALS Training Program shall notify the Department within 5 working days if its Medical Director resigns, is terminated or is otherwise unable to perform the duties required under R9-25-403(B).
2. The ALS Training Program shall file a written request with the Department to have its certificate amended upon the change of the Training Program Medical Director.
3. The request shall include:
a. The name of the new Medical Director.
b. A copy of the new Medical Director's curriculum vitae.
4. The ALS Training Program shall cease training until a new Medical Director is appointed who meets the qualifications of R9-25-403 and receives verbal or written approval by the Department. The Department shall then issue an amended certificate.

D. Renewal of Certificate
1. An ALS Training Program shall submit an application for recertification to the Department, at least 45 days prior to the expiration of its current certificate, on a form provided by the Department as shown in Exhibit S.
2. The application shall contain the documents identified in R9-25-401(B)(1) that were amended, revised, or added since initial certification; or, a written verification that revised documents are not submitted because the information submitted with the initial application is unchanged.
3. An applicant for ALS training program recertification shall have completed at least 1 intermediate, paramedic, intermediate to paramedic course or refresher course during the previous certification period.
4. An ALS training program which instituted a corrective action plan or is on probation may apply for renewal of its certificate. The Director may issue a renewal certificate and order that the ALS training program complete the terms of the corrective action plan or probation as a condition of the issuance of the renewal certificate.

E. Denial of Application
1. The Department shall deny an application that does not meet the requirements for initial certification or renewal.
2. The Director may deny an initial or renewal application for an ALS training program certificate if its owners or operators have held a previous certificate and they, their officers, agents or employees:
a. Intentionally violated any of the rules in this Article.
b. Knowingly committed, aided, permitted, or abetted the commission of any crime involving medical and health related services.
c. Submitted to the Department information required by this Article that it knew or should have known was false.
d. Refused Department personnel access to inspect facilities, equipment or required documents.

R9-25-402. Operating Authority (Authorized by A.R.S. §§ 36-2202(A)(3) and (4), 36-2204(1) and (3))

A. Scope: An ALS training program may conduct paramedic, intermediate, intermediate to paramedic, intermediate and paramedic refresher courses, and challenge courses.
1. The ALS training program shall make all notifications and maintain all documentation required by R9-25-407 and R9-25-404(B)(3) separately, for each course.
2. The ALS training program shall not allow students to transfer between courses of different levels.

3. The ALS training program may allow students to attend didactic presentations in another course running concurrently as long as the total number of students attending the didactic presentation is in adherence with R9-25-407(C)(2)(a).

B. Concurrent Courses: The ALS training program may conduct a maximum of 3 concurrent ALS courses in any combination of the following: paramedic, intermediate, intermediate to paramedic. An ALS training program that wishes to conduct more than 3 concurrent courses shall apply for a new certificate under the direction of a different medical director and training program director and course manager.

R9-25-403. Medical Director (Authorized by A.R.S. §§ 36-2202(A)(3) and (4), 36-2204(1),(3))

A. The medical director of an ALS training program shall meet the following qualifications:
   1. Be licensed as a physician pursuant to Title 32, Chapter 13 or 17, in good standing, in the State of Arizona and maintain licensure for the term of the training program certificate.
   2. Be board certified by the American College of Emergency Physicians or the American College of Osteopathic Emergency Physicians or have worked a minimum of 2000 clinical hours in the emergency department of a licensed health care institution.

B. The medical director of an ALS training program shall be responsible for the following:
   1. Review and approve in writing all course outlines and each lesson plan to assure they are consistent with the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U, and do not exceed the scope of practice established pursuant to A.R.S. § 36-2205.
   2. Approve the selection of faculty in writing to assure that each faculty member meets the qualifications for each lesson in the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U.
   3. Provide a minimum of 12 hours of didactic presentation, clinical or vehicular supervision, for each intermediate and paramedic course, and 4 hours of didactic presentation for each refresher course.
   4. Review the performance evaluations for each student. Review performance evaluations for each faculty member who teaches over 10 hours.
   5. Complete and sign the Advanced Life Support Training Program Course Completion Report as shown in Exhibit V, verifying course completion and skill competency for all students completing the course.

R9-25-404. ALS Training Program Director (Authorized by A.R.S. §§ 36-2202(A)(3) and (4), 36-2204(1) and (3))

A. The ALS Training Program Director shall have the following qualifications:
   1. Be currently licensed or certified for a minimum of 1 year in the State of Arizona as a physician, registered nurse, or paramedic and maintain licensure or certification for the term of the training program certificate.
   2. Maintain current ACLS instructor status.
   3. Have at least 2 years of clinical or teaching experience as a physician, registered nurse, or paramedic in prehospital care, emergency medicine, or critical care within the last 5 years.

B. The ALS training program director shall be responsible for the following:
   1. Schedule classes, faculty, preceptors, facilities, clinical/vehicular rotations and equipment for each class.
   2. Assure that classes, clinical and vehicular rotations are conducted as scheduled and adhere to the lesson plans and objectives.
   3. Assure that faculty and equipment are present at each class.
   4. Require and maintain the following records that contain the certificate number of the ALS training program and the names of the medical director and training program director:
      a. Attendance logs that include the class title, location, date, length of lecture and the name of each student who attended the lecture.
      b. A gradebook for each course that includes each student's grades for all exams, projects and evaluations. The gradebook shall indicate if a student dropped, withdrew or was issued an incomplete.
      c. Clinical rotation logs for each student rotation that include the student's name, clinical area and a description of skills completed by the student as observed by the preceptor. The logs shall be signed and dated by the preceptor responsible for the rotation.
      d. Vehicular logs for each student rotation that include the student's name, agency's name, unit number, field incident number, a listing of the following advanced skills completed by the student: endotracheal intubation, establishing intravenous therapy, cricothyrotomy, thoracostomy, administration of any drug in the drug box, insertion of a gastric tube, cardiac electrical therapy; and communication with a base hospital as established by either the preceptor or student. The logs shall be signed and dated by the preceptor responsible for the rotation.
      e. All exams taken and graded in each class.
      f. A course schedule that includes the location, date, time, division, section, topic, duration and instructor for each class.
      g. Skills evaluation sheets required by R9-25-407(D)(4).
      h. A copy of all EMS field incident report forms completed by the student or preceptor and co-signed by the student and preceptor for all patient assessments, medical care, communications or treatments provided by the student.
      i. Performance evaluations for each student completed and signed by the training program director and the student. These evaluations shall be conducted at least once during the course and shall include: the student's name, date of evaluation, attendance record, grades, areas of proficiencies and deficiencies and a plan for improvement, if deficiencies are noted.
      j. Assigned written projects.
      k. Instructor evaluation forms completed by students for each course faculty member teaching over 10 hours.
      l. Lesson plans that cover the objectives in the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U.
   5. Complete the Advanced Life Support Training Program Course Completion Report as shown in Exhibit V, verifying course completion and skill competency for all students completing the course.
   6. Within 10 working days after completion of each course, submit to the Department an official course roster and a course completion report on forms provided by the

Department as shown in Exhibits M and V. The course roster shall contain only the names of students that complete all didactic, clinical and vehicular requirements outlined in the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U. The ALS training program may submit addendum rosters up to 6 months after the course completion date for students who complete all requirements after that date.

7. Assist each student in completing the paperwork necessary for the State and National Registry certification examinations.
8. Coordinate with the Department for administration of all state required testing.
9. Coordinate and schedule the National Registry Examination in compliance with The National Registry of Emergency Medical Technicians Advanced Level Examination Coordinator's Manual, April 1992, and no other amendments, incorporated herein by reference and on file with the office of the Secretary of State.

C. The program director may assume the responsibilities of course manager or appoint a course manager to conduct the activities described in R9-25-405(B).

R9-25-405. Course Manager (Authorized by A.R.S. §§ 36-2202(A)(3) and (4), 36-2204(1) and (3))

A. The course manager of an ALS training program shall have the following qualifications:
   1. Hold current licensure or certification in good standing in the State of Arizona as a physician, pursuant to Title 32 Chapter 13 or 17; registered nurse, pursuant to Title 32 Chapter 15; or paramedic, pursuant to Title 36 Chapter 21.1.
   2. Maintain current ACLS instructor status for all paramedic level courses; maintain current ACLS provider status for all intermediate courses.
   3. Have at least 500 hours of clinical or 40 hours teaching experience in prehospital care, emergency medicine, or critical care within the last 2 years.

B. The course manager shall be responsible for the following:
   1. Assure adherence to the lesson plans and objectives of the didactic portion of the course by attending at least a portion of each didactic presentation.
   2. Assure adherence with the behavioral objectives of the rotations by meeting with the department head of the institution and service which provides the clinical and vehicular rotations prior to beginning the rotation to provide and review the behavioral objectives, preceptor qualifications and responsibilities for each rotation.
   3. Collect and forward documents required under R9-25-404(B)(4) to the training program director.

R9-25-406. Faculty and Preceptor Qualifications (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1) and (3))

A. The ALS training program shall utilize faculty and preceptors currently licensed or certified in the State of Arizona that meet the qualifications for the topic being taught contained in the Arizona ALS Curriculum, as shown in Exhibit U.

B. Clinical preceptors shall be employed by a health care institution licensed by the State of Arizona or an EMS provider operating in the State of Arizona.

C. Vehicular Preceptors for paramedic and intermediate to paramedic students shall be:
   1. A paramedic with current Arizona state certification and at least 2 years of paramedic field experience within the last 5 years; or
   2. A physician with 2 years of pre-hospital, emergency medicine or critical care experience within the last 5 years; or
   3. A registered nurse who has:
      a. Either:
         i. Documented proficiency in advanced airway management, central intravenous access, intraosseous access and needle thoracostomy according to the standards for these skills contained in the Arizona ALS Curriculum as shown in Exhibit U verified by the Medical Director, or
         ii. Performs the skills identified in subsection (C)(3)(a)(i) as a part of their current nursing practice; and,
      b. Either:
         i. 2080 hours emergency medicine, critical care or pre-hospital care clinical or teaching experience within the last 2 years; or
         ii. 200 hours experience as an instructor in an ALS training Program with continuing vehicular preceptor experience within the last 2 years.

D. Vehicular Preceptors for intermediate students shall be:
   1. An intermediate or paramedic with current Arizona state certification and at least 2 years of intermediate or paramedic field experience within the last 5 years; or
   2. A physician with 2 years of pre-hospital, emergency medicine or critical care experience within the last 5 years; or
   3. A registered nurse who has:
      a. Either:
         i. Documented proficiency in advanced airway management, central intravenous access, intraosseous access and needle thoracostomy according to the standards for these skills contained in the Arizona ALS Curriculum as shown in Exhibit U verified by the Medical Director, or
         ii. Performs the skills identified in subsection (C)(3)(a)(i) as a part of their current nursing practice; and,
      b. Either:
         i. 2080 hours emergency medicine, critical care or pre-hospital care clinical or teaching experience within the last 2 years; or
         ii. 200 hours experience as an instructor in an ALS training Program with continuing vehicular preceptor experience within the last 2 years.

R9-25-407. ALS Training Program Course Requirements (Authorized by A.R.S. §§ 36-2202(A)(3) and (4), 36-2204(1) and (3))

A. Department Notifications
   1. The ALS Training Program shall include its certificate number on all correspondence with the Department.
   2. At least 45 days prior to commencing each course, the ALS Training Program shall submit to the Department:
      a. A course approval application as shown in Exhibit S.
      b. A prospective course roster listing all students to be screened for the course on the form as shown in Exhibit M.
      c. A course schedule that satisfies the minimum hourly requirements listed in subsection (D) to include: the date of each class, the division and section of Arizona Advanced Life Support Curriculum to be covered in each class, the topic, class duration, class

location and the identity of the faculty for each lecture. The Department shall notify the ALS Training Program in writing within 30 days after it receives the course schedule whether the schedule satisfies the curriculum requirements or has deficiencies. The Department shall reject a schedule that does not satisfy the requirements in subsection (D) and shall notify the ALS Training Program of the deficiencies in writing. The ALS Training Program shall submit an amended schedule within 14 days after receiving the notification. The ALS Training Program shall not commence training until it submits a course schedule that complies with paragraph (D) of this section and is approved by the Department in writing.

3. The ALS Training Program shall submit to the Department the active course roster as shown in Exhibit M within 15 days of course commencement.
4. The ALS Training Program shall notify the Department of any changes in the Training Program Director within 10 working days of the change.

B. Student Selection Requirements
1. Each ALS Training Program shall develop a written entrance examination with a minimum of 100 questions utilizing 1 absolutely correct answer, 1 incorrect answer and 2 distractors neither of which is "all of the above" or "none of the above", that covers the following:
   a. Medicolegal, Patient Handling and Transportation, 6 questions;
   b. Anatomy and Physiology and Patient Assessment, 6 questions;
   c. Breathing, Resuscitation and CPR, 25 questions;
   d. Wounds, Bleeding, Shock, and Pneumatic Anti-Shock Garments, 14 questions;
   e. Medical Emergencies, 14 questions;
   f. Injuries to the Head, Neck, Spine, Abdomen and Genitalia, 11 questions;
   g. Fractures and Dislocations, 6 questions;
   h. Environmental Emergencies and Hazardous Materials, 6 questions;
   i. Emergency Childbirth, 6 questions;
   j. Psychological Aspects, 6 questions
2. Each applicant shall have 1 attempt to complete the written entrance examination with a minimum score of 75% in order to be eligible to continue the screening process.
3. Each applicant shall have 1 attempt to demonstrate proficiency in patient trauma assessment and 1 random skill, utilizing the standards and skills checksheets of the EMT-Basic Practical Examination Users Guide as developed by the National Registry of Emergency Medical Technicians, May 1992, and no other amendments, incorporated herein by reference and on file with the Secretary of State, in order to be eligible to continue the screening process.
4. The Training Program shall conduct an oral interview for the purpose of ranking and selecting applicants. The oral interview process shall be designed to exclude bias. The ALS Training Program shall:
   a. Develop written oral interview questions and benchmarks that assess an applicant's motivation, critical thinking, reasoning and judgment skills. The questions shall be designed to allow each applicant time to fully answer each question without placing time constraints placed on any question.
   b. Disclose to each applicant prior to beginning the interview the number of questions to be asked and that no interview shall exceed 60 minutes.
   c. Utilize an oral interview board that consists of a minimum of 3 members and a maximum of 5 members. None of the members shall have a personal relationship with an applicant or receive any direct or indirect financial gain from the selection. The oral interview board shall include the Training Program Medical Director, the Training Program Director and at least 1 other licensed or certified professional who either teaches or works in pre-hospital care.
   d. Assure that all applicants are screened by the same board members with all board members present for each entire interview.
   e. Assure that identical questions are read to each applicant in the same manner.

C. Class Structure
1. Facility Requirements. The ALS Training Program shall ensure that each didactic session is held in a facility that provides:
   a. Restrooms within the building or campus, accessible or key available in the classroom during class hours.
   b. A minimum of 1 chair and desk or table space per student.
   c. A temperature range between 65 degrees Fahrenheit and 82 degrees Fahrenheit.
   d. Lighting that evenly illuminates the room to allow the student to function within the classroom setting.
   e. An environment that is free of visual and auditory distractions.
2. Class size.
   a. Didactic. Each ALS Training Program course shall be limited to 24 students. In the lecture format, the ALS Training Program may combine 2 paramedic, intermediate or intermediate to paramedic courses for a maximum of 48 students. This combined group of 2 courses shall not exceed 15 hours of the total didactic curriculum. The Training Program shall not allow students enrolled in a refresher or challenge course to attend a paramedic, intermediate or intermediate to paramedic course.
   b. Skills: Skills instruction and evaluation shall be limited to a maximum ratio of 8 students to 1 instructor. The ALS Training Program shall not combine courses for skills instruction or evaluation.

D. Curriculum Requirements
1. Each course conducted by the ALS Training Program shall adhere to the requirements of the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U.
2. Training for protocols adopted pursuant to A.R.S. § 36-2205, subsequent to the certification date of these rules, shall not be implemented until Exhibit U of this rule is amended.
3. The ALS Training Program shall assure total completion of the course by offering make-up sessions for all classes required for certification that are canceled during a course.
4. The ALS Training Program shall utilize all Advanced Level and Paramedic Practical Examination forms for skills evaluations developed by The National Registry of Emergency Medical Technicians, incorporated herein by reference and on file with the Secretary of State.

E. Body Substance Isolation. The ALS Training Program shall comply with and assure that its contracts with institutions and

services require compliance with the procedures described in Bloodborne Pathogens, 29 CFR 1910.1030, revised July 1, 1993, and §§ II and IV of The Guidelines for Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Health-Care and Public-Safety Workers published by the U.S. Department of Health and Human Services, February 1989, incorporated herein by reference and on file with the Secretary of State.

F. Clinical Rotation Requirements.
1. The ALS Training Program shall assure that each student receives the required hours in each clinical area described in the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U, for the training course in which the student is enrolled.
2. The ALS Training Program shall require that clinical preceptors be present and directly observe all student related patient care.
3. The ALS Training Program shall require that the clinical preceptors sign the student's clinical log to verify skills and the completion of the rotation.
4. The ALS Training Program shall assure that medications, treatments, procedures and techniques administered by the student are authorized pursuant to A.R.S. § 36-2205.
5. The ALS Training Program shall not permit an intermediate or paramedic student to begin clinical rotations until the student has successfully completed the following lessons from the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U:
   a. Division 2, Section 2 Assessment, 4 hours;
   b. Division 2, Section 3 Airway,8 hours;
   c. Division 2, Section 4 Shock, 4 hours; and
   d. Division 2, Section 5 Pharmacology, 8 hours.

G. Vehicular Rotation Requirements.
1. The ALS Training Program shall assure that each student receives the minimum required hours of vehicular training described in the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U.
2. The ALS Training Program shall not permit an intermediate student to begin vehicular rotations until the student successfully completes the lesson objectives described in subsection (F)(5).
3. The ALS Training Program shall not permit a paramedic or intermediate to paramedic student to begin vehicular rotations until the student successfully completes the lesson objectives described in subsection (F)(5) and an advanced cardiac life support course.
4. The ALS Training Program shall assure that a ratio of 1 preceptor to 1 student is maintained for all vehicular rotations.
5. The ALS Training Program shall require that the preceptor be present and observe all student-related patient care and co-sign the field incident report form.
6. The ALS Training Program shall assure that medications, treatments, procedures and techniques administered by the student are authorized pursuant to A.R.S. § 36-2205.

H. Examinations.
1. The ALS Training Program may develop and shall keep on file course examinations, in addition to the final examination, given at the discretion of the Training Program Director or Medical Director.
2. The ALS Training Program shall administer a final written and practical examination to all students prior to completion of the course.
3. The written examination shall consist of 150 multiple choice questions utilizing 1 absolutely correct answer, 1 incorrect answer and 2 distractors neither of which is "all of the above" or "none of the above," covering the learning objectives of the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U, utilizing the blueprint as shown in Exhibit FF.
4. The minimum passing grade on the final written comprehensive examination shall be no less than 75%.
5. The ALS Training Program may allow a student a maximum of 3 attempts to pass the final written, comprehensive examination. If the student does not attain the minimum passing grade on the written comprehensive examination on the final attempt, the student shall be considered ineligible to complete the program. To be eligible for certification, the student shall reapply to, be accepted by, and successfully complete an entire training program.
6. The ALS Training Program shall administer a final comprehensive, practical skills examination utilizing the forms required in subsection (D)(4) following completion of the didactic, clinical, and vehicular components of the course.
7. The minimum passing grade on the final, comprehensive practical skills examination shall be 80% of possible points in each skill. Performing any of the elements listed in the critical criteria section of the testing form shall result in automatic failure of that station, regardless of the total of points accumulated.
8. The ALS Training Program may allow a student a maximum of 3 attempts to pass each skill of the final comprehensive practical examination. If the student does not attain the minimum passing grade on the practical examinations on the final attempt, the student shall be considered ineligible to complete the program. To be eligible for certification, the student shall reapply to, be accepted by and successfully complete an entire training program.

I. The ALS Training Program shall allow students who have failed to complete clinical or vehicular requirements no more than 6 months from the official course completion date to complete the requirements. The ALS Training Program shall fail students who do not complete all requirements within 6 months. If the student does not complete all requirements within 6 months, the student shall be considered ineligible to complete the course. To be eligible for certification, the student shall reapply to, be accepted by and successfully complete an entire training program.

J. The ALS Training Program may offer ALS Challenge Courses that shall be separate from all other ALS training courses:
1. An ALS Training Program may accept a student into a Challenge Course who holds current EMT-B certification in Arizona and meets 1 of the following standards:
   a. Was certified as an Arizona paramedic or intermediate whose certification has lapsed, or
   b. Is currently certified as a paramedic in another state or is registered with the National Registry of Emergency Medical Technicians, or
   c. Has successfully completed an Arizona certified paramedic or intermediate training course but was not successful in completing the testing process for State certification.
2. An ALS Training Program who wishes to accept a challenge applicant shall assess the applicant's current level of competency in paramedic or intermediate skills required by Arizona Advanced Life Support Refresher and Challenge Course Curricula, 1994, as shown in Exhibit D.

3. Upon completion of the course, the ALS Training Program shall administer the same written and practical final examinations utilizing the same grading criteria as described in subsection (H), paragraph (2) of this rule.
4. The ALS Training Program shall provide a certificate of course completion to an applicant who successfully completes course requirements and attains a minimum passing grade on the written and practical final examinations. The certificate shall be signed by the Medical Director and Training Program Director verifying that the applicant meets all training requirements to apply for certification.
5. If the student does not attain the minimum passing grade on the written and practical final examinations on the final attempt, the student shall be considered ineligible to complete the program. The student shall reapply and complete a new challenge course to be eligible to apply for certification.

K. The ALS Training Program may offer paramedic and intermediate refresher courses which meet the refresher course requirements in the Arizona Advanced Life Support Refresher and Challenge Curricula, as shown in Exhibit D.

L. The ALS Training Program shall retain all student records for 2 years from the date of course commencement. These records shall include the student's name, attendance record, grades, practical skills evaluations including vehicular and clinical records, course schedules and master copies of all examinations.

R9-25-408. Trainee Prerequisites (Authorized by A.R.S. §§ 36-2202(A)(3) and (4), 36-2204(1) and (3))

A. Each applicant shall be certified in Arizona as an EMT prior to applying to the ALS Training Program
B. Each applicant shall be employed by or volunteer with an EMS provider functioning in a patient care setting for a minimum of 1 calendar year prior to the starting date of the course.
C. Each applicant shall be at least 18 years of age prior to applying to the ALS Training Program.
D. Each applicant shall provide proof of:
   1. TB testing or chest x-ray with a negative result within 6 months prior to application.
   2. Immunity to Rubella (German Measles) determined as follows:
      a. Persons born before January 1, 1942 are considered immune to Rubella (German Measles).
      b. Persons born after January 1, 1942 are considered immune to Rubella if:
         i. The person has a documented record of having received 1 dose of live Rubella vaccine since June 1, 1969 on or after their first birthday, or
         ii. Documented laboratory confirmation of immunity to Rubella. Physician diagnosis is not acceptable.
   3. Immunity to Rubeola (Measles) determined as follows:
      a. Persons born before January 1, 1957 are considered immune to Rubeola and Mumps.
      b. Persons born on or after January 1, 1957 are considered immune to Rubeola if:
         i. The person has a documented record of having received 2 doses of live Measles vaccine since January 1, 1968, on or after their first birthday, or
         ii. Documented laboratory confirmation of immunity to Rubeola. Physician diagnosis is not acceptable.

R9-25-409. Disclosure Documents (Authorized by A.R.S. § 36-2202(A)(4))

The ALS Training Program shall provide all trainee applicants with the following information, in writing:
1. A description of the ALS Training Program curriculum and graduation requirements.
2. A list of books, equipment and supplies that the student must purchase.
3. A notification that the ability to perform certain physical activities is a mandatory requirement for both graduation and state certification and that the inability to perform these activities may disqualify the student from both graduation from the ALS Training Program and state certification.
4. A notification that it is the responsibility of the applicant to complete the ALS Training Program course, including final testing, within 6 months of the course completion date in order to be eligible for graduation.
5. A copy of ALS Training Program policies and procedures that govern student conduct. The Program's Policy and Procedures Manual shall contain the following information:
   a. Attendance shall be required as follows:
      i. Unexcused absences from didactic, clinical or vehicular rotations shall render the student ineligible to complete the course.
      ii. Excused absences and tardiness shall not exceed 16 hours.
      iii. Excused absences and tardiness during the didactic portion of the program shall be made up under the direction of the Training Program Director either through individual instruction or documented self-study projects.
      iv. Clinical and vehicular excused absences shall be rescheduled either prior to the official course completion date or according to the time constraints in R9-25-407(I). A student shall arrange to make up clinical and vehicular excused absences or tardiness through the Program Director.
      v. Students who contract a contagious disease identified in subsection (13) during the course shall not participate in didactic, clinical or vehicular activities until they provide written documentation from their physician that they are no longer contagious. If the excused absence exceeds 16 didactic hours, the student shall not be eligible to complete the course.
   b. The Program shall establish a grading policy that requires a minimum score no less than 75% proficiency in didactic and 80% proficiency in practical skills testing.
6. Notification that a paramedic, intermediate to paramedic or intermediate applicant shall successfully complete written and practical examinations for State certification.
7. Notification that the requirements for paramedic and intermediate certification are located in the Arizona Administrative Code Title 9, Chapter 25, Article 6, and can be found in public libraries.
8. Notification that the Department does not regulate or insure the financial viability of the ALS Training Program.
9. Notification that the student is required to maintain current Arizona EMT or intermediate certification and hold a current CPR card throughout the training course, or be expelled from the course.

10. Notification that a student enrolled in a paramedic course who is not able to meet the minimum requirements to graduate from the course as a paramedic shall not qualify to graduate as an intermediate.
11. Notification of required proof of immunity or immunization and negative TB test as required in R9-25-408(D).
12. Notification that a student shall provide evidence of annual TB testing while enrolled in the program.
13. Notification that a student who contracts Tuberculosis, Rubella, Rubeola, Mumps or Hepatitis during the course, shall not be allowed participate in didactic, clinical or vehicular activities until they provide written documentation from their physician that they are no longer contagious.
14. Notification that a student may be required to submit to a drug screening or meet other requirements before beginning a clinical rotation.

R9-25-410. Quality Management Program (Authorized by A.R.S. § 36-2202(A)(4))

A. Application by the ALS Training Program for certification or recertification shall constitute agreement for participation in the quality management program.
B. During the term of certification, the Department's representatives may evaluate the quality of the Training Program pursuant to the rules established in this Article.
C. Evaluation shall consist, in whole or in part, of the following components:
   1. Site visit shall be conducted as follows:
      a. Each site visit shall consist of the Department's representative attending a scheduled class to: observe the training scheduled to occur, review the required records, interview students and inspect equipment, supplies and the physical location. The Department shall notify the Training Program Director of the site visit at least 24 hours prior to the visit.
      b. During the visit, the Training Program Director or assigned faculty shall make available to the Department's representative all requested records pertaining to the class.
      c. During the site visit the Department's representative shall evaluate:
         i. Records Management - The accuracy and currency of all records and paperwork required by this Article.
         ii. Classroom Structure - The physical conditions in the classroom required in R9-25-407(C).
         iii. Equipment and supplies as required in R9-25-401 subsection (B), paragraphs (1)(f) and (g) of this rule.
         iv. Faculty compliance with the learning objectives of the Arizona Advanced Life Support Curriculum, as shown in Exhibit U, for each class.
         v. At the conclusion of each site visit, the Department's representative shall meet with the assigned faculty and verbally review the evaluation, including feedback and recommendations of the Department's representative. The Department shall prepare and make a written report of the site visit for the Training Program Director within 10 working days after completion of the site visit. If the written report contains a request for a corrective action plan, the report shall refer to the applicable section of the rules for guidance.
   2. Analysis of State certification examination results: The ALS Training Program shall maintain a cumulative pass/fail ratio for all students taking the certification examination. The minimum ratio of students passing the certification examination shall be at least 70%.
   3. The Department shall conduct customer service surveys of students, faculty, preceptors, and agencies contracted with the training program to provide clinical and vehicular rotations.
      a. The surveys shall contain:
         i. The ALS Training Program's name.
         ii. The Training Program Director's name.
         iii. The Training Program Medical Director's name.
         iv. The name and contact phone number of the survey respondent.
         v. A statement that the survey respondent shall remain anonymous unless the respondent authorized their identity be revealed to the ALS Training Program, and,
         vi. Questions relevant to the role of the respondent to determine compliance with this Article.
      b. The survey question design shall elicit a "yes" or "no" response with space for comments.
      c. The Department shall maintain the results of each survey and shall forward a copy to the ALS Training Program.
      d. Any survey that is returned with a "no" response shall be investigated by the Department to determine whether a rule violation has occurred. If a violation occurred, the Department shall notify the ALS Training Program who shall develop a corrective action plan as described in this rule.
D. If corrective action is necessary, the ALS Training Program shall develop a corrective action plan within 20 working days of notification by the Department. The ALS Training Program shall submit this corrective action plan to the Department for approval. An acceptable corrective action plan shall include:
   1. The specific program deficiency, including the rule violated, completed by the Department.
   2. The plan for correction of the deficiency, and the time line for implementation of the correction, completed by the ALS Training Program.
   3. A step by step procedure that the ALS Training Program shall follow to comply with the rule and a time line for implementation that corrects the deficiency without delay.
E. If the Training Program develops a corrective action plan that does not comply with this rule or the Training Program is unable to meet the terms of the plan, the Department may initiate administrative proceedings against the Training Program's certificate. These proceedings may result in a letter of censure, probation, suspension or revocation of the Training Program's certificate.

R9-25-411. Letter of Censure, Probation, Suspension, Revocation of Certificate (Authorized by A.R.S. § 36-2202(A)(4))

A. The Director may issue a letter of censure, place on probation, suspend or revoke an ALS Training Program certificate, in whole or in part, if its owners or operators, officers, agents or employees:
   1. Violate any of the rules in this Article.
   2. Knowingly commit, aid, permit, or abet the commission of any crime involving medical and health related services.
   3. Submit to the Department information required by this Article that it knew or should have known was false.

4. Refuse Department personnel access to inspect facilities, equipment and documents.

B. The Department may request an informal interview with the ALS Training Program, if it determines the ALS Training Program may have violated subsection (A).

C. The Director may take the following action against the certificate if a violation of subsection (A) is substantiated:
1. Issue a letter of censure, or an order of probation.
2. Suspend or revoke a certificate after notice and opportunity to be heard is given according to the procedures described in A.R.S. Title 41, Chapter 6, Article 1 and 9 A.A.C. 1, Article 1.

D. The Department may suspend or revoke the certificate of an ALS Training Program during an active training course for failure to conform to the rules of this Article. In the event that the ALS Training Program's certificate is suspended or revoked during an active training course, the Department reserves the right to refuse to certificate graduates of that Training Program if it determines that the graduates did not satisfy all course requirements. If such a determination is made, all students and graduates of the program shall be so notified in writing by the Department.

ARTICLE 5. BASIC LIFE SUPPORT CERTIFICATION

R9-25-501. Certification Application Requirements (Authorized by A.R.S. §§ 36-2202(A)(2),(3),and (4), 36-2204(1) and (6))

A. Applicant Prerequisites: An applicant for certification as an EMT-Basic shall satisfy the following requirements:
1. General Requirements. An applicant shall:
   a. Be at least 18 years of age.
   b. Submit a completed application to the Department for certification on a form as shown in Exhibit X.
   c. Verify within the last 6 months, the applicant has not used illegal drugs or substances, illicit drugs or substances, or controlled drugs not prescribed for the applicant.
   d. Verify within the last 6 months, the applicant has not used alcohol to an extent that the use impairs the skill or ability to safely conduct the job requirements.
2. EMT-Basic applicant requirements. An applicant shall provide evidence of successful completion of an EMT-Basic training program course certified by the Department completed in accordance with the requirements described in R9-25-307(C).

B. Physical Requirements. Within 90 days prior to applying, each applicant shall undergo a physical examination, at the applicant's expense, that evaluates the applicant's health status and physical abilities necessary to perform the job requirements of an EMT as listed on the form provided by the Department as shown in Exhibit Y. A physician licensed under the provision of Title 32, Chapter 13 or 17, physician assistants, or a nurse practitioner licensed in Arizona shall conduct the examination, complete, and sign the physical examination form. The applicant shall submit the completed physical examination form to the Department with the application for certification.

C. Good Character Requirements. An applicant shall certify on a form that is provided by the Department and notarized that the applicant has not been convicted of, or admitted committing, any of the following crimes:
1. Sexual abuse of a minor,
2. Driving under the influence within the last 4 years,
3. First or second degree murder,
4. Kidnapping,
5. Arson,
6. Sexual assault,
7. Sexual exploitation of a minor,
8. Contributing to the delinquency of a minor,
9. Commercial sexual exploitation of a minor,
10. Felony offenses involving distribution of marijuana or dangerous or narcotic drugs,
11. Burglary,
12. Robbery,
13. A dangerous crime against children as defined in A.R.S. Section 13-604.01,
14. Child or adult abuse,
15. Sexual conduct with a minor,
16. Molestation of a child,
17. Manslaughter,
18. Aggravated assault,
19. A felony or misdemeanor involving moral turpitude, or
20. Flight to avoid prosecution.

R9-25-502. Applicant Screening Process (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1) and (6))

A. Any applicant, who has been convicted of, or admitted committing, any of the following crimes shall be denied certification unless the person has been granted an exception for good cause pursuant to the requirements of subsection (B):
1. Sexual abuse of a minor,
2. Driving under the influence within the last 4 years,
3. First or second degree murder,
4. Kidnapping,
5. Arson,
6. Sexual assault,
7. Sexual exploitation of a minor,
8. Contributing to the delinquency of a minor,
9. Commercial sexual exploitation of a minor,
10. Felony offenses involving distribution of marijuana or dangerous or narcotic drugs,
11. Burglary,
12. Robbery,
13. A dangerous crime against children as defined in A.R.S. Section 13-604.01,
14. Child or adult abuse,
15. Sexual conduct with a minor,
16. Molestation of a child,
17. Manslaughter,
18. Aggravated assault,
19. A felony or misdemeanor involving moral turpitude, or
20. Flight to avoid prosecution.

B. An applicant who would otherwise be ineligible for certification because of prior criminal acts may apply to the Director in accordance with the requirements and procedures in this section for an exception for good cause permitting certification. The applicant shall submit or cause to be submitted under penalty of perjury to the Director the following information:
1. A copy of the record of conviction, if applicable.
2. A copy of reports relevant to the criminal offense, such as probation presentence reports or parole or community supervision termination reports.
3. Other evidence of the applicant's moral fitness, including letters of recommendation from law enforcement, prosecution or correctional officers.
4. Documentation substantiating the applicant's record of employment, record of support of dependents and record of good conduct, and whether the applicant has paid all outstanding court costs, supervision fees, fines and restitution as may have been ordered by a court of law.
5. A notarized statement providing the following:
   a. A description of the nature and seriousness of the criminal offense.
   b. The nature and extent of the applicant's conviction.

c. The applicant's age at the time the applicant committed the criminal offense.
d. The amount of time that has elapsed since the applicant's last criminal offense, release from incarceration and probation, parole, community supervision, or supervised release.

6. Supporting documentation providing the following:
a. Evidence of rehabilitative effort and lack of recidivism.
b. A description of the applicant's conduct and work activity before and after the criminal offense.

7. Information relating to the potential job including responsibilities, plans for supervision and hours and days of employment.

C. The documents provided to the Director in accordance with subsection (B) shall be accompanied by the following statement signed by the applicant: "I affirm under the penalty of perjury that the information contained herein is true and correct".

D. The Director shall consider whether to allow an exception for good cause unless the individual has been convicted of or is awaiting trial on any of the following offenses or any similar offenses in another state or jurisdiction:
1. Sexual abuse of a minor,
2. First or second degree murder,
3. Sexual assault,
4. Sexual exploitation of a minor,
5. Commercial sexual exploitation of a minor,
6. A dangerous crime against children as defined in A.R.S. Section 13-604.01,
7. Child or adult abuse,
8. Sexual conduct with a minor,
9. Molestation of a child, or
10. Felony offenses involving distribution of marijuana or dangerous or narcotic drugs.

E. The Director shall review the documentation and any additional relevant information and grant a good cause exception if he determines that there is a reasonable likelihood that the applicant:
1. Is rehabilitated and has assumed a role as a responsible, law-abiding citizen;
2. Possesses unique or exceptional skills, education, training or experience to providing EMT-Basic services; and
3. Does not present a risk to the health, welfare or safety of patients.

F. The Director shall notify the applicant of the decision approving or denying the exception.

G. Any misrepresentation or concealment of fact by an applicant shall be grounds for denial or revocation of a good cause exception by the Director.

H. Any denial of certification pursuant to subsection (B) shall be in the form of a written order signed by the Director or the Director's designated representative.

I. All criminal justice information received from the Arizona Department of Public Safety shall be confidential and shall not be available for public record review.

J. If an application is denied, the applicant may request a hearing within 15 days of the date of receipt of the notice of denial. A hearing on the denial shall be conducted in accordance with Title 41, Chapter 6 of the Arizona Revised Statutes and 9 A.A.C. 1, Article 1.

R9-25-503. Denial of Application (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1) and (6))

An applicant who is on parole, probation, supervised release or is presently incarcerated for any criminal conviction shall be denied application for certification as a Basic EMT.

R9-25-504. Examinations for Initial Certification (Authorized by A.R.S. §§ 36-2202(A)(2),(3)and (4) 36-2204(1),(2) and (6))

A. Applicants shall pass written and practical examinations for EMT-Basic certification administered or approved by the Department in accordance with the National Registry of Emergency Medical Technicians. These examinations shall not be required for an applicant with a current and valid National Registry certification in good standing.

B. Applicants shall be given 3 opportunities to attain passing scores on all examinations within 1 year after the official completion date of the training program.

C. An applicant who has failed to pass the written examination after the third attempt shall repeat a certified EMT-Basic training program prior to reapplication.

R9-25-505. Duration of Certification (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1) and (6))

EMT-Basic certification shall be valid for a period of 2 years.

R9-25-506. Out of State Applicants (Authorized by A.R.S. §§ 36-2202(A)(2), (3) and (4) and 36-2204(1), (2) and (6))

A. A person who holds current and valid certification as an EMT-Basic in good standing issued by another state or jurisdiction may be certified in Arizona after meeting the following requirements:
1. Compliance with all requirements described in R9-25-501 and R9-25-502.
2. Submission of a completed application on a form provided by the Department and set forth in Exhibit X.
3. Submission of evidence of a current and valid certification issued by the National Registry of Emergency Medical Technicians or a state or a political subdivision.
4. After December 31, 1997, submission of written verification from a certified training program or ALS Base Hospital of having successfully completed training that meets the requirements of the Arizona BLS Curriculum in the following:
a. Semi-automatic defibrillator
b. Patient-Assisted medications
c. Blood glucose monitoring
d. Patient assessment
e. SIDS (Sudden Infant Death Syndrome)
f. IV monitoring

B. If an out-of-state applicant does not hold a current and valid certification issued by the National Registry of Emergency Medical Technicians, the applicant shall apply for and successfully complete the written and practical examinations for EMT-Basic certification administered or approved by the Department in accordance with the National Registry of Emergency Medical Technicians.

C. Certification issued to a person meeting the requirements under this section, shall be for 2 years.

R9-25-507. Applicants With Disabilities (Authorized by A.R.S. §§ 36-2202(A)(2), (3) and (4) and 36-2204(1), (2) and (6))

A. Special examination accommodations may be made for individuals with diagnosed learning disabilities in the areas of reading decoding or reading comprehension, or some form of documented disability or cognitive processing deficit which would negatively affect an applicant's performance on the written examination.

B. No special accommodations shall be made for the practical examination.

C. Applicants requesting special accommodations for the written examination shall submit such request to the Medical Director at least 30 days prior to the date of the written examination

together with evidence that documents the diagnosis of a learning disability in the area of reading decoding or reading comprehension based upon the results of a standardized psychoeducational assessment including a standardized measure of intelligence and a standardized measure of achievement in reading decoding or reading comprehension.

D. Accommodations on the written examination shall be considered by the Medical Director for those applicants who meet the minimum standards for performance as determined by analysis of the requirements of the job analysis for EMT-Basic.

R9-25-508. Scope of Practice (Authorized by A.R.S. §§ 36-2202(A)(2), (3) and (4), and 36-2204(1), (6), and (8) and 36-2205)

A. Individuals certified as an EMT-Basic shall be authorized to provide medical treatments, procedures, medications and techniques as outlined in the Arizona BLS Curriculum, 1994, as shown in Exhibit N, or adopted pursuant to 36-2205.

B. Individuals certified as an EMT-Basic shall be authorized to provide medical treatments, procedures, medications and techniques described in subsection (A) only under the administrative medical control of a BLS Medical Director or ALS Base Hospital.

C. A certified EMT-Basic shall be authorized to monitor peripheral intravenous lines after having successfully completed IV Monitoring training by a certified BLS Training Program or ALS Base Hospital that meets the requirements described in the Arizona BLS Curriculum, 1994, as shown in Exhibit N.

D. A certified EMT-Basic shall be authorized to perform semi-automatic/automatic defibrillation after having successfully completed semi-automatic/automatic defibrillation training by a certified BLS Training Program or ALS Base Hospital that meets the requirements described in the Arizona BLS Curriculum, 1994, as shown in Exhibit N.

R9-25-509. Special Skills Certification (Authorized by A.R.S. §§ 36-2202(A),(2),(3) and (4) and 36-2204(1))

A. A certified EMT-Basic shall be authorized to perform endotracheal intubation skills under the following:
   1. Be employed by an EMS provider which is providing such services and has a written and signed provider agreement with an ALS Base Hospital to provide medical direction and continuing education.
   2. Possess a certificate of training issued by a certified BLS Training Program or certified ALS Base Hospital documenting successful completion of endotracheal intubation training as shown in Exhibit K.
   3. Successfully complete a written examination administered or approved by the Department with a score of 75% or greater within 1 year of the completion date of the advanced airway training. The EMT-Basic shall have 3 opportunities to attain a passing score. An EMT-Basic who has failed to pass the written examination after the third attempt shall repeat an advanced airway training course.

R9-25-510. Recertification Requirements for EMT-Basic (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1),(4), and (6))

A. An applicant for EMT-Basic recertification shall have been in compliance with all requirements of this Article during the current certification period and submit to the Department:
   1. A completed application on a form provided by the Department, as shown in Exhibit Z.
   2. Evidence of reregistration with the National Registry of Emergency Medical Technicians, or
   3. Evidence of successful completion of an EMT-Basic Refresher training course that meets the requirements described in the Arizona EMT-Basic Refresher Curriculum, 1994, as shown in Exhibit E, conducted by a certified BLS Training Program or ALS Base Hospital.
   4. A physical examination or verification of the ability to perform the functions of an EMT obtained within 90 days prior to recertifying. The physical examination or verification form as shown in Exhibits Y and AA shall be signed by a licensed physician, physician's assistant, or nurse practitioner licensed in the State of Arizona.
   5. A written form accompanying the application for recertification from the BLS Medical Director responsible for the applicant's administrative medical control for the current certification period, as shown in Exhibit GG.

B. An applicant for recertification shall submit evidence of successful completion of the requirements listed in subsection (A) of this rule within 30 days prior to the expiration of the applicant's current certificate.

C. An applicant who applies for recertification and has not met the requirements of subsection (A) of this rule prior to expiration of the current certification shall not be permitted to function as an EMT-Basic until complying with subsection (A) of this rule as determined by the Medical Director.

D. Each EMT-Basic shall be required to pass an examination administered or approved by the Department every 4 years as a condition for recertification. An applicant for recertification shall be required to attain a passing grade of 75% on the examination. An applicant shall be granted 3 attempts to attain a passing score on the examination. An applicant who fails the examination on all 3 attempts shall be required to complete an entire EMT-Basic training program prior to reapplying.

E. All applicants applying for recertification after December 31, 1997, shall have successfully completed training that meets the requirements described in the Arizona EMT-Basic Refresher Curriculum, 1994, as shown in Exhibit E, to include the following:
   1. Semi-automatic defibrillator
   2. Patient-assisted medications
   3. Blood glucose monitoring
   4. Patient assessment
   5. SIDS (Sudden Infant Death Syndrome)
   6. IV monitoring

R9-25-511. Recertification for EMT-Basic Special Skills (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1),(4), and (6))

A. The EMT-Basic certified to perform endotracheal intubation shall submit to the Department:
   1. A completed application on a form provided by the Department, as shown in Exhibit Z.
   2. Evidence of reregistration with the National Registry of Emergency Medical Technicians, or
   3. Evidence of successful completion of an EMT-Basic Refresher training course that meets the requirements described in the Arizona EMT-Basic Refresher Curriculum, 1994, as shown in Exhibit E, conducted by a certified BLS Training Program.
   4. Evidence of successful completion of an endotracheal intubation skills workshop during the certification period covering the objectives shown in Exhibit K.
   5. A letter recommending the applicant for recertification, signed by the ALS Base Hospital medical director and ALS Base Hospital program manager who have been responsible for administrative medical direction of the EMT-Basic during the previous 90 days.

B. An applicant for recertification shall submit evidence of successful completion of the requirements listed in subsection (A) of this rule within 30 days prior to the expiration of the applicant's current certificate.

C. An applicant who applies for recertification and has not met the requirements of subsection (A) of this rule prior to expiration of the current certification shall not be permitted to function as an EMT-Basic until complying with subsection (A) of this rule as determined by the Medical Director.

D. Each EMT-Basic shall be required to pass an examination administered or approved by the Department every 4 years as a condition for recertification. An applicant for recertification shall be required to attain a passing grade of 75% on the examination. An applicant shall be granted 3 attempts to attain a passing score on the examination. An applicant who fails the examination on all 3 attempts shall be required to complete an entire EMT-Basic training program prior to reapplying.

E. All applicants applying for recertification after December 31, 1997, shall have successfully completed training that meets the requirements described in the Arizona EMT-Basic Refresher Curriculum, 1994, as shown in Exhibit E, to include the following:
   1. Semi-automatic defibrillator
   2. Patient-assisted medications
   3. Blood glucose monitoring
   4. Patient assessment
   5. SIDS (Sudden Infant Death Syndrome)
   6. IV monitoring

R9-25-512. Extension of Recertification Application Requirements (Authorized by A.R.S. §§ 36-2202 (A)(2),(3) and (4) and 36-2204 (1),(2), and (3))

A. An EMT-Basic who has not met the requirements in subsection (A) of this rule prior to the expiration of his or her current certificate may apply for 1 extension to file for recertification. The request for extension shall be made to the Director prior to the expiration of the current certification date.

B. The applicant for extension shall not practice as an EMT-Basic after the expiration date of the current certification.

C. An application for an extension shall be submitted to the Department, on a extension form provided by the Department as shown in Exhibit BB, which contains the following:
   1. Applicant's name, address and phone number;
   2. EMS Employer's name, address and phone number;
   3. Applicant's certification number and date of expiration;
   4. Statement signed by the applicant, under penalty of perjury, that the applicant was unable to complete the recertification requirements during the effective period of the certification and verified by an attached, signed statement as follows:
      a. Physician licensed in Arizona who provides evidence of a mental or physical disability or health problem that has precluded the applicant from meeting the recertification requirements,
      b. Applicant's superior officer who documents that the applicant has been involved in military duty, or
      c. Third party who supports an undue hardship claim.

D. The request for extension may be granted for a term no greater than 180 days.

E. An applicant who does not meet recertification requirements within 180 days following the expiration of their certification shall be required to complete an entire EMT-Basic training program and meet requirements of R9-25-501.

R9-25-513. Inactive Status Due to Temporary Medical Condition (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(6))

A. An applicant who is unable to meet the requirements of recertification due to a temporary medical condition may apply to be placed on an inactive status by the Director for a period of 24 months from the expiration date of the applicant's certification.

B. An applicant shall submit to the Director:
   1. Written verification from a physician describing the applicant's temporary medical condition, the date of onset, a statement estimating the length of time that the condition will be present, a description of the applicant's physical limitations and a statement that the applicant is unable to perform the job duties of an EMT.
   2. A written request to place the applicant's certification on inactive status pending resolution of the medical condition.

C. The Director shall inform the applicant in writing whether the application was granted. The applicant shall not perform the job duties of an EMT during the term of inactive status.

D. Prior to the expiration of the inactive status or upon resolution of the medical condition, the applicant may apply for recertification, and shall submit documents required in R9-25-510(A).

E. The applicant shall pass a written examination if required by A.R.S. § 36-2202(D).

R9-25-514. Reporting Requirements (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1) and (6))

An EMT-Basic affiliated with an agency shall ensure that a first care form is completed for each patient encounter. The EMT-Basic shall ensure that the original or a legible copy of this report is provided to the receiving facility or the EMT-Basic's ALS Base hospital.

R9-25-515. Enforcement Actions (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1),(6), and (7))

A. In accordance with A.R.S. § 36-2211, the following factors shall be considered unprofessional conduct:
   1. Conduct as an EMT in another jurisdiction which resulted in denial, suspension or revocation of the EMT's certificate or license.
   2. Intentionally or negligently causing physical injury to a patient under the EMT's care or treatment.
   3. Abandoning or neglecting a patient requiring emergency medical care without making arrangements to continue such care as the patient required.
   4. Performing treatments above the level of the EMT's current level of certification.
   5. Use of, or being under the influence of narcotics, dangerous drugs or intoxicating beverages to the extent that the use impairs the judgement of the EMT while providing services as an EMT or ambulance attendant.
   6. Obtaining, possessing, administering or using any narcotic or controlled substance in violation of federal or state law.
   7. Willful destruction, falsification of, or making materially inaccurate statements on records of patient treatment or care.
   8. Impersonation of an EMT of higher level of certification.
   9. Conviction of or admission to committing any of the crimes listed in R9-25-501(C).

B. In accordance with A.R.S. § 36-2211 mental or physical incompetence shall be considered a lack of physical or mental ability to perform the duties of an EMT.

C. In accordance with A.R.S. § 36-2211 gross incompetence or gross negligence shall be considered willful acts or omissions in disregard of an individual's life, health or safety which may cause death or injury.

D. In accordance with A.R.S. § 36-2211 willful fraud or misrepresentation shall be considered false statements, or actions taken by an individual with the intent to benefit himself or mislead another.

ARTICLE 6. ADVANCED LIFE SUPPORT CERTIFICATION

R9-25-601. Certification Application Requirements (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4), 36-2204(1) and (6))

A. Applicant Prerequisites: An applicant for certification as a paramedic or intermediate shall satisfy the following requirements:
   1. General Requirements. An applicant shall:
      a. Be at least 18 years of age.
      b. Submit a completed application to the Department for certification on a form as shown in Exhibit X.c. Verify that within the last 6 months, the applicant has not used illegal drugs or substances, illicit drugs or substances, or controlled drugs not prescribed for the applicant.
      d. Verify that within the last 6 months, the applicant has not used alcohol to an extent that the use impairs the skill or ability to safely conduct the job requirements, and
      e. Be currently certified as an EMT in the State of Arizona.
   2. Paramedic applicant requirements. An applicant shall provide evidence of completion of a paramedic or intermediate to paramedic training program course certified by the Department or a challenge course completed in accordance with the requirements prescribed in R9-25-407.
   3. Intermediate applicant requirements. An applicant shall provide evidence of successful completion of an intermediate training program course certified by the Department or a challenge course completed in accordance with the requirements described in R9-25-407.

B. Physical Requirements. Within 90 days prior to applying, each applicant shall undergo a physical examination, at the applicant's expense, that evaluates the applicant's health status and physical abilities necessary to perform the job requirements of an EMT as listed on the form provided by the Department as shown in Exhibit Y. A physician licensed pursuant to the provisions of title 32, chapter 13 or 17, in good standing, physician's assistant, or a nurse practitioner licensed in Arizona shall conduct the examination, and complete and sign the physical examination form. The applicant shall submit the completed physical examination form to the Department with the application for certification.

C. Good Character Requirements. An applicant shall certify on a form that is provided by the Department and notarized that the applicant has not been convicted of, or admitted committing, any of the following crimes:
   1. Sexual abuse of a minor,
   2. Driving under the influence within the last 4 years,
   3. First or second degree murder,
   4. Kidnapping,
   5. Arson,
   6. Sexual assault,
   7. Sexual exploitation of a minor,
   8. Contributing to the delinquency of a minor,
   9. Commercial sexual exploitation of a minor,
   10. Felony offenses involving distribution of marijuana or dangerous or narcotic drugs,
   11. Burglary,
   12. Robbery,
   13. A dangerous crime against children as defined in A.R.S. Section 13-604.01,
   14. Child or adult abuse,
   15. Sexual conduct with a minor,
   16. Molestation of a child,
   17. Manslaughter,
   18. Aggravated assault,
   19. A felony or misdemeanor involving moral turpitude, or
   20. Flight to avoid prosecution.

R9-25-602. Applicant Screening Process (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1) and(6))

A. Any applicant who has been convicted of, or admitted committing, any of the following crimes shall be denied certification unless the person has been granted an exception for good cause pursuant to the requirements of subsection (B):
   1. Sexual abuse of a minor,
   2. Driving under the influence within the last 4 years,
   3. First or second degree murder,
   4. Kidnapping,
   5. Arson,
   6. Sexual assault,
   7. Sexual exploitation of a minor,
   8. Contributing to the delinquency of a minor,
   9. Commercial sexual exploitation of a minor,
   10. Felony offenses involving distribution of marijuana or dangerous or narcotic drugs,
   11. Burglary,
   12. Robbery,
   13. A dangerous crime against children as defined in A.R.S. Section 13-604.01,
   14. Child or adult abuse,
   15. Sexual conduct with a minor,
   16. Molestation of a child,
   17. Manslaughter,
   18. Aggravated assault,
   19. A felony or misdemeanor involving moral turpitude, or
   20. Flight to avoid prosecution.

B. An applicant who would otherwise be ineligible for certification because of prior criminal acts may apply to the Director in accordance with the requirements and procedures in this section for an exception for good cause permitting certification. The applicant shall submit or cause to be submitted under penalty of perjury to the Director the following information:
   1. A copy of the record of conviction, if applicable.
   2. A copy of reports relevant to the criminal offense, such as probation presentence reports or parole or community supervision termination reports.
   3. Other evidence of the applicant's moral fitness, including letters of recommendation from law enforcement, prosecution or correctional officers.
   4. Documentation substantiating the applicant's record of employment record of support of dependents and record of good conduct and whether the applicant has paid all outstanding court costs, supervision fees, fines and restitution as may have been ordered by a court of law.
   5. A notarized statement providing the following:
      a. A description of the nature and seriousness of the criminal offense.
      b. The nature and extent of the applicant's conviction.
      c. The applicant's age at the time the applicant committed the criminal offense.

d. The amount of time that has elapsed since the applicant's last criminal offense, release from incarceration and probation, parole or community supervision.

6. Supporting documentation providing the following:
   a. Evidence of rehabilitative effort and lack of recidivism.
   b. A description of the applicant's conduct and work activity before and after the criminal offense.
7. Information relating to the potential job including responsibilities, plans for supervision and hours and days of employment.

C. The documents provided to the Director in accordance with subsection (B) shall be accompanied by the following statement signed by the applicant: "I affirm under the penalty of perjury that the information contained herein is true and correct".

D. The Director shall consider whether to allow an exception for good cause unless the individual has been convicted of or is awaiting trial on any of the following offenses or any similar offenses in another state or jurisdiction:
1. Sexual abuse of a minor,
2. First or second degree murder,
3. Sexual assault,
4. Sexual exploitation of a minor,
5. Commercial sexual exploitation of a minor,
6. A dangerous crime against children as defined in A.R.S. Section 13-604.01,
7. Child or adult abuse,
8. Sexual conduct with a minor,
9. Molestation of a child, or
10. Felony offenses involving distribution of marijuana or dangerous or narcotic drugs.

E. The Director shall review the documentation and any additional relevant information and grant a good cause exception if he determines that there is a reasonable likelihood that the applicant:
1. Is rehabilitated and has assumed a role as a responsible, law-abiding citizen;
2. Possesses unique or exceptional skills, education, training or experience to providing EMT services; and
3. Does not present a risk to the health, welfare or safety of patients.

F. The Director shall notify the applicant of the decision approving or denying the exception.

G. Any misrepresentation or concealment of fact by an applicant shall be grounds for denial or revocation for a good cause exception by the Director.

H. Any denial of certification pursuant to subsection (B) of this rule shall be in the form of an written order signed by the Director or the Director's designated representative.

I. All criminal justice information received from the Arizona Department of Public Safety shall be confidential and shall not be available for public record review.

J. If an application is denied, the applicant may request a hearing within 15 days of the date of receipt of the notice of denial. A hearing on the denial shall be conducted in accordance with A.R.S. Title 41, Chapter 6 and the 9 A.A.C. 1, Article 1.

R9-25-603. Denial of Application (Authorized by A.R.S. §§ 36- 2202(A)(2),(3), and (4) and 36-2204(1) and (6))

An applicant who is on parole, probation, supervised release, or is presently incarcerated for any criminal conviction shall be denied application for certification as a paramedic or intermediate EMT.

R9-25-604. Examinations for Initial Certification (Authorized by A.R.S. §§ 36-2202(A)(2), (3), and (4) and 36-2204(1), (2), and (6))

A. Applicants shall pass written and practical examinations for paramedic or intermediate certification administered or approved by the Department in accordance with the National Registry of Emergency Medical Technicians. These examinations shall not be required for an applicant with a current and valid National Registry certification in good standing.

B. Applicants shall pass a written pharmacology examination administered or approved by the Department with the minimum score of 75%. The examination shall consist of multiple choice questions covering all objectives of the pharmacology module in the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U.

C. Applicants shall be given 3 opportunities to attain passing scores on all examinations within 1 year after the official completion date of a training program.

D. An applicant who has failed to pass the written examination after the third attempt shall repeat a certified paramedic or intermediate training program or challenge course prior to reapplication.

R9-25-605. Duration of Certification (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1) and (6))

Paramedic or intermediate certification shall be valid for a period of 2 years.

R9-25-606. Out of State Applicants (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1),(2), and (6))

A. An applicant who holds current and valid certification as a paramedic in good standing issued by another state or jurisdiction may be certified in Arizona after meeting the following requirements:
1. Compliance with all requirements described in R9-25-601, R9-25-602, R9-25-604(B).
2. Submission of a completed application on a form provided by the Department and set forth in Exhibit X.
3. Submission of evidence of a current and valid certification issued by the National Registry of Emergency Medical Technicians or a state or a political subdivision.
4. Submission of evidence of successful completion of a challenge course as described in R9-25-407(J).

B. If an out-of-state paramedic applicant does not hold a current and valid certification issued by the National Registry of Emergency Medical Technicians, the applicant shall apply for and successfully complete the written and practical examinations for EMT-Paramedic administered or approved by the Department in accordance with the National Registry of Emergency Medical Technicians.

C. Certification issued to a person meeting the requirements under this section, shall be for 2 years.

D. An out of state applicant who is certified as an intermediate in another state or jurisdiction shall be required to complete an intermediate training program in the state of Arizona prior to applying for certification.

R9-25-607. Applicants With Disabilities (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1),(2), and (6))

A. Special examination accommodations may be made for individuals with diagnosed learning disabilities in the areas of reading decoding or reading comprehension, or some form of documented disability or cognitive processing deficit which would negatively affect an applicant's performance on the written examination.

B. No special accommodations shall be made for the practical examination.

C. Applicants requesting special accommodations for the written examination shall submit such request to the Medical Director at least 30 days prior to the date of the written examination together with evidence that documents the diagnosis of a learning disability in the area of reading decoding or reading comprehension based upon the results of a standardized psychoeducational assessment including a standardized measure of intelligence and a standardized measure of achievement in reading decoding or reading comprehension.

D. Accommodations on the written examination shall be considered by the Medical Director for those applicants who meet the minimum standards for performance as determined by analysis of the requirements of the job analysis for EMT.

R9-25-608. Scope of Practice (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4), 36-2204(1),(6) and (8), and 36-2205)

A. Individuals certified as paramedic or intermediates shall be authorized to provide medical treatments, procedures, medications and techniques as outlined in the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U or adopted pursuant to A.R.S. § 36-2205.

B. Individuals certified as paramedic or intermediates shall be authorized to provide medical treatments, procedures, medications and techniques described in subsection (A) only under the direction of an ALS Base Hospital certified pursuant to Title 9, Chapter 25, Article 2.

R9-25-609. Extended Scope of Practice Training Requirements (Authorized by A.R.S. §§ 36-2202(A)(3) and (4) and 36-2204(1))

A. Immunization Training Requirements. A paramedic or intermediate may administer immunizations according to the protocol established in R9-25-1501 upon successful completion of the following requirements:

1. Curriculum Requirements: Each immunization trainee shall complete all of the objectives of the Arizona Advanced Life Support Immunization Curriculum as shown in Exhibit CC. The curriculum shall be approved by a Medical Director who is:
   a. A physician licensed in the State of Arizona and:
      i. Is currently practicing in General Medicine, Family Practice, Internal Medicine, Pediatrics, or Emergency Medicine;
      ii. Is accessible by phone, beeper, or in person during all phases of training;
      iii. Signs the course completion certificates for each trainee who successfully completes the Arizona Advanced Life Support Immunization Training course;
      iv. Provides immunization schedule changes and updates on immunobiologics as they become available to paramedics trained to administer immunizations.
2. The curriculum shall be taught by the Medical Director or an instructor with the following qualifications:
   a. Licensed registered nurse in the State of Arizona with either a:
      i. Bachelor of Science Degree, or
      ii. 2 years experience administering immunizations in a pediatric or public health setting, or
   b. Physician or physician's assistant licensed in the State of Arizona currently practicing in General Practice, Family Practice, Internal Medicine, Pediatrics, or Emergency Medicine.
3. Competency Requirements: Each immunization trainee shall demonstrate competency by obtaining a score of 80% or better on each of the following examinations:
   a. The final written examination shall consist of 100 multiple choice questions utilizing 1 absolutely correct answer, 1 incorrect answer and 2 distractors neither of which is "all of the above" or "none of the above," covering the learning objectives of the Arizona Advanced Life Support Immunization Curriculum, 1994, as shown in Exhibit CC, in the following proportions:
      i. Epidemiology, 15 questions,
      ii. Immunization Scheduling, 15 questions,
      iii. Vaccine Screening, 10 questions,
      iv. Vaccine Administration, 20 questions,
      v. Adverse Reactions, 10 questions,
      vi. Vaccine Management, 15 questions,
      vii. Liability, 5 questions,
      viii. Documentation, 5 questions,
      ix. OSHA Requirements, 5 questions
   b. The final practical examination shall assess each skill outlined on the check off sheet as shown in Exhibit DD.
   c. The trainee shall have a maximum of 3 attempts to pass the final written examination and the final practical examination. If the student does not attain the minimum passing grade on either of the examinations on the third attempt, the student shall complete another immunization training program prior to being retested.
4. Course Completion Certificate Requirements: The instructor and Medical Director who approved the training curriculum shall sign and issue a course completion certificate to a trainee who completes the course and passes the final examinations. The course completion certificate shall be valid for 1 year from the date on which the trainee successfully completes the final examinations.
   a. The ALS personnel shall provide a copy of the course completion certificate to the Medical Director of an Immunization Clinic prior to administering immunobiologics evidencing successful completion of immunization administration training as required by R9-25-1501.
   b. The ALS personnel shall be responsible to keep and safeguard the course completion certificate.
5. Continuing Education and Renewal of Course Completion Certificate Requirements:
   a. The ALS personnel shall complete yearly continuing education in immunization administration.
   b. The continuing education shall cover the following topics from the Arizona Advanced Life Support Immunization Course curriculum:
      i. Routine immunization scheduling
      ii. Vaccine screening process
      iii. Vaccine administration
      iv. Management of adverse reactions
      v. Vaccine management
      vi. Documentation
   c. The continuing education course shall utilize a Medical Director and instructor who meet the qualifications and satisfy the responsibilities identified in section (1) of this rule.
      i. Upon completion of the continuing education course, the ALS personnel shall be given 3 attempts to attain a passing score of 80% on the final written examination identified in section

(3)(a) of this rule prior to receiving a course completion certificate.

ii. The Medical Director and instructor shall sign and issue a new course completion certificate to the ALS personnel who completes the continuing education course and passes the final examination. The course completion certificate shall be valid for 1 year from the date on which the ALS personnel successfully completes the examination.

R9-25-610. Paramedic Recertification Requirements (Authorized by ARS §§ 36-2202(A)(2)(3) and(4) and 36-2204(1),(4), and (6))

A. An applicant for paramedic recertification shall have been in compliance with all requirements of this Article, R9-25-601(C), R9-25-602 and R9-25-613 during the current certification period.

B. An applicant for paramedic recertification shall complete 60 hours of continuing medical education in the following categories:

1. Category I (Mandatory). 1 hour of continuing education credit shall be given for 1 hour of instruction received.
   a. ACLS and BCLS provider course completion: a maximum of 24 hours.
   b. Prehospital case reviews: minimum of 12 hours.
   c. Base station lectures: minimum of 12 hours.
   d. Skills Workshops: Training in endotracheal intubation, needle thoracostomy, surgical cricothyrotomy, intraosseous infusion, and central venous lines that meets the requirements and objectives described in the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U. A minimum of 4 hours and a maximum of 20 hours.
2. Category II (Electives)
   a. An EMT-Paramedic refresher training program which meets the requirements and objectives in R9-25-407(K). A maximum of 48 hours.
   b. EMS health related college courses provided by a educational institution which is accredited by the New England Association of Schools and Colleges, Middle States Association of Colleges and Secondary Schools, North Central Association of Colleges and Schools, Northwest Association of Schools and Colleges, Southern Association of Colleges and Schools or the Western Association of Schools and Colleges: 3 hours per credit unit of courses to a maximum of 12 hours of classes.
   c. Conference, Didactic or Lecture sessions on subjects which meet 1 or more of the objectives as established in R9-25-407(K). Maximum of 30 hours.
   d. Clinical experience supervised by a preceptor who meets the qualification in R9-25-406. Maximum of 20 hours.
   e. Teaching: maximum of 20 hours of instruction in a certified EMT program or Basic Cardiac Life Support, Advanced Cardiac Life Support, Prehospital Trauma Life Support or Basic Trauma Life Support. Credit shall not be given for the same course taught more than once during the period of certification.
   f. Vehicular preceptor for a certified training program: maximum of 20 hours.

C. Complete 120 hours of vehicular experience or supervised clinical training in an emergency setting, or a combination of the 2, during each year of the certification period.

D. Submit to the Department the following documents 30 days prior to the expiration of the current certification period:

1. An application on a form provided by the Department as shown in Exhibit Z.
2. A written verification attesting that the applicant has met all the requirements for recertification on a form shown in Exhibit EE.
3. A physical examination or verification of the ability to perform the functions of a paramedic obtained within 90 days prior to recertifying. The physical examination or verification form as shown in Exhibits Y and AA shall be signed by a licensed physician, or physician's assistant, or nurse practitioner licensed in the State of Arizona.

R9-25-611. Intermediate Recertification Requirements (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1),(4), and (6))

A. An applicant for intermediate recertification shall have been in compliance with all requirements of this Article R9-25-601(C), R9-25-602 and R9-25-613 during the current certification period.

B. An applicant for intermediate recertification shall complete 50 hours of continuing medical education in the following categories:

1. Category I (Mandatory). 1 hour of continuing education credit shall be given for 1 hour of instruction received.
   a. BCLS provider course completion: a maximum 8 hours.
   b. Prehospital case reviews: minimum of 12 hours.
   c. Base station lectures: minimum of 12 hours.
   d. Skills Workshops: Training in endotracheal intubation, needle thoracostomy, surgical cricothyrotomy, and intraosseous infusion that meets the requirements and objectives described in the Arizona Advanced Life Support Curriculum, 1994, as shown in Exhibit U. A minimum of 4 hours and a maximum of 20 hours.
2. Category II (Electives)
   a. An EMT-Intermediate refresher training program which meets the requirements and objectives in R9-25-407(K). A maximum of 48 hours.
   b. EMS health related college courses provided by a educational institution which is accredited by the New England Association of Schools and Colleges, Middle States Association of Colleges and Secondary Schools, North Central Association of Colleges and Schools, Northwest Association of Schools and Colleges, Southern Association of Colleges and Schools or the Western Association of Schools and Colleges: 3 hours per credit unit of courses to a maximum of 12 hours of classes.
   c. Paramedic Training course hours.
   d. Conference, Didactic or Lecture sessions on subjects which meet 1 or more of the objectives as established in R9-25-407(K). Maximum of 30 hours.
   e. Supervised clinical experience by a preceptor who meets the qualification in R9-25-406. Maximum of 20 hours.
   f. Teaching, a maximum of 20 hours of instruction in a certified EMT program or Basic Cardiac Life Support, Prehospital Trauma Life Support or Basic Trauma Life Support. Credit shall not be given for the same course taught more than once during the period of certification.
   g. Vehicular preceptor for a certified training program: maximum of 20 hours.

C. The applicant shall complete 80 hours of vehicular experience or supervised clinical training in an emergency setting, or a combination of the 2, during each year of the certification period.

D. The applicant shall submit to the Department the following documents 30 days prior to the expiration of the current certification period:
   1. An application on a form provided by the Department as shown in Exhibit Z.
   2. A written verification attesting that the applicant has met all the requirements for recertification on a form shown in Exhibit EE.
   3. A physical examination or verification of the ability to perform the functions of an intermediate obtained within 90 days prior to recertifying. The physical examination or verification form as shown in Exhibits Y and AA shall be signed by a licensed physician, physician assistant, or nurse practitioner licensed in the State of Arizona.

E. An applicant shall be required to pass an examination administered or approved by the Department with a 75% or greater as a condition for recertification if required to do so by his or her base hospital medical director. Each applicant shall be granted 3 attempts to pass the examination. Applicants who fail the examination on all 3 attempts shall be required to complete an entire EMT-intermediate training program or challenge course prior to reapplying.

R9-25-612. Extension of Recertification Application Requirements (Authorized by A.R.S. §§ 36- 2202(A)(2), (3) and (4) and 36-2204(1),(4) and (6))

A. An applicant who has not met the requirements in R9-25-610(B) and (C), or R9-25-611(B) and (C), prior to the expiration of their current certificate, may apply for 1 extension to file for recertification per certification cycle. The request for extension shall be made to the Director prior to the expiration of the current certification date.

B. The applicant for extension shall not practice as a paramedic or an intermediate after the expiration date of the current certification.

C. An application for an extension shall be submitted to the Department on an extension form as shown in Exhibit BB, which contains the following:
   1. Applicant's name, address and phone number;
   2. EMS employer's name, address and phone number;
   3. Applicant's certification number and date of expiration;
   4. Statement signed by the applicant, under penalty of perjury, that the applicant was unable to complete the recertification requirements during the effective period of the certification and verified by an attached signed statement as follows:
      a. Physician licensed in Arizona who provides evidence of a mental or physical disability or health problem that has precluded the applicant from meeting the recertification requirements,
      b. Applicant's superior officer who documents that the applicant has been involved in military duty, or
      c. Third party who supports an undue hardship claim.

D. The request for extension may be granted for a term no greater than 180 days.

E. An applicant who does not meet recertification requirements within 180 days following the expiration of their certification shall be required to complete an entire EMT- Intermediate or paramedic training program and meet requirements of R9-25-601.

R9-25-613. Inactive Status Due to Temporary Medical Condition (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(6))

A. An applicant who is unable to meet the requirements of recertification due to a temporary medical condition may apply to be placed on an inactive status by the Director for a period of 24 months from the expiration date of the applicant's certification.

B. An applicant shall submit to the Director:
   1. Written verification from a physician describing the applicant's temporary medical condition, the date of onset, a statement estimating the length of time that the condition will be present, a description of the applicant's physical limitations and a statement that the applicant is unable to perform the job duties of an EMT, and
   2. A written request to place the applicant's certification on inactive status pending resolution of the medical condition.

C. The Director shall inform the applicant in writing whether the application was granted. The applicant shall not perform the job duties of an EMT during the term of inactive status.

D. Prior to the expiration of the inactive status or upon resolution of the medical condition, the applicant may apply for recertification and shall submit:
   1. Documents required in R9-25-610(D).
   2. Evidence of successful completion of an intermediate or paramedic refresher course as described in R9-25-407(K) or the continuing education requirements of R9-25-610 or R9-25-611.

R9-25-614. Downgrading of Certification (Authorized by A.R.S. §§ 36-2202(A)(2)(3) and (4) and 36-2204(1), and (6))

A. A certified paramedic or intermediate in good standing may voluntarily elect to downgrade the level of certification for the remainder of the certification period. The applicant shall:
   1. Meet all requirements in R9-25-601(A)(1) or R9-25-501(A)(1), and
   2. Submit a written recommendation from the base hospital medical director verifying their ability to perform at the lower level of certification; or
   3. Successfully complete the examination for recertification required for the lower level.

B. A certified paramedic or intermediate in good standing may voluntarily elect to recertify at a lower level of certification. The applicant shall meet all requirements in R9-25-510 or R9-25-611.

C. An application for downgrading of certification shall not be approved if the applicant is under investigation pursuant to A.R.S. § 36-2211 or 9 A.A.C. 25, Article 5 or 6.

R9-25-615. Reporting Requirements (Authorized by A.R.S. §§ 36-2202(A)(2),(3) and (4) and 36-2204(1) and (6))

A paramedic or intermediate affiliated with an agency shall ensure that a first care form is completed for each patient encounter. The paramedic or intermediate shall ensure that the original or a legible copy of this report is provided to the receiving facility or the ALS Base hospital.

R9-25-616. Enforcement Actions (Authorized by A.R.S. §§ 36- 2202(A)(2),(3) and (4)., 36-2204(1),(6) and (7))

A. In accordance with A.R.S. § 36-2211, the following factors shall be considered unprofessional conduct:
   1. Conduct as an EMT in another jurisdiction which resulted in denial, suspension or revocation of the EMT's certificate or license.
   2. Intentionally or negligently causing physical injury to a patient under the EMT's care or treatment.

3. Abandoning or neglecting a patient requiring emergency medical care without making arrangements to continue such care as the patient required.
4. Performing treatments above the level of the EMT's current level of certification.
5. Use of, or being under the influence of narcotics, dangerous drugs or intoxicating beverages to the extent that the use impairs the judgement of the EMT while providing services as an EMT or ambulance attendant.
6. Obtaining, possessing, administering or using any narcotic or controlled substance in violation of federal or state law.
7. Willful destruction, falsification of, or making materially inaccurate statements on records of patient treatment or care.
8. Impersonation of an EMT of higher level of certification.
9. Performing advanced procedures without medical direction.
10. Conviction of or admission to committing any of the crimes listed in R9-25-601(C).

B. In accordance with A.R.S. § 36-2211, mental or physical incompetence shall be considered a lack of physical or mental ability to perform the duties of an EMT.

C. In accordance with A.R.S. § 36-2211, gross incompetence or gross negligence shall be considered willful acts or omissions in disregard of an individual's life, health or safety which may cause death or injury.

D. In accordance with A.R.S. § 36-2211, willful fraud or misrepresentation shall be considered false statements, or actions taken by an in dividual with the intent to benefit himself or mislead another.

EXHIBIT A

Arizona Department of Health Services
Office of Emergency Medical Services

Advanced Life Support Base Hospital
Application for Certification/Recertification

Name of licensed health care facility applying for certification:

_____

Address of the facility:

_____
Address

_____
City County Zip

Administrator's name and phone number:

_____
Name Phone number

Base Hospital Medical Director's name and phone number:

_____
Name Phone number

Prehospital Manager's name and phone number:

_____
Name Phone number

I hereby verify that: (1) All information contained on this application and supporting documentation is true and accurate; (2) I have the authority to act on behalf of, and legally bind, the named agency as applicant; (3) All documentation as required in Arizona Administrative Code R9-13-202 are attached hereto.

Signature _____ Title _____ Date _____

OEMS-212
REV: January 30, 1995

EXHIBIT B

PROCEDURES/DRUG LISTS
MINIMUM STANDARDS FOR
EMERGENCY PREHOSPITAL CARE PROVIDERS

Drug Box procedures for use by certified EMT-Is and EMT-Ps have been recommended by the State Emergency Medical Services Council, the Medical Direction Commission and adopted by the Director, Arizona Department of Health Services pursuant to A.R.S. §36-2203.01 and § 36-2205 and Arizona Administrative Codes R9-13-402 and R9-13-602. A.R.S. § 36-2205 provides that EMT-Is and EMT-Ps may "render such medications only under the direction of a physician." Physician direction is defined as occurring via either direct communication (person to person, two-way radio or telephone conversation) or indirect communication (conveyed by an intermediary). Use and/or maintenance of a drug box by emergency prehospital care personnel without this level of physician direction is prohibited.

Periodic modifications of the drug list may include new drugs which will require additional training of the emergency prehospital care personnel. Each certified ALS Base Hospital's Medical Director shall have the responsibility for implementing the provision of this training.

MEDICAL DIRECTION COMMISSION RECOMMENDED AND ADOPTED BY DIRECTOR, ADHS, OCTOBER 1993

Reprint: August 1994

A. GENERAL PROVISIONS

1. A drug may be administered by emergency prehospital care personnel only by order of an emergency physician via direct or indirect communication or when following approved Standing Orders. The emergency physician is responsible for signing the verification of a telemetry order for delivery to the pharmacy of the receiving hospital within seventy-two (72) hours for ordered controlled substances.
2. The drug box contents shall be issued by a base hospital pharmacy to on-duty emergency prehospital care personnel:
    a. the drug box contents are part of the inventory and records for accountability by the issuing base hospital.
    b. on-duty emergency prehospital care personnel to whom drug boxes are issued act as agents of the EMS Providers who shall be responsible for the box and shall be accountable to the pharmacy for its contents.
3. An EMS Provider agency shall be responsible for monitoring recognition of drug expiration dates, evidence of drug deterioration, damage to containers, illegible labels with timely notification to the issuing pharmacy.
4. EMS Providers shall be responsible for the security and environmental control of the in-house and on-vehicle storage of a drug box and its contents.

5. EMS Providers shall be responsible for recording shift assignment of the box to in-coming duty personnel. Record of box contents inspection shall be made prior to an individual assuming accountability for the drug box.
6. When discrepancies of contents are found, i.e., tampered or broken containers, missing drugs, etc., immediate notification shall be made to the duty supervisor and to the issuing pharmacy for corrective action. An incident report shall be filed with the issuing pharmacy, as necessary. Any incident involving Class II drugs shall be reported to appropriate investigative agencies (State Board of Pharmacy, DPS Division of Narcotics, Drug Enforcement Administration) having jurisdiction over controlled substances.
7. All drug administrations shall be recorded on the patient's encounter form and a copy filed with the patient's record and receiving hospital's pharmacy.
8. Each medical facility issuing drug boxes to prehospital care personnel shall develop policy addressing drug box in-house security, issue documentation, and for agent accountability.
9. EMS Providers having supporting service agreements with ALS Base Hospitals shall acquire and use drug boxes having specifications mutually agreeable between the EMS Provider, the ALS Base Hospital Prehospital Care Committee and the Pharmacy. (See: C. Drug Box, No. 2)
10. An EMS Provider shall acquire sufficient drug boxes to meet peak emergency response demands within its service area.

11. A common drug box may used by emergency prehospital care providers. The drug box shall be supplied with all authorized EMS drugs. Administration of drugs shall be limited to those designated for the appropriate skill level of the care provider.

B. EXCHANGE PROCEDURES

1. An ALS Base Hospital whose policy mandates a drug box-for-drug box exchange shall be supplied with sufficient numbers of boxes by the EMS Provider in order to expedite box-for-box exchange.
2. An ALS Base Hospital whose policy allows drug-for-drug exchange shall document such exchanges on appropriate record forms.
3. Drug-for-drug restocking from air transport unit resources is optional depending upon anticipated circumstances to transport to a health care facility. All exchanges shall be identified on the patient's encounter form.
4. Allow EMS Providers having supporting service agreements with ALS Base Hospitals an appropriate mechanism, as authorized by a medical control authority, for replacement of medications provided to a patient transported to a receiving facility without capability for replacement of approved EMS medications.

C. DRUG BOX

1. When necessary, replace with the authorized Plano 747M, with drawer configurations for paramedic or intermediate, or with a container meeting guidelines for drug box approval. Approved soft packs meet these guidelines.

2. Guidelines for approval of an appropriate device for conveying EMS drugs:

   a. Container to be washable.
   b. Exterior identifiable as to skill level.
   c. Securing device may be applied.
   d. Container to accommodate drugs and quantities of current drug list.
   e. Have appropriate mechanism for internal location and identification of drugs.
   f. Capable of compartmentalization.

D. DRUG SUPPLY STANDARDS

1. Supply of each agent appearing in the approved Drug List shall be the minimum amount to be carried in the Drug Box.
2. An EMS Provider shall be allowed to carry additional quantities of a drug to satisfy specific needs of the local service area.
3. An EMS Provider shall submit written request to OEMS for approval to carry supplies in excess of minimum amounts.
4. Controlled substances shall not be subject to supply flexibility.

EMT-P DRUG LIST

MEDICAL DIRECTION COMMISSION RECOMMENDED AND ADOPTED BY DIRECTOR, ADHS, NOVEMBER 1993

DRUG PREPARATION	AMOUNT		SUPPLY
ADENOSINE	6 mg/ 2 ml	VIAL	5
ALBUTEROL SULFATE (Sulfite free)**	2.5 mg/3 ml NS	UNIT DOSE	2
AMINOPHYLLINE	500 mg/20 ml	VIAL	2
ASPIRIN, PEDIATRIC CHEWABLE	80 mg	INDEPENDENT DOSE	4
ATROPINE	1 mg/10 ml	SYRINGE	3
ATROPINE	8 mg/20 ml	VIAL	1
BRETYLIUM	500 mg/10 ml	SYRINGE	3
CALCIUM CHLORIDE	1 gm/10 ml	SYRINGE	2
CHARCOAL, ACTIVATED*	25 gm	BOTTLE	4
DEXTROSE	25 gm/50 ml	SYRINGE	2
DIAZEPAM	10 mg/2 ml	SYRINGE	2
DIPHENHYDRAMINE	50 mg/1 ml	UNIT DOSE	2
DOPAMINE HCL	400 mg/5 ml	SYRINGE	2
EPINEPHRINE (1:1,000 SOL)	1 mg/1 ml	30 ml VIAL	1
	1 mg/1 ml	UNIT DOSE	2
EPINEPHRINE (1:10,000 SOL)	1 mg/10 ml	SYRINGE	6
GLUCAGON	1 mg/1 ml	UNIT DOSE	2
FUROSEMIDE	40 mg/4 ml	SYRINGE	4
ISOETHARINE**	1% 0.5 ml 3-5 ml Normal Saline PREMIX OPTIONAL FOR NEBULIZATION	AMPULE with	2
LIDOCAINE IV	100 mg/5 ml	SYRINGE	3
LIDOCAINE IV	1 gm/25 ml	VIAL	2
LIDOCAINE IV (Option to above)	2 gm/500 ml	Premix/D5W	1
MAGNESIUM SULFATE	1 gm/2 mL	VIAL	2
METHYLPREDNISOLONE SOD. SUCCINATE	125 mg	VIAL	1

*Exclude as in-box item

** Administer by nebulizer

EMT-P DRUG LIST
Page 2 of 2

DRUG PREPARATION	AMOUNT		SUPPLY
MORPHINE SULFATE	10 mg/1 ml	AMPULE	2
NALOXONE	1 mg/1 ml/2 ml	UNIT DOSE	5
NEO-SYNEPHRINE	0.5% 15 ml	BOTTLE	1
NIFEDIPINE	10 mg oral	CAPSULE	4
NITROSTAT TABLETS	0.4 mg tab/25 in	BOTTLE	1
OXYTOCIN	10 units/1 ml	UNIT DOSE	2
SODIUM BICARBONATE	50 mEq/50 ml	SYRINGE	3
THIAMINE	100 mg/1 ml	UNIT DOSE	1
VERAPAMIL	5 mg/2 ml	UNIT DOSE	2

NITROUS OXIDE (NITRONOX) Nitrous oxide 50% / Oxygen 50% fixed ratio with O2 fail safe device with self-administration mask. Optional.

SYRINGES:	1 ml (TB 25 g)	2
	3 ml	4
	10-12 ml	4
	20 ml	2
	50-60 ml	2
FILTER NEEDLES:	5 micron 19 g 1 1/2"	3
NON-FILTER NEEDLES		Assorted

INTRAVENOUS SOLUTIONS: (Bulk restricts inclusion of all fluids in Drug Box)

DEXTROSE, 5% IN H20	250 ml BAG	minimum	1
L RINGER'S/NORMAL SALINE	1 L BAGS	8 L total	
NORMAL SALINE	250 ml Bag	minimum	3
NORMAL SALINE	50 ml Bag	minimum	2
SALINE 0.9% lock	1 ml fluid flush		5

OEMS DRUG LIST 8/94

EMT-I DRUG LIST
Medical Direction Commission recommended and adopted by Director, ADHS, October 1993

DRUG PREPARATION	AMOUNT		SUPPLY
ALBUTEROL SULFATE (Sulfite free)**	2.5 mg/3 ml NS	UNIT DOSE	2
ASPIRIN, PEDIATRIC CHEWABLE	80 mg	INDEPENDENT DOSE	4
ATROPINE	8 mg/20 ml	VIAL	1
CHARCOAL, ACTIVATED*	25 gm	BOTTLE	4
DEXTROSE	25 gm/50 ml	SYRINGE	2
DIAZEPAM	10 mg/2 ml	SYRINGE	2
DIPHENHYDRAMINE	50 mg/1 ml	UNIT DOSE	2
EPINEPHRINE (1:1000 SOL)	1 mg/1 ml	UNIT DOSE	2
FUROSEMIDE	40 mg/4 ml	SYRINGE	4
GLUCAGON	1 mg/1 ml	UNIT DOSE	2
ISOETHARINE**	1% 0.5 ml with 3-5 ml Normal Saline PREMIX OPTIONAL FOR NEBULIZATION	AMPULE	2
METHYLPREDNISOLONE SOD. SUCCINATE	125 mg	VIAL	1
MORPHINE SULFATE	10 mg/1 ml	AMPULE	2
NALOXONE	1 mg/1 ml/2 ml	UNIT DOSE	5
NEO-SYNEPHRINE	0.5% 15 ml	BOTTLE	1
NITROSTAT TABLETS	0.4 mg tab/25	in BOTTLE	1
OXYTOCIN	10 units/1 ml	UNIT DOSE	2
SODIUM BICARBONATE	50 mEq/50 ml	SYRINGE	3
THIAMINE	100 mg/1 ml	UNIT DOSE	1
NITROUS OXIDE (NITRONOX)	Nitrous oxide 50% / Oxygen 50% fixed ratio with O2 fail safe device with self-administration mask. Optional.		

* Exclude as in-box item

** Administer by nebulizer

EMT-I DRUG LIST
Page 2 of 2

SYRINGES:	1 ml (TB 25 g)	2
	5 ml	2
	10 ml	2
	20 ml	2
FILTER NEEDLES	5 micron 19 g 1 1/2"	3
NON-FILTER NEEDLES		Assorted

INTRAVENOUS SOLUTIONS: (Bulk restricts inclusion of all fluids in Drug Box)

DEXTROSE, 5% IN H20	250 ml BAG	minimum	1
L RINGER'S/NORMAL SALINE	1 L BAGS to	8 L	total
NORMAL SALINE	250 ml BAG	minimum	3
SALINE 0.9% lock	1 ml fluid flush		5

OEMS DRUG LIST 8/94

INTRAVENOUS INFUSIONS TO BE MONITORED BY APPROPRIATE LEVEL OF EMT PERSONNEL

IV INFUSIONS		EMT-B-IV	EMT-I	EMT-P	INFUSION PUMP
AMINOPHYLLINE				X	
ANTIBIOTICS			X	X	
ANTIARRHYTHMICS:	PHENYTOIN			X	X
	PROCAINAMIDE			X	X
BRETYLIUM				X	
BLOOD				X	
CALCIUM CHLORIDE				X	
COLLOIDS:	DEXTRAN; HETASTARCH; HUMAN SERUM; ALBUMIN; MANNITOL; PLASMANATE		X	X	
CORTICOSTEROIDS			X	X	
CRYSTALLOIDS (> USUAL/CUSTOMARY)				X	
DIURETICS				X	
DOPAMINE				X	X
ELECTROLYTE ADDITIVES (>USUAL/CUSTOMARY)				X	
EPINEPHRINE				X	X
HEPARIN					X
ISOPROTERENOL				X	X
LIDOCAINE				X	X
MAGNESIUM				X	X
MORPHINE SULFATE			X	X	X
NITROGLYCERINE					X
OXYTOCIN			X	X	
PHENOBARBITAL					X
SODIUM BICARBONATE			X	X	
DRUG BOX SOLUTIONS AND AGENTS OF AUTHORIZED SKILL LEVELS			X	X	
VITAMINS			X	X	
WATER/ELECTROLYTES (COMMERCIAL PREPS)		X	X	X	

COMMENTS: Electrolyte Additives and Crystalloid Solutions -To meet specific patient needs, supplemental additives frequently are made above the "usual and customary amounts" to "commercial preparations". The transferring facility should evaluate the ordered solutions and additives prior to turning a patient over to the care of appropriate certified EMT personnel for transfer.

OEMS MARCH 1995

EXHIBIT C

TRANSCUTANEOUS EXTERNAL PACER (TEP) PROCEDURE TRAINING CURRICULUM

ARIZONA DEPARTMENT OF HEALTH SERVICES
OFFICE OF EMERGENCY MEDICAL SERVICES

OEMS-027
REV. September 28, 1992

Transcutaneous External Pacing
CURRICULUM

Course description:

Transcutaneous External Pacing (TEP) is a procedure provisionally approved by the Medical Direction Commission of the Arizona Department of Health Services, Office of EMS, for use by certified EMT-Paramedics, only when under the Direction of an ALS Base Hospital that supports this procedure.

Please note that the use of Transcutaneous External Pacing is an independent Medical Control issue. The Arizona Department of Health Services (ADHS) does not intend for Transcutaneous External Pacing to be a standard of care. In areas that have resources available and the support of local Medical Control, Transcutaneous External Pacing is an approved procedure.

Successful completion of this course will constitute eligibility for certified EMT-Paramedics to utilize Transcutaneous External Pacing under the Medical Direction of an ALS Base Hospital.

NOTE: As with any advanced skill the ALS Base Hospital will be responsible for: (1) Managing skills retention through continuing education and Quality Assurance monitoring. (2) Reporting to the Department performance issues or withdrawal of medical control.

This document is the Official minimum standard curriculum for Transcutaneous External Pacing training.

Prerequisites:

The student must be a certified EMT-Paramedic; or enrolled in an approved ALS training program in which this curriculum is incorporated, in its entirety, as a module of Division 4. Section 2.; and be under the Medical Direction of an approved ALS Base Hospital willing to conduct training and continuing education related to this skill.

OEMS-027
REV. September 28, 1992

Methodology:

Description - The course is designed to be a minimum of 1½ hours in length and combine lecture with hands-on practice.

Lead instruction - The lead instructor must be certified in the State of Arizona as a Paramedic, Registered Nurse, or Licensed Physician. The lead instructor should have previous teaching experience and must have expertise in the process and the equipment.

Minimum Time Requirements -

Breakdown of minimum hours of instruction:

Module One.	Lecture with equipment display	½ hour
Module Two.	Lab with hands on experience	1 hours
Module Three.	Formal testing stations	As required

Equipment - The following minimum equipment must be available for the course:

- *Transcutaneous External Pacer (must train on the model that will be used in the field)*
- *Pacer pads*
- *Dysrhythmia generator*
- *Defibrillation mannikin*
- *A-V equipment (overhead projector, blackboard, etc...)*

Paperwork flow:

A letter of intent to conduct a class must be received by this Office a minimum of two weeks prior to the class. Included in this letter should be a brief description of the Instructor's qualifications, the date and location of the class, as well as a course outline.

Upon completion of the class, a letter signed by the Medical Director attesting to the competency of each student's skill in Transcutaneous External Pacing must be submitted to the ALS Program Manager, Office of EMS. A copy of a skills test checksheet must be maintained on file with the Base Hospital for a period of two years and will be subject to audit under the Department's Quality Management Program.

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Course Competencies:

Upon successful completion of this course, the student will be able to:

1. *Describe the purpose of Transcutaneous External Pacing.*
2. *List and describe the indications for Transcutaneous External Pacing.*
3. *List and describe the contraindications for Transcutaneous External Pacing.*
4. *List and describe the special considerations for Transcutaneous External Pacing.*
5. *Identify the landmarks for the pacer pads.*
6. *Demonstrate the correct technique for Transcutaneous External Pacing in a simulated situation.*
7. *Discuss the role of Medical Control for Transcutaneous External Pacing*
8. *Discuss the terms of the approval status and correctly identify that the approval status runs concurrent with Paramedic certification.*
9. *Pass a practical skills examination, administered by the State or its approved agent, with 100% competency.*

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Course Content:

Module One - Lecture

I. Description:

A. Transcutaneous External Pacing provides a non-invasive method of managing patients in severe bradyarrhythmias (and asystole as determined by local medical control).

B. Transcutaneous External Pacing may be performed only with direct on-line medical control.

C. Normal supportive therapy, airway management, peripheral I.V. access, drug therapy (Atropine), etc.. should not be affected by Transcutaneous External Pacing.

II. Indications:

A. Hemodynamically significant bradydysrhythmias and heart blocks unresponsive to atropine.

1. Identification of various bradycardias

2. Definition of hemodynamically significant

A. Hypotension
B. Anginal chest pain
C. Pulmonary edema
D. Decreased cerebral perfusion

B. Early asystolic arrest (<10 minutes) and witnessed asystolic arrest. •• This is a local medical control decision ••

C. Consider pacer standby mode for patients with new hemodynamically stable bradycardias/blocks.

III. Contraindications:

A. Traumatic asystole and bradyarrhythmias

B. Nonviable patients

C. Children weighing less than 15 kg (33 lbs.)

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IV. Special Considerations:

A. Pain control

1. Analgesia - Morphine Sulfate

2. Sedation - Valium

B. Defibrillation

1. Place defibrillation pads 2-3 cm from pacer electrodes to prevent arching

2. Put separate pacer units on standby when defibrillating.

C. CPR

1. May perform CPR with pacer electrodes in place without risk.

2. May get artifactual muscle stimulation which may make it difficult to palpate pulses.

D. ACLS protocols should be followed.

E. Etiologies of hemodynamically significant bradydysrhythmias.

1. AMI

2. Beta blocker and calcium channel blocker overdoses

3. Digoxin toxicity

4. Metabolic abnormalities - hyperkalemia

5. Internal pacemaker failure

F. Failure to capture pacing

1. Extremely large individuals

2. Inappropriate electrode placement

3. Barrel-chested individuals with increased intrathoracic air

4. Pericardial effusions and tamponade

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G. Complications

1. Failure to recognize the presence of underlying treatable V. Fib. (large pacer artifact on screen)

2. Induction of dysrhythmias (theoretical)

3. Pain

4. Burns

5. Cardiac damage

V. Procedure:

A. Identify the need for Transcutaneous External Pacing
   1. 3 lead monitor shows a paceable rhythm
   2. Vitals indicate unstable patient

B. Prepare patient for the procedure (sedation PRN)

C. Proper placement of pacing pads

D. Select correct output setting (start out at 5 milli-amps and increase until capture is achieved)

E. Select pacing rate (start at 60 and increase until patient shows signs of perfusion)

F. Monitor patient's rhythm

G. Monitor patient

VI. Medical Control:

A. Many prehospital providers work for multiple agencies. Therefore, the provider is responsible for knowing the local policies and protocols.

B. Each occurrence of Transcutaneous External Pacing must be appropriately documented. A review of the occurrence will be done by the Base Hospital.

C. The Medical Director has the authority to withdraw medical direction for Transcutaneous External Pacing. Medical Control is required to report such action to the Office Of EMS.

D. Review Base Station of policies.

OEMS-027
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Module Two - LAB

I. Given a mannikin, the student will practice the proper technique for Transcutaneous External Pacing.

II. Given a mannikin, in a one on one situation, the instructor will guide the student to perform the skill to proficiency.

III. Given a mannikin, in a one on one situation, the instructor will create a minimum of three scenarios which meet one or more of the following criteria:

(a) There is not an indication for Transcutaneous External Pacing
(b) There is an indication for Transcutaneous External Pacing
(c) Transcutaneous External Pacing is contraindicated
(d) The equipment used for Transcutaneous External Pacing failed to operate.

The student must identify each situation correctly and perform the indicated tasks appropriately.

Module Three - Practical testing

I. Given a mannikin, in a one on one testing situation, and using the attached skills checksheet, the student will correctly perform Transcutaneous External Pacing with 100% proficiency.

Note: The training program will act as an agent of the State of Arizona, Department of Health Services, by conducting the practical examination. The following conditions must be maintained.

1. The practical test must be conducted in a testing environment. Students must understand that they are being evaluated. Corrective guidance during the evaluation is not permitted.

2. The evaluator must not reveal the results or the specific criteria for failure.

3. The Medical Director may review the skills checksheet, prior to a generalized counselling session with the student.

4. The student will be allowed three attempts to perform the skill with 100% competency. Students who fail to do so must attend another training session.

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References

1. *Falk RH, Zoll PM, Zoll RH: Safety and efficacy of noninvasive cardiac pacing, N Engl J Med 1983;309:1166-1168*

2. *Clinton JE, Zoll PM, Zoll RH et al: Emergency noninvasive external cardiac pacing, J Emerg Med 1985; 2:155-162*

3. *Paris PM, Stewart RD, Kaplan RM, Whipkey R: Transcutaneous pacing for bardyasystolic cardiac arrests in prehospital care, Ann Emerg Med 1985; 14:320-323*

4. *White JM, Nowak RM, Martin GB, Best R, Carden DL, Tomlanovich MC: Immediate emergency department external pacing for prehospital bradyasystolic arrest, Ann Emerg Med 1985; 14:298-302*

5. *Eitel DR, Guzzardi LJ, Stein SE, et al: Noninvasive transcutaneous cardiac pacing in prehospital cardiac arrest, Ann Emerg Med 1987; 16:531-534*

6. *Bocka JJ: External transcutaneous pacemakers, Ann Emerg Med 1987; 18:1280-1286*

7. *Giuliano A, Salvatore T, et al: Emergency cardiac pacing for severe bradycardia, PACE 1990; 13:2038-2043*

8. *Hedges JR, Feero S, Shcltz B, Easter R, Syverud SA, Dalsey WC: Prehospital transcutaneous cardiac pacing for symptomatic bradycardia, PACE 1991; 14:1473-1478*

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STATE OF ARIZONA • OFFICE OF EMS

Transcutaneous External Pacing Practical Examination

Student's name: _____

SS#: _____

Date: _____ Attempt#: _____

Evaluator's Signature: _____

Criteria	Pts. Poss	Pts. Attain
Assesses patient and correctly identifies the need for Transcutaneous External Pacing (rhythm, vitals)	2	
Prepares the patient for pacing	1	
Places pacing pads correctly	1	
Selects proper output setting (starting at 5 milli-amps and increasing until capture is achieved)	1	
Selects the proper pacing rate	1	
Verbalizes that the rhythm will be monitored for changes	1	
Verbalizes that the patient will be monitored	1	
Indicates proper documentation of the procedure on the first care form.	1	
TOTAL	9	

Critical Criteria:
(Meeting any of the critical criteria constitutes automatic failure. The student must be counselled by the Medical Director prior to retesting)

___ Fails to properly perform Transcutaneous External Pacing.
___ Performs any technique resulting in potential harm to the patient.

I attest to the accuracy and validity of the above information. I certify that the above named student has met the applicable conditions put forth by the Arizona Department of Health Services for utilization of Transcutaneous External Pacing.

_____ _____
Medical Director's signature Date

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ADMINISTRATION OF RECTAL VALIUM PROCEDURE TRAINING CURRICULUM

ARIZONA DEPARTMENT OF HEALTH SERVICES
OFFICE OF EMERGENCY MEDICAL SERVICES

ADHS/OEMS - 030
REV: July 19, 1995

Administration of Rectal Valium
CURRICULUM

Course Description:

Administration of Rectal Valium is a procedure approved by the Medical Direction Commission of the Arizona Department of Health Services, Office of EMS, designed to expand the scope of practice of certified EMT-Paramedics and Intermediate EMT's.

Successful completion of this course will constitute eligibility for certified EMT-Paramedics and Intermediate EMT's to Administer Rectal Valium under the Medical Direction of an ALS Base Hospital.

NOTE: As with any invasive skill, the ALS Base Hospital will be responsible for: (1) managing skills retention through annual continuing education and Quality Assurance monitoring. (2) Reporting to the Department performance issues or withdrawal of medical control.

This document is the Official minimum standard curriculum for the Administration of Rectal Valium.

Prerequisites:

The student must be a certified EMT-Paramedic or Intermediate EMT; or enrolled in an approved ALS training program in which this curriculum is incorporated, in its entirety, as a module of Division 4. Section 11.; and be under the Medical Direction of an approved ALS Base Hospital willing to conduct training and continuing education.

Methodology:

Description - The course is designed to be a minimum of 30 minutes in length.

Lead instruction - The lead instructor must be certified in the State of Arizona as a Paramedic, Registered Nurse, or Physician. The lead instructor should have previous teaching experience and must have expertise in the process.

Equipment - The following minimum equipment must be available for

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the course:

- *1cc syringe with a hypodermic needle*
- *Lubricating jelly*
- *Gloves*
- *Simulated Vial of Valium*
- *A-V equipment (overhead projector, blackboard, etc...)*

Paperwork Flow:

A letter of intent to conduct a class must be received by this Office a minimum of two weeks prior to the class. Included in this letter should be a brief description of the Instructor's qualifications, the date of the class and the location of the class, as well as a course outline.

Upon completion of the class, a letter signed by the Medical Director attesting that the competency of each student's skill in Administration of Rectal Valium has been verified by a ten (10) question examination following the examination Blueprint defined in this curriculum. A copy of each students examination must be maintained on file with the Base Hospital for a period of two years and will be subject to audit under the Department's Quality Management Program.

Course Competencies:

Upon successful completion of this course, the student will be able to:

1. *Describe the purpose of Administration of Rectal Valium.*
2. *Describe and list the indications for Administration of Rectal Valium.*
3. *Describe and list the contraindications for Administration of Rectal Valium.*
4. *Describe and list the possible side effects/complications of Administration of Rectal Valium.*
5. *Discuss the importance of Basic Supportive Care. (Airway, oxygen, peripheral I.V. attempts etc.)*
6. *Demonstrate the ability to assemble and define the appropriate equipment to be used for Administering Valium Rectally.*
7. *Discuss the importance of removing the needle from the syringe prior to Administering Valium Rectally.*

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8. *Describe the procedure for Administration of Rectal Valium.*

9. *Discuss the importance of monitoring the patient after Administration of Rectal Valium.*

10. *Discuss the role of Medical Control for Administration of Rectal Valium.*

11. *Discuss the terms of the approval status and correctly identify that the approval status runs concurrent with I-EMT or Paramedic certification.*

12. *Pass a written examination, administered by the State or its approved agent, with 90% competency, within two attempts.*

Course Content:

Module One - Lecture

I. ***Description:***

A. *Administration of Rectal Valium is a safe procedure which can be used in pediatric patients ≤ 6 years of age.*

B. *Administration of Rectal Valium may be performed only after contact with medical control.*

C. *Basic supportive therapy is imperative. Airway management, oxygen administration, peripheral I.V. access attempts, etc. should occur prior to Administration of Rectal Valium.*

II. ***Indications:***

A. *When IV access has been attempted unsuccessfully and a route for valium is critical.*

B. *The patient is in Status Epilepticus.*

C. *The patient is 6 years old or under. (May be used in patients over the age of 6 at the discretion of Medical Control)*

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III. ***Contraindications:***

A. *Known Allergy*

IV. ***Side Effects/Complications***

A. *Occasional transient respiratory depression is more likely to occur in patients concurrently taking phenobarbital.*

B. *Occasional drowsiness, mild behavior changes, as well as ataxia, muscular hypotonia, and cardiac depression can occur, but are rare.*

C. *Local irritation with burning sensation, up to 15 minutes after administration can occur.*

D. *Incomplete absorption dose can occur with fecal explosion or absorption, or leakage after administration.*

V. ***Procedure:***

A. *Assess a need for Administration of Rectal Valium. Provide basic supportive therapy.*

B. *Assemble the equipment.*

- *Draw up correct dose of valium - 0.2 / 0.5 mg/kg*
- *Remove Hypodermic needle*
- *Lubricate the syringe*

C. *Position the patient in the prone position if possible. (Remember to monitor the Airway)*

D. *Device should be inserted 4 cm to 6 cm gently into rectal vault.*

E. *Properly document the procedure on the first care form.*

F. *Monitor patient for side affects/complications.*

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*VI. **Medical Control:***

A. Many prehospital providers work for multiple agencies, therefore, the provider is responsible for knowing the local policies and protocols.

B. Each occurrence of Administration of Rectal Valium must be appropriately documented. A review of the occurrence will be done by the Base Hospital.

C. The Medical Director has the authority to withdraw medical direction for Administration of Rectal Valium. Such action would be considered an action against the I-EMT's or Paramedic's certification. Medical Control is required to report such action to the Office of EMS.

D. Review of policies, protocols and standing orders. Note: Administration of Rectal Valium requires on-line medical direction.

Module Two - Written Examination

Note: The training program will act as an agent of the State of Arizona, Department of Health Services, by conducting the written examination. The following conditions must be maintained.

1. The written examination must be conducted in a testing environment. Students must understand that they are being evaluated. Corrective guidance during the evaluation is prohibited.

2. The student will be given two attempts to successfully pass the examination with 90% competency. Students who fail to do so will be required to repeat the training course.

3. The evaluator must not reveal the specific criteria for failure.

4. The Medical Director may review the examination, prior to a generalized counselling session with the student.

****

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Examination Blueprint

*The examination will consist of a **minimum** of 10 questions. The questions should be multiple choice, with 4 choices. The questions must relate directly to the contents of this curriculum.*

*At a **minimum** the content of the examination should be as follows:*

*3 questions on **Indications***

*2 questions on **Side Effects/Complications***

*3 questions on the **Procedure***

*2 questions on **Medical Control***

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AUTOMATIC TRANSPORT VENTILATORS TREATMENT PROTOCOL AND TRAINING CURRICULUM

ARIZONA DEPARTMENT OF HEALTH SERVICES
OFFICE OF EMERGENCY MEDICAL SERVICES

ADHS/OEMS - 065
REV: July 19, 1995

AUTOMATIC TRANSPORT VENTILATORS TREATMENT PROTOCOL AND TRAINING CURRICULUM

Course Description:

The use of the Automatic Transport Ventilator (ATV) as approved by the Medical Direction Commission of the Arizona Department of Health Services, Office of EMS, is designed to expand the scope of practice of certified Basic EMT's, Intermediate EMT's, and Paramedics.

Successful completion of this course will constitute eligibility for certified Basic EMT's, Intermediate EMT's, and Paramedics to utilize Auto Ventilators when under the direction of a certified ALS Base Hospital.

This document is the Official minimum standard curriculum for Automatic Transport Ventilator training for use by ALS Base Hospitals. Additionally, the course competencies and content of this curriculum shall become part of the minimum training requirements, Division 7, for certified ALS training programs.

Prerequisites:

1. The student must be an AZ certified Basic EMT, I-EMT or Paramedic, who is under the direction of an ALS Base Hospital, or

2. The student shall be enrolled in a certified ALS training program.

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Methodology:

Description -

The course is designed to consist of 1½ hours of didactic presentation and hands-on practice, and a practical examination.

The following is a breakdown of the minimum hours of instruction.

½ hour	- Didactic material
1 hour	- Hands-on practice
As required	- Practical Examination

Instruction/Coordination -

Instruction: Instructors must be approved by the ALS Base Hospital or Training Program Medical Director.

Equipment - The following minimum equipment should be available for the course:

A-V equipment (overhead projector, blackboard, etc.)

Auto Ventilator

Airway Adjuncts

Airway Mannikin

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Paperwork Flow:

The following documents must be submitted and on file with the Office of EMS a minimum of two weeks prior to the initiation of the class:

ALS Base Hospitals:

1. **A letter of intent to conduct a course (include the date and location of the course)**

2. **A detailed course outline to include date, time, topic, and instructor**

Upon completion of the class submit to OEMS (Attention: ALS Program Manager) a letter of completion which indicates the results of the course and identifies any individuals who did not successfully complete the course.

> **NOTE:** *Training records must be maintained on file with the ALS Base Hospital for a period of two years and will be subject to audit under the State's Quality Management Program.*

ALS Training Programs:

> *Notification is not required, inasmuch as this skill will become a minimum standard, and is required by Division 7 of the ALS curricula.*

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Course Competencies:

Upon successful completion of this course, the student will be able to:

I. Identify and discuss the anatomy and physiology of the respiratory system.

II. Describe the pathophysiology, assessment, and management of patients who have compromised respiratory functions due to apnea or respiratory disorders.

III. Discuss respiratory volumes and capacities.

IV. List and describe the indications for use of auto ventilators.

V. List and describe the contraindications for use of auto ventilators.

VI. List and describe the components of the auto ventilator.

VII. Demonstrate the proper use of universal precautions.

VIII. Describe and demonstrate the assembly and application of the auto ventilator.

IX. Discuss and demonstrate the tidal volume settings, by weight, for the auto ventilator.

X. Discuss and demonstrate assessment of the patient to determine efficacy of the auto ventilator.

XI. Given a patient situation, recognize the need for the auto ventilator, apply it correctly, and assess the patient appropriately.

XII. Demonstrate how to disassemble, clean, disinfect and reassemble the auto ventilator.

XIII. Discuss the maintenance and quality control of the auto ventilator.

XIV. Discuss the role of Medical Control.

XV. Discuss the terms of the approval status.

XVI. Pass a practical examination, with 100% competency, within three attempts.

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Course Content:

MODULE ONE: - *Respiratory System.*

I. Anatomy and Physiology:

- *A. Upper Airway*
- *B. Lower Airway*
  - *1. Trachea*
  - *2. Lungs*
    - *a. Components*
    - *b. Functions*
    - *c. Volumes and capacities*

II. Assessment of the patient:

- *A. Primary Assessment*
- *B. Secondary Assessment*
  - *1. History*
  - *2. Physical Examination*
    - *a. Inspection*
    - *b. Palpation*
    - *c. Auscultation*
- *C. Apnea*
  - *1. Pathophysiology*
  - *2. Assessment*
  - *3. Management*
- *D. Obstructive Lung Disease*
  - *1. Pathophysiology*
  - *2. Assessment*
  - *3. Management*
- *E. Smoke and Toxic inhalation*
  - *1. Pathophysiology*
  - *2. Assessment*
  - *3. Management*
- *F. Pulmonary Embolism*
  - *1. Pathophysiology*
  - *2. Assessment*
  - *3. Management*
- *G. Central Nervous System Disorders*
  - *1. Pathophysiology*
  - *2. Assessment*
  - *3. Management*

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MODULE TWO: - Automatic Transport Ventilators

Note:	Content material in module two may vary slightly depending on the type of equipment being used. The instructor will need to make any necessary adjustments.

III. Specifications:

Automatic Transport Ventilators used in the prehospital setting must be approved by the ALS Base Hospital Medical Director. It is recommended that the Medical Director consider the following when approving a device:

A. Is the equipment compact, durable and suited to field use?

B. Can the device deliver controlled tidal volumes?

C. Does the device use low flow rates to prevent gastric insufflation?

D. Does the device deliver safe inflation pressures?

E. Are the breaths per minute (BPM) time-cycled?

F. Can the device be used on pediatric and adult patients?

G. Does the device conform to current American Heart Association CPR Standards relating to ventilation rates and inspiratory/expiratory (I/E) ratios?

IV. Components of the device:

The content of this section will be specific to the device being used. It is important that all components are discussed.

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V. Assembly of the device:

A. Hand tighten all fittings

B. Attach regulator to oxygen cylinder, check for adequate pressure (>200 psi), remove cap from regulator gas outlet.

C. Connect oxygen line.

D. Connect patient valve supply tubing.

The content of this section may vary depending on the specifics of the device being used. It is important that assembly of the device be practiced to proficiency by each participant.

VI. Cleaning and Quality Control:

A. Units must be cleaned/disinfected after every use.

1. Control Module

a. Leave hoses connected so as not to get water inside.

b. DO NOT SUBMERGE the control unit in liquid!

c. Remove gross contamination by wiping with a mild detergent and water, wipe off with a clean, damp cloth.

d. Wipe with an approved disinfectant, and wipe off with a clean, damp cloth.

e. Dry surface with a clean cloth.

2. Patient Valve Assembly

a. Remove the outlet adapter and exhalation valve from the patient valve assembly.

b. Remove gross contamination by washing adapter and exhalation valve with a mild detergent and water. Rinse in running water.

c. Dry with a clean cloth.

d. Inspect each component for signs of wear (discard and replace any worn parts).

e. Reassemble as described in Section III.

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B. Quality Control

The ATV unit should be checked at the start of each shift and after each use to assure that it is in proper working condition and ready for use.

1. Open the portable oxygen cylinder slowly - as to not damage the control unit.

2. Set the BPM control to 12

3. Set the tidal volume control to 800

4. Count the number of complete ventilator cycles for a full minute. The number should be 12 (+1)

5. Occlude the outlet of the patient valve assembly. The audible pressure limit alarm should sound as the ventilator cycles through a delivery phase.

It is recommended that the unit be tested periodically, using a calibrated testing device, to insure the delivery of proper tidal volume.

MODULE THREE: - Patient Management

VII. Indications

A. Any patient requiring ventilatory assistance in conjunction with advanced airway adjuncts.

B. Any patient requiring ventilatory assistance in conjunction with basic airway adjuncts.

C. Any patient requiring ventilatory assistance in conjunction with manual airway maintenance.

VIII. Contraindications

A. Patients weighing less then 16 kg (35 lbs)

B. Pneumothorax - Tension Pneumothorax (relative)

C. Pulmonary overpressurization syndrome (blast injury, water ascent injury, etc.) (relative)

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IX. Application (Protocol)

Appropriate universal precautions must be used when performing this procedure.

Use of the ATV should not impede the management of the patients airway. Always do your basics first.

A. Determine that a need for the use of the ATV exists

B. Assure that all tubing is free from kinks.

C. Determine the proper tidal volume setting. This is done by determining the patient's ideal (approx. weight for any physically fit patient having the same sex, height and frame) and multiplying it by 8-10 ml/kg. Begin with the lowest tidal volume limit. (see chart page 11)

D. Set BPM control to desired rate per minute.

E. Occlude the patient valve assembly outlet. The audible pressure limit alarm should sound as the ventilator cycles through the delivery phase.

F. Assess lung compliance and chest rise with a bag-valve device. Tidal volume settings may be adjusted lower if poor lung compliance is found.

Note: Due to C.O.P.D., chest rise may not appear full (do not increase tidal volume control past upper TV limit).

G. Attach the patient valve assembly to the airway device or mask used on the patient.

H. Assess the ventilation. Listen for bilateral lung sounds. Observe for proper chest rise. Chest rise should look normal and be bilateral. If lung sounds are absent or on one side only; R/O airway obstruction, improper tube placement, or pneumothorax/tension pneumothorax; and check tidal volume ml/BPM settings.

Note: If chest expansion is not adequate, the rescuer should slowly increase tidal volume until chest expansion is adequate or the uppermost limit (for patient's ideal weight) is reached. If chest appears to overexpand, decrease tidal volume.

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I. Count the number of complete ventilator cycles for a full minute. The number should be the same as the setting (+1).

J. Assess and manage the airway as you normally would for any patient with controlled ventilation.

K. If spontaneous breathing begins, it may be desirable to turn off the BPM. This would allow the patient to draw oxygen up to the tidal volume limit set on the control module.

L. Check oxygen cylinder pressure level frequently. This device will deplete a "D" cylinder rapidly.

This area has been left blank

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TIDAL VOLUME RANGE

Kg	TV Range	Lbs
<16	DO NOT USE	<35
16	105-175	35
20	160-200	44
25	200-250	55
30	240-300	66
35	280-350	77
40	312-390	86
40	320-400	88
45	360-450	99
50	400-500	110
55	440-550	121
60	480-600	132
65	520-650	143
70	560-700	154
75	600-750	165
80	640-800	176
85	680-850	187
90	720-900	198
95	760-950	209
110	800-1000	220
105	840-1050	231
110	880-1100	242
115	920-1150	253
120	960-1200	264

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MODULE FOUR: - *Medical Control*

X. Use of ATV's requires Medical Control. This may be accomplished by Administrative Medical Control or On-line Medical Control, at the sole discretion of the Medical Director.

XI. The use of ATV's must be appropriately documented.

XII. The Medical Director has the authority to withdraw medical direction for use of ATV's. Medical Control is required to report such action to the Office Of EMS.

XIII. Review Base Station policies.

MODULE FIVE: - *Lab*

XIV. Given the equipment to be used, the student will practice the proper technique for using an ATV.

XV. Given the equipment to be used, in a one on one situation, the instructor will guide the student to perform the skill to proficiency.

XVI. In a one on one situation, the instructor will create a minimum of three scenarios which meet one or more of the following criteria:

(a) There is an indication for use of the ATV.

(b) There is an indication for use of the ATV and the device fails to operate properly.

(c) The ATV is in use when the patient begins to breath spontaneously.

The student must identify each situation correctly and perform the indicated tasks appropriately.

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MODULE FIVE: - *Practical Testing*

Given the equipment to be used, in a one on one testing situation, and using the attached skills checksheet, the student will correctly use the ATV to ventilate a mannikin with 100% proficiency.

Note: *When conducting the practical examination the following conditions must be maintained:*

1. *The practical test must be conducted in a testing environment. Students must understand that they are being evaluated. Corrective guidance during the evaluation is not permitted.*

2. *The evaluator must not reveal the specific criteria for failure.*

3. *The Medical Director may review the skills checksheet prior to a generalized counselling session with the student.*

4. *The student will be allowed three attempts to perform the skill with 100% competency. Students who fail to do so must attend another training session.*

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STATE OF ARIZONA • OFFICE OF EMS

Automatic Transport Ventilator Practical Examination

Student's name: _____

SS#: _____

Date: _____ Attempt #: _____

Evaluator's Signature: _____

CRITERIA	Pts. Possible	Pts. Attained
Assesses patient and correctly identifies the need for the use of the ATV.	2	
States contraindications for use	1	
Assembles materials and confirms proper assembly	2	
Determines tidal volume setting. (TV setting at lower limit or range for patient ideal weight)	1	
Sets BPM control appropriately	1	
Occludes the outlet adapter with the palm of hand and confirms audible alarm function during inhalation phase.	1	
Assesses lung compliance and chest rise with a bag-valve device.	1	
Attaches patient valve assembly/nonrebreathing valve to airway device.	1	
Assesses the ventilations. Listens for bilateral lung sounds. Observe for proper chest rise.	2	
Counts the number of ventilator cycles for one full minute to assure proper device function.	1	
Indicates proper documentation of the procedure on the first care form.	1	
Total	14	____

Critical Criteria:

___ Fails to use universal precautions
___ Fails to properly use the ATV.
___ Performs any technique resulting in potential harm to the patient.

You must document the rationale for any critical criteria checked. The medical director should counsel the student prior to retesting.

I attest to the accuracy and validity of the above information. I certify that the above named student has met the applicable conditions put forth by the Arizona Department of Health Services for utilization of Automatic Transport Ventilators.

_____ _____
Medical Director's signature Date

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MODULE SIX: - Supplemental resource material

Note: The following abstract was prepared from a document submitted by the Phoenix Fire Department as part of the proposal for approval of a study for use of the Autovent 2000/3000 automatic transport ventilator. It contains some excellent supplemental material.

Special note: The Arizona Department of Health Services dose not endorse any specific manufacturer of ATV's.

Automatic Transport Ventilator

I. Introduction:

Airway management is the most critical and potentially life-saving intervention performed by prehospital providers. The bag-valve-mask manual resuscitator continues to be the standard device for prehospital ventilation despite evidence in the literature describing potentially harmful problems with its use. (See attached bibliography). The use of an automatic oxygen-powered ventilator in the prehospital setting may provide ventilatory support superior to the bag-valve resuscitator.

II. Prehospital Ventilation - A collective review

Maintaining and/ or establishing an airway and providing effective ventilatory assistance are the initial and primary steps in treating patients. In the prehospital setting, this has traditionally been done by a number of manual interventions of increasing skill level and effectiveness.

This review will focus on: A) manual ventilation with a bag-valve resuscitator with a mask following establishment of an airway with an oropharyngeal airway (OPA) or after endotracheal intubation (ETI); B) automatic ventilators.

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A. Common problems associated with manual ventilation:

1. Hypoventilation/ Hypercarbia

Inadequate ventilation has several physiological effects including hypotension, myocardial depression, CNS vasodilation, decreased oxygen delivery to tissues due to decreased hemoglobin oxygen affinity, decreased heart rate, and peripheral vasoconstriction.

Contributing factors causing hypoventilation/hypercarbia.

a) Inadequate mask seal. When using a bag-valve-mask resuscitator it is difficult to maintain a tight mask seal while maintaining proper head/ jaw position.

The 1986 Standards and Guidelines for Cardiopulmonary Resuscitation and Emergency Care[1] states "When bag-valve-mask units are used, they usually provide less ventilatory volume than mouth-to-mouth or mouth-to-mask ventilation because of the difficulty in providing a leak proof seal to the face while maintaining an open airway."

Seidelin et al[2] state "In clinical practice any system has to have leeway to allow for leaks that could be increased by movements of chest massage or a moving ambulance."

Wynne[3] states that "Bag-valve-mask ventilation of a mannikin requires a very firm one-handed grip and gas leaks readily occur."

b) One-handed versus two-handed BVMR. Tidal volume delivered via a BVMR is dependent on the size and shape of the bag and the size of the rescuer's hand. Consequently, volumetric compensation for leaks when using a BVMR is often difficult or impossible. With one hand providing both the face seal and maintaining proper head position, the other hand is capable of ejecting only a certain volume from the bag.

Ventilation by a BVMR is difficult when performed by a single rescuer. The problem lies in positioning the patient's head and maintaining a leak proof mask seal while squeezing the bag with the other hand. Hess et al[4] found that "...the mean tidal volume delivered by one-person bag-valve-mask technique in our study would be very inadequate for most victims."

Studies have shown that to effectively deliver a tidal volume of 800 cc as recommended by the AHA, BVMR ventilation requires two-man operation. Manoranjan et al[5] noted that "...a two-man rescue team for ventilation with the BVM is superior to the one-man team rescue team."

Attempting to compensate for a mask leak by increasing the number of breaths per minute (BPM) delivered via a BVMR in an effort to increase overall minute ventilation can predispose the patient to other problems.

c) Gastric Insufflation. When a rescuer increases the BPM given to the patient the tendency is to increase the rate at which the bag is "squeezed" thereby increasing the inspiratory flow rate.

Previous AHA standards required oxygen-powered resuscitators to deliver a volume 800 cc in 0.5 seconds. This required a flow rate of 160 LPM. A study by Melker[6] determined that "High flow rates raise intraoral pressure and if this pressure exceeds approximately 16-20 cm H_2O, the opening pressure of the lower esophageal sphincter is exceeded and gas enters the stomach."

Ruben et al[7] concluded that "...the airway pressure producing gastric insufflation during face mask ventilation averaged 19 cm H_2O." High flow rates generated by rapidly squeezing a BVMR can easily reach 80-90 cm H_2O. Thus, rapidly squeezing the BVMR to compensate for leaks or in an attempt to "hyperventilate the patient invariably leads to gastric insufflation.

"...air will travel down the esophagus and into the stomach causing gastric distention which almost certainly leads to gastric regurgitation. If that occurs in an unprotected airway, the odds of pulmonary aspiration are very high and the odds of survival become very small." Baskett[8].

Fuerst et al[9] determined that a mean of 16.3% of ventilatory volume with a BVM entered the stomach. This study was a prospective laboratory study using a mechanical lung. They concluded " A portable ventilator set at an appropriate T_I (inspiratory time) results in less gastric inflation than other devices commonly used for ventilating unintubated patients." The lung was ventilated with a volume of 1 L every 5 seconds for a total of 5 ventilation. Gastric volumes were: BVM- 815 ml (+/- 437 ml); high flow demand valve- 1339 ml (+/- 407 ml); low flow demand valve- 21 ml (+/- 50 ml); pocket mask- 300 ml (+/- 211ml); portable automatic ventilator set at inspiratory time of 1 second- 85 ml (+/- 102 ml); portable automatic ventilatory with inspiratory time set at 2 seconds- 0 ml.

A study by Augustine et al[10] stated that "...we found that peak pressures varied from 23 to 72 cm H_2O when the bags were attached to an endotracheal tube..."

Menegazzi et al[11] compared ventilation with a BVMR to a low flow oxygen powered demand valve (OPDV). There was no significant difference in tidal volumes or intrapleural pressures between the two devices. When lung compliance was normal (0.05L/cm), the OPDV caused 0 L gastric insufflation. The BVMR averaged 1.3 L. With decreased compliance (0.02 L/cm), the OPDV delivered significantly less gastric volume than the BVMR (1.1 L vs 3.7 L).

d) Inadequate Training/Skill Retention. As stated previously, acquiring and maintaining a leak free mask seal when using a BVMR can be difficult. The problem becomes more serious when the task is being performed by an individual whose skills have declined through infrequent use. Elling et al[12] state "The mean ventilation volume recorded for BVM's was 641 cc, which is well below the American Heart Association's minimum standard of 800 cc for an adult. Our results support previous indications that BVM ventilation fails to provide adequate ventilation in the hands of EMTs."

The successful application of most ventilatory equipment is directly related to the skill of the individuals using them. Improving the ease of use and effectiveness of a resuscitator will likely improve it's application and function. A study by Augustine et al[10] concluded "...both emergency department physicians and prehospital personnel ventilated with average tidal volumes below those currently accepted in ACLS standards." And Elling et al[12] state "More than 50% of the EMT's were not capable of ventilating to the minimum standard using a bag-valve-mask."

e) Increased Airway Resistance, Decreased Lung Compliance, and High Inflation Pressures. "...the ability to adequately squeeze the bag, and thus ventilate the patient may be compromised by an increase in airway resistance or a decrease in lung compliance." Hess et al[4].

"High flow rates raise intraoral pressure and if the pressure exceeds approximately 16-20 cm H_2O, the opening pressure of the lower esophageal sphincter is exceeded and gas enters the stomach." Melker et al[9].

"...with bag-mask or mouth-to-mask ventilation, it is almost impossible to inflate the lungs adequately in less than one second. Very high inflation pressures would be required, which in a non-intubated subject, would lead to gastric insufflation or may be impossible because of air leaks at the subject's face." Safar[13].

"...stroke volume decreases when compliance decreases and resistance increases using either one or both hands." Hess et al[4].

A study by Menegazzi et al[11] found that with decreased compliance, a BVMR delivered significantly more gastric volume than a low flow oxygen powered demand valve (3.7 L vs 1.1 L).

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2.HYPERVENTILATION/HYPOCARBIA

The physiological affects of Hyperventilation/Hypocarbia include decreased myocardial and cerebral blood flow, coronary vasospasm, arrhythmia, tachycardia, decreased myocardial contractility and stroke volume, hypotension, pulmonary airtrapping, inadvertent PEEP, lung hyperinflation, vasodilation, and cerebral vasoconstriction.

A case review in Emergency Medicine[14] describes the effects of rapid assisted ventilation with high inspiratory pressures in a 63 year old woman with a history of severe COPD. The resultant air trapping and progressively increasing intrapulmonary pressures lead to auto-PEEP. "If auto-PEEP progresses, the air trapping and high intrapulmonary pressures will increase air way resistance and pulmonary dead space and decrease alveolar ventilation. The high pulmonary pressures will eventually reduce pulmonary blood flow, causing hemodynamic compromise and exacerbating the patient's acidosis, hypoxemia, and hypercapnia. The high pulmonary pressure is also likely to cause blowout of micro- or macro-blebs or bullae, leading to tension pneumothorax." The case review further states that ventilation rates of 10-20 BPM allow adequate time for exhalation, minimizing the effects of auto-PEEP.

Studies indicate that unintentional hyperventilation is a common problem with the intubated patient that is being ventilated via a BVMR or a demand valve resuscitator, even in skilled hands. "All members of the health care team (physicians, respiratory therapists, and nurses) tended to ventilate patients at a more rapid rate and lower tidal volume during manual ventilation than on ventilatory support." Adams et al[15].

Objective variables to control the amount of tidal volume delivered and /or the number of BPM are not present in the prehospital setting. Gervais et al[16] compared blood gases in three patient groups requiring ventilatory assistance during transport. The first group received manual ventilation with a BVM, the second group was ventilated with a transport ventilator, and the third with a BVM with a respirometer attached to allow visual assessment of delivered tidal volume. Group one showed a persistent respiratory alkalosis. Group two did not change from pretransport Ph. When the respirometer was added to the BVM for Group three, the incidence of respiratory alkalosis sharply declined.

"This study has shown that unintentional hyperventilation and acute respiratory alkalosis is a common problem during manual ventilation, even in the hands of skilled operators."
Hurst et al[17].

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In an article on prehospital transport of the head-injured patient, Morris[18] discusses the use of hyperventilation to decrease ICP. Morris states "Hyperventilation is best performed by using controlled mechanical ventilation...manual hyperventilation with a bag-valve device can be an inaccurate method to achieve hyperventilation. Such inaccuracy can contribute to an increase in secondary injury by either decreasing $PaCo_2$ too much and facilitating cerebral ischemia, or by not reducing $PaCO_2$ enough and permitting ICP to increase. Without the use of a ventilator in such a situation, it is difficult for one or two medical crew members to concentrate just on the ventilation technique."

3. ADDITIONAL PROBLEMS.

"...during transfer, manual ventilation can become difficult as a patient travels through the hospital corridors in and out of doors and elevators." Hurst et al[17]. How much more difficult is manual ventilation down stairways, across open fields, and in a moving ambulance?

B.AUTOMATIC VENTILATORS

"Another advantage of using a transport ventilator is that it frees a member of the team from being entirely responsible for ventilation. Also, during transfer, manual ventilation can become difficult as a patient travels through the hospital corridors in and out of doors and elevators." Hurst et al[17].

"Our data and those of others suggest that the use of a transport ventilator or a system which allows visual assessment of delivered tidal volumes is the preferred method of ventilatory support." Hurst et al[17].

"We conclude that when ventilatory support is required during transport, a transport ventilator produces reliable control of ventilation." Hurst et al[17].

"Conclusion: A portable ventilator set at an appropriate T_I results in less gastric inflation than other devices commonly used for ventilating unintubated patients." Fuerst et al[9].

"Oxygen-powered transport ventilators are an important adjunct for patient transport and should be chosen based on system needs and ventilator design and performance." Mahoney et al[19].

"Frequently during transport, patients are ventilated by manual devices such as self-inflating bags or Elder demand valves; however, manual ventilation may not be practical for long periods often required for transportation. The use of a mechanical transport ventilator also frees one member of the transport team for patient care and monitoring." McGough et al[20].

"Our data and those of others suggest that use of a transport ventilator or a system which allows visual assessment of delivered volumes is the preferred method of ventilatory support." Hurst; Davis et al[17].

Braman et al[21] concluded that "The use of a portable volume-cycled mechanical ventilator in our study resulted in a statistically significant improvement in arterial blood gas values when compared with those values in the group of transported patients who received manual ventilatory support."

III. NEEDS ASSESSMENT

The current method of providing prehospital ventilation is the bag-valve resuscitator (BVR). A review of the literature shows numerous problems with this device which can be classified under three broad labels: those that are related to hypoventilation, those that occur with hyperventilation, and those of a more general nature.

A. Hypoventilation

Several factors contribute to hypoventilation during manual ventilation.

Two are inherent with the BVR itself: inadequate mask seal and one-handed versus two-handed operation.

Contrary to accepted belief, skill retention in the use of the BVR requires frequent use or training to insure proper application. It has also proved difficult to make the change from past training which emphasized rapid rate without addressing "rate of squeeze".

Air trapping in the lungs as a result of attempting hyper-ventilation by rapid BPM. In general, rates in excess of 10-20 BPM do not allow adequate time for exhalation. This leads to air trapping which increases pulmonary dead space. This causes a decrease in pulmonary ventilation when, to the rescuer, it seems the patient is being hyperventilated.

The physiological effects of hypoventilation include hypotension, myocardial depression, CNS vasodilation, decreased hemoglobin affinity for oxygen which decreases oxygen delivery to tissues, decreased heart rate, and shock.

B. Hyperventilation

The primary factor contributing to hyperventilation with manual ventilation is excessive BPM. This can adversely affect the patient in several ways.

The patient's minute volume dead space increases as the BPM increase which may account for a decrease in effective alveolar ventilation.

Gastric insufflation as a result of high inspiratory flow rates. As a rescuer increases the breaths per minute (BPM) given to the patient, the tendency is to increase the rate at which the bag is "squeezed" increasing the inspiratory flow rate. The pressure caused by rapidly "squeezing" the BVM can reach 80-90 cm H_2O and easily open the cardiac sphincter early in the inspiratory phase leading to aspiration of gastric contents.

When using a BVMR with a non-intubated patient, care must be taken to squeeze the bag slowly over 1.5- 2 seconds, regard-less of ventilatory rate. This is a considerable change from past training which emphasized rapid rate without addressing rate of "squeeze". Such a change in focus is difficult to insure.

As peak inspiratory pressure increases, volume delivered decreases.

The physiological effects of pulmonary hyperventilation include: decreased myocardial and cerebral blood flow, increased affinity of hemoglobin for oxygen decreases oxygen delivery to tissues, coronary vasospasm, tachycardia, decreased myocardial contractility and decreased stroke volume, hypotension, pulmonary air trapping, inadvertent PEEP, lung hyperinflation which causes an increase in intrathoracic pressures which in turn decreases venous return which contributes to systemic hypotension, and systemic vasodilation.

C. General Problems

The ability to consistently squeeze the BVMR at the desired rate of 1.5-2.0 seconds is impossible to perform without a metering device, which is not available for use with a BVMR.

Maintaining ET tube placement is difficult and there exists a risk of inadvertent extubation of the patient. The point of contact between the rescuer and the patient is the connection of the ET tube and the BVR. There is a constant pushing and pulling motion on the ET tube when the patient is being moved and during transport due to the swaying motion of all objects in the back of the ambulance.

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The preferred method of manual ventilation is the two-man method. Shortage of personnel on the emergency scene can make it impossible to assign two rescuers to maintain the patient's airway and ventilate the patient.

Once the patient is intubated the rescuer can use both hands to squeeze the bag. The potential for leaks is effectively eliminated and the BVR volume is delivered directly to the lungs. The average BVR volume is 1.6 L. The potential exists for delivering a much higher volume than the 800 cc recommended by the AHA.

Many patients ventilated with a BVMR vomit with resultant aspiration. While the incidence of this happening could be reduced by using the "Selick maneuver", it would still occur much too frequently. In addition, the second rescuer needed to perform this maneuver is very often not available.

It is considered standard care to deliver 100% O_2 when using a BVR. However, it is not uncommon in the prehospital setting to see ventilation rates which exceed the reservoir bag filling capacity. This results in the delivery of O_2 concentrations below 100%.

Discussion

The ideal ventilator should address the problems identified:

1. Deliver controlled tidal volumes
2. Deliver consistent breaths per minute
3. Deliver safe inflation pressures
4. Deliver low flow rates to prevent gastric insufflation
5. Compensate for mask seal leaks by adjusting tidal volume
6. Deliver 100% O_2 regardless of patients tidal volume and respiratory rate
7. Provide adequate tidal volume when airway resistance increases and lung compliance decreases
8. Allow rescuer to provide adequate ventilation, with monitoring, and provide other patient care.

IV. Cost/ Benefits

The AutoVent automatic ventilator provides several benefits not found with the BVR.

Rate and volume are independently adjustable. This allows adjustment of ventilation to the specific needs of the patient.

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It is not necessary to increase BPM to compensate for leaks or hyperventilate the patient (head injury, etc.). Hyperventilation is accomplished by adjusting the tidal volume, as is compensation for leaks. This should reduce or prevent airtrapping, inadvertent PEEP, lung hyperinflation and high intrathoracic pressures from developing.

Breaths per minute and tidal volume remain constant. Tidal volume is not dependent on rescuers hand size, one versus two person ventilation (see above), airway resistance, or lung compliance.

The AutoVent allows hands free operation. Anytime a patient is ventilated by mask, both hands may be used to achieve a mask seal and reduce leaks. Once the patient is intubated, the rescuer is freed to monitor the patient and provide patient care.

Accurate and consistent volume and rate delivery regardless of rescuer skill level.

Reduction in incidence of/ prevention of gastric insufflation. Accomplished by constant flow rate of 40 LPM.

Coordination of ventilation with compression with ventilation during CPR. Visual indicator identifies the inspiratory cycle.

Delivers 100% O_2 regardless of volume or rate setting.

Delivery of 100% O_2 to spontaneously breathing patient.

Consistent ventilation during extrication, patient transfer, and transportation.

Hands free operation eliminates pulling and pushing on endotracheal tube that is common during manual ventilation, significantly reducing inadvertent extubation.
will compensate for the leak.

Gas flow automatically stops if inspiratory pressure exceeds 60 cm H_2O.

Audible indicator of increasing airway resistance or decreasing lung compliance. Audible alarm sounds whenever patient airway pressure meets or exceeds 45 cm H_2O. Eliminates subjective feel associated with "squeezing" a BVR.

The primary "cost" of automatic ventilators is cost. The AutoVent 2000 (for adult use) has a list price of $1250 and the AutoVent 3000 (for adults and peds above 35 lbs) lists for $2000. Additional cost would be in training should be a two hour module.

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V. Equipment

Equipment:

Both devices are time-cycled, volume adjustable, constant flow, gas powered ventilators. The units are equipped with a Patient Valve Assembly that allows a patient to draw supplemental oxygen with spontaneous effort (up to 48 LPM). BPM and TV are independently adjustable. The devices can be used on intubated and non-intubated patients. Both devices meet or exceed the American Heart Association standards for ventilators.

The Autovent 2000 has been in use for approximately four years. The Autovent 3000 was introduced approximately 18 months ago. Nationally, both devices are used in the prehospital setting, with the Los Angeles Fire Department being the largest user.
The Autovent 2000 is designed for use on adult patients with a minimum body weight of 40 kg (90 pounds).

Safety Features:

Safety features include an audible alarm and a visual indicator. The alarm sounds whenever ventilatory pressures exceed 45 cm H_2O. The alarm continues to sound until airway pressure drops below 45 cm H_2O. The device(s) automatically stop oxygen delivery whenever it senses an airway pressure of approximately 60 cm H_2O. A pressure relief diaphragm on the patient valve assembly will "blow out" if unit pressure reaches approximately 100 cm H_2O. The visual indicator displays bright green during inspiration for monitoring of the inspiratory cycle.

Specifications:

	Autovent 2000	Autovent 3000
Ventilation Rate	8-20	8-20 (adult) 8-30 (child)
Tidal Volume	400-1200 ml	400-1200 (adult) 200-600 (child)
Flow Rate	16-48 LPM	16-48 LPM
Inspiratory Time	1.5 sec	1.5 sec (adult) 0.75 sec (child)
Expiratory Time	1.5-6.0 sec	1.5-6.0 sec
I:E Ratio	1:1 to 1:4	1:1 to 4:4
Minute Volume	0-24 LPM	0-24 LPM
Gas Consumption	0.5 LPM max.	0.5 LPM max.

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References

1. AHA Standards and Guidelines for Cardiopulmonary Resuscitation and Emergency Care. Journal of the American Medical Association 1986; 225: 2905-2960.

2. Seidelin PH, Stolarek IW, Littlewood DG: Comparisions of Six Methods of Emergency Ventilation. Lancet 1986; (ii):1274-1275.

3. Wynne G: ABC of Resuscitation; Training and Retention of Skills. Br.Med.V 1986; 293:30-32.

4. Hess D, Goff G: The Effects of Two-Hand Versus One-Hand Ventilation on Volumes Delivered During Bag-Valve Ventilation at Various Resistances and Compliances. Respiratory Care 1987: 3:1025-1028.

5. Manoranjan CS, Jusudian, Harrison R, Keenan R, Maullk: Bag-Valve-Mask Ventilation; Two Rescuers are Better Than One. Preliminary Report. Critical Care Medicine 1985: 122-123.

6. Melker RJ: Ventilation in the Prehospital and Emergency Setting. Conference Proceedings; Edmonton, Canada. May 1986.

7. Ruben H, Knudsen EJ, Carugati G: Gastric Insufflation in Relation to Airway Pressures. American Anesthesiology 1961; 5:107-114.

8. Baskett PJF: Resuscitation and Pain Control in Emergency Care. Conference Proceedings; Edmonton, Canada. May 1986.

9. Fuerst RS, Banner MJ, Melker RJ: Gastric Inflation in the Unintubated Patient: A Comparison of Common Ventilating Devices. Annals of Emergency Medicine 1992; 21:636. SAEM Abstracts.

10. Augustine JA, Seidel DR, McCabe JB: Ventilation Performance Using a Self-Inflating Anesthesia Bag. American Journal of Medicine 1987; 5:267-270.

11. Menegazzi JJ, Winslow HJ: Tidal Volume, Intrapleural Pressure, and Gastric Volume with Bag-Valve-Mask Versus Oxygen-Powered Demand Valve. Annals of Emergency Medicine 1991; 20:488. Abstract.

12. Elling R, Politis J; An Evaluation of Emergency Medical Technicians Ability to Use Manual Ventilation Devices. Annals of Emergency Medicine 1983; 11:74-76.

13. Safar P; An International Symposium on Resuscitation: Controversial Aspects. Heidelberg, Springer-Verbag 1963:27.

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14. Readable Practice; Too Much of a Good Thing. Emergency Medicine 1992; March:312,317.

15. Adams KS, Branson RD, Hurst JM: Variabilities in Delivered Tidal Volume and Respiratory Rate During Manual Ventilation. Respiratory Care 1986; 31:986. Abstract.

16. Gervais HW, Eberle B, Konietzke D, et al: Comparison of Blood Gases of Ventilated Patients During Transport. Critical Care Medicine 1987; 15:761-763.

17. Hurst JM, David K, Branson RD, Johannigman JA: Comparison of Blood Gases During Transport Using Two Methods of Ventilatory Support. Journal of Trauma 1989; 29:1637-1640.

18. Morris M: Transport Considerations for the Head-Injured Patient: Are We Contributing to Secondary Injury?. Journal of Air Medical Transport 1992; July:9-13.

19. Mahoney JF, Kaplan RM, Yealy DM, Klein KA: Performance Evaluation of Transport Ventilators. Prehospital and Disaster Medicine 1989; 4:66. Abstract.

20. McGough EK, Banner MJ, Melker RJ: Variations in Tidal Volume with Portable Transport Ventilators. Respiratory Care 1992; 37: 233-239.

21. Braman SS, Dunn SM, Amico CA, Millman RP: Complications of Intrahospital Transport in Critically Ill Patients. Annals of Internal Medicine 1987; 107:469-473.

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INTRAOSSEOUS INFUSION (I.O.) PROCEDURE TRAINING CURRICULUM

ARIZONA DEPARTMENT OF HEALTH SERVICES
OFFICE OF EMERGENCY MEDICAL SERVICES

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INTRAOSSEOUS INFUSION CURRICULUM

Course description:

Intraosseous Infusion is a procedure approved by the Medical Direction Commission of the Arizona Department of Health Services, Office of EMS, designed to expand the scope of practice of certified EMT-Paramedics and Intermediate EMT's.

Successful completion of this course will constitute eligibility for certified EMT-Paramedics and Intermediate EMT's to utilize Intraosseous Infusion under the Medical Direction of an ALS Base Hospital.

NOTE: As with any invasive skill the ALS Base Hospital will be responsible for: (1) managing skills retention through annual continuing education and Quality Assurance monitoring. (2) Reporting to the Department performance issues or withdrawal of medical control.

This document is the Official minimum standard curriculum for Intraosseous Infusion training.

Prerequisites:

The student must be a certified EMT-Paramedic or Intermediate EMT; or enrolled in an approved ALS training program in which this curriculum is incorporated, in its entirety, as a module of Division 4. Section 11.; and be under the Medical Direction of an approved ALS Base Hospital willing to conduct training and continuing education.

Methodology:

Description - The course is designed to be a minimum of four hours in length and combine lecture with hands on practice.

Lead instruction - The lead instructor must be certified in the State of Arizona as a Paramedic, Registered Nurse, or Physician. The lead instructor should have previous teaching experience and must have expertise in the process and the equipment.

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Equipment *- The following minimum equipment must be available for the course:*

- *Intraosseous Infusion Needle (must be a bone marrow needle and the same type the student will be using in the field)*
- *Gloves*
- *Pressure infuser bags*
- *I.V. fluids (Lactated Ringers, Normal Saline)*
- *A-V equipment (overhead projector, blackboard, etc...)*
- *Tape*
- *2x2's*
- *Alcohol preps*
- *Kling*
- *Splint*
- *5cc Syringe*

Paperwork flow:

A letter of intent to conduct a class must be received by this Office a minimum of two weeks prior to the class. Included in this letter should be a brief description of the Instructor's qualifications, the date of the class and the location of the class, as well as a course outline. (see sample outline)

Upon completion of the class, a letter signed by the Medical Director attesting to the competency of each student's skill in I.O. must be submitted. A copy of a skills test checksheet must be maintained on file with the Base Hospital for a period of two years and will be subject to audit under the Department's Quality Management Program.

Sample outline:

TIME	TOPIC	INSTRUCTOR
8:00-8:15	INTRODUCTION - 1. List objectives 2. Format 3. ADHS requirements ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	JOHN SMITH, CEP ↓ ↓ ↓ ↓ ↓ ↓

Breakdown of minimum hours of instruction:

Module One.	Lecture with equipment display	2 hour
Module Two.	Lab with hands on experience	2 hours
Module Three.	Formal testing stations	As required

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Course Competencies:

Upon successful completion of this course, the student will be able to:

1. *Describe the purpose of Intraosseous Infusion (I.O.)*
2. *Describe and list the indications for I.O.*
3. *Describe and list the contraindications for I.O.*
4. *Describe and list the possible side effects/complications of I.O*
5. *Discuss the importance of immediate airway management.*
6. *Discuss the importance of attempting a peripheral I.V. prior to initiation of I.O.*
7. *Demonstrate the ability to assemble and define the appropriate equipment to be used for I.O.*
8. *Identify the various types of Needles used for I.O.*
9. *Identify the landmarks for I.O. placement*
10. *Demonstrate the correct technique for establishing an I.O. in a simulated situation.*
11. *Discuss the procedure for checking proper placement of I.O. lines.*
12. *Define and describe the signs and symptoms of infiltration of an I.O. line.*
13. *Identify the drugs which are permitted to be administered via I.O.*
14. *Discuss the role of fluid resuscitation in I.O.*
15. *Discuss the role of Medical Control for I.O.*
16. *Discuss the terms of the approval status and correctly identify that the approval status runs concurrent with their I-EMT or Paramedic certification.*
17. *Pass a practical skills examination, administered by the State or its approved agent, with 100% competency.*

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Course Content:

Module One - Lecture

I. ***Description:***

A. *Intraosseous Infusion provides a route for fluids and medications in critical pediatric patients.*

B. *Intraosseous Infusion may be performed prior to contact with medical control.*

C. *Basic supportive therapy is imperative. Airway management, hemorrhage control, peripheral I.V. access attempts, etc.. should occur prior to I.O.*

II. ***Indications:***

A. *When IV access has been attempted unsuccessfully and a route for fluids and medications is critical.*

B. *Cardiac arrest, uncompensated shock, major traumatic injuries with shock, and major burns.*

C. *The patient is 6 years old or under.*

III. ***Contraindications:***

A. *Relative contraindications are infection or burns at the site to be used and must be weighed against benefits.*

B. *Fractures in the extremity to be used.*

IV. ***Assessment of Pediatric Anatomy and Physiology:***

A. *INFANTS: (0-12 months)*

B. *CHILDREN: (≤ 6 years)*

1. *Proximal tibia - 2 cm below tuberosity (primary site)*
2. *Distal femur - 3cm above knee (only in extreme circumstances)*
3. *Use care to avoid epiphyseal plates*

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V. **Procedure:**

A. Assemble equipment

B. Take universal infection control precautions

C. Locate site

D. Cleanse the site with alcohol or betadine

E. Use firm pressure and rotate motion to push through skin and into cortex. Direct away from epiphyseal line. Entrance into medullary cavity will be felt through a loss of resistance.

F. Remove the stylet and aspirate.

G. Dispose of the needle properly

H. Attach I.V. fluid and regulate flow appropriately.

I. Use pressure bag if necessary to provide flow.

J. Secure in place (splint) and protect from movement.

K. If additional site(s) attempted inform the physician on arrival at the hospital.

L. Properly document the procedure on the first care form.

M. Monitor patient and reassess the patency of the line.

♦ In a shock situation, only one intraosseous is necessary.

VI. **Complications:**

A. Puncture through the posterior cortex

B. Incomplete penetration of cortex

C. Fluid leaking from puncture site

D. Infection

E. Fracture

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VII. Drugs Permitted via I.O.:

A. Epinephrine

B. Atropine

C. Lidocaine

D. $D_{25}W$

E. Lactated Ringers

F. Normal Saline

G. D_5W

H. Na HCO_3

I. Naloxone

J. Diazepam

VIII. Medical Control:

A. Many prehospital providers work for multiple agencies, therefore, the provider is responsible for knowing the local policies and protocols.

B. Each occurrence of I.O. must be appropriately documented. A review of the occurrence will be done by the Base Hospital.

C. The Medical Director has the authority to withdraw medical direction of I.O.. Such action would be considered an action against the I-EMT's or Paramedic's certification. Medical Control is required to report such action to the Office Of EMS.

D. Review of policies, protocols and standing orders. Note: Local Medical Control shall determine if I.O. will be done under standing orders or become a protocol which requires on-line medical direction.

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Module Two - Lab

I. Given a mannikin or simulation, the student will practice the proper technique for I.O.

II. Given a mannikin or simulation, in a one on one situation, the instructor will guide the student to perform the skill to proficiency.

III. Given a mannikin or simulation, in a one on one situation, the instructor will create a minimum of three scenarios which meet one or more of the following criteria: (a) there is not an indication for I.O.; (b) there is an indication for I.O.; (c) I.O is contraindicated; (d) an I.O. was preformed and a complication has occurred. The student must identify each situation correctly and perform the indicated tasks appropriately.

Module Three - Practical testing

I. Given a mannikin or simulation, in a one on one testing situation, and using the attached skills checksheet, the student will correctly perform an I.O. with 100% proficiency.

Note: The training program will act as an agent of the State of Arizona, Department of Health Services, by conducting the practical examination. The following conditions must be maintained.

1. The practical test must be conducted in a testing environment. Students must understand that they are being evaluated. Corrective guidance during the evaluation is prohibited.

2. The evaluator must not reveal the results or the specific criteria for failure.

3. The Medical Director may review the skills checksheet, prior to a generalized counselling session with the student.

4. The student will be allowed three attempts to perform the skill with 100% competency. Students who fail to do so after the third attempt, must attend another training session.

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I.O. Practical Examination

Student's name:_____ SS#:_____

Date:_____ Attempt#:_____ Evaluator:_____

Criteria	Pts. Poss	Pts. Attian
Assemble equipment	1	
Take universal infection control precautions	1	
Locate site	1	
Cleanse the site with alcohol	1	
Use firm pressure and rotating motion to push through skin and into cortex. Directs away from epiphyseal line. Verbalizes that entrance into medullary cavity will be felt through a loss of resistance.	3	
Remove the stylet and aspirate.	2	
Dispose of the stylet properly	1	
Attach I.V. fluid, pressure infuser and regulate flow appropriately	3	
Secure in place and splint to protect from movement	2	
Indicates proper documentation of the procedure on the first care form.	1	
Reassess patient/site	2	
Total	18	

Critical Criteria:
(Meeting any of the critical criteria constitutes automatic failure. The student must be counselled by the Medical Director prior to retesting)

___ Fails to take universal infection control precautions.
___ Fails to place I.O. needle in medullary cavity.
___ Contaminates equipment or site without appropriately correcting situation.
___ Performs any technique resulting in potential harm to the patient.

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___ Fails to dispose of stylet properly.

I attest to the accuracy and validity of the above information. I certify that the above named student has met the applicable conditions put forth by the Arizona Department of Health Services for utilization of Intraosseous Infusion.

_____ _____
Medical Director's signature Date

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INTRAOSSEOUS INFUSION (I.O.) PROCEDURE

I. Assessment of the patient indicates a need for Intraosseous Infusion. (Standing orders exist or patch is made per local protocol)

II. Assemble equipment

III. Take universal infection control precautions

IV. Locate site -

1. Proximal tibia - 2 cm below tuberosity (primary site)

2. Distal femur - 3cm above knee (only in extreme circumstances)

Note: Use care to avoid epiphyseal plates

V. Cleanse the site with alcohol or betadine

VI. Use firm pressure and rotate motion to push through skin and into cortex. Direct away from epiphyseal line. Entrance into medullary cavity will be felt through a loss of resistance.

VII. Remove the stylet and aspirate.

VIII. Dispose of the needle properly

IX. Attach I.V. fluid and regulate flow appropriately.

X. Use pressure bag if necessary to provide flow.

XI. Secure in place (splint) and protect from movement.

XII. If additional site(s) attempted inform the physician on arrival at the hospital.

XIII. Properly document the procedure on the first care form.

XIV. Monitor patient and reassess the patency of the line.

♦ In a shock situation, only one intraosseous is necessary.

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PREHOSPITAL BLOOD GLUCOSE TESTING PROCEDURE TRAINING CURRICULUM

ARIZONA DEPARTMENT OF HEALTH SERVICES
OFFICE OF EMERGENCY MEDICAL SERVICES

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Prehospital Blood Glucose Testing
CURRICULUM

Course description:

Blood Glucose Testing is a procedure approved by the Medical Direction Commission of the Arizona Department of Health Services, Office of EMS, for use by certified Basic EMT's, Intermediate EMT's and EMT-Paramedics, only when under the Direction of an ALS Base Hospital that supports this procedure.

Successful completion of this course will constitute eligibility for certified Basic EMT's, EMT-Intermediates and EMT-Paramedics to utilize Blood Glucose Testing only when under the Medical Direction of an ALS Base Hospital.

NOTE: As with any advanced skill, the ALS Base Hospital will be responsible for: (1) Managing skills retention through continuing education and Quality Assurance monitoring; and (2) Reporting to the Department performance issues or withdrawal of medical control. The ALS Base Hospital may delegate the responsibility of managing skills retention and/or the Quality Control Program through written agreement to a Provider Agency with a current CLIA Certificate of Waiver. The ALS Base Hospital will have the authority and responsibility of reviewing, monitoring and making recommendations regarding the Provider Agency's Program. Reporting performance issues and/or withdrawal of medical control shall be the ALS Base Hospital's responsibility.

This document is the Official minimum standard curriculum for Blood Glucose Testing training.

Prerequisites:

The student must be a certified Basic EMT, EMT-Paramedic or EMT-Intermediate; and be under the Medical Direction of an approved ALS Base Hospital willing to conduct training and continuing education related to this skill.

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Methodology:

Description - The course is designed to be a minimum of 1½ hours in length and combine lecture with hands-on practice.

Lead Instruction - The lead instructor must be certified in the State of Arizona as a Paramedic, Certified Laboratory Technician, Registered Nurse, Pharmacist or Licensed Physician. The lead instructor should have previous teaching experience and must have expertise in the process and the equipment.

Minimum Time Requirements -

Breakdown of minimum hours of instruction:

Module One:	Lecture with equipment display	½ hour
Module Two:	Lab with hands-on practice	1 hour
Module Three:	Formal testing stations	As required

Equipment - The following minimum equipment must be available for the course:

- Policies for infection control, quality control and guidelines for use of blood glucose monitoring supplies (strips and/or monitor same as will be used in the field)
- Blood Glucose Strips and/or Monitor (same as will be used in the field)
- Lancets
- Cotton balls
- Alcohol swabs
- Disposable latex gloves
- Sharps Container
- Glucose Control Solutions
- Knowledge Test & Skills Checklist
- Operator Certification Roster
- Certificate of training
- Copies of QC Maintenance logs
- A-V equipment (overhead projector, blackboard, etc...)

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Paperwork Flow:

A letter of intent to conduct a class must be received by this Office a minimum of two weeks prior to the class. Included in this letter should be a brief description of the Instructor's qualifications, the date and location of the class, as well as a course outline.

Upon completion of the class, a letter signed by the Medical Director attesting to the competency of each student's skill in Blood Glucose Testing must be submitted to the ALS Program Manager, Office of EMS. A copy of a skills test checksheet must be maintained on file with the Base Hospital for a period of two years and will be subject to audit under the Department's Quality Management Program.

Course Competencies:

Upon successful completion of this course, the student will be able to:

1. Describe the purpose of Blood Glucose Monitoring.

2. Describe and demonstrate methods necessary to prevent cross contamination through the use of equipment by adherence of Universal Blood and Body Fluid Precautions.

3. Demonstrate the correct technique for individual strip and/or instrumentation operation to include:
   - Specimen collection and infection control
   - Instrumentation calibration (if instrumentation is used)
   - Test performance
   - Individual instrumentation display codes and troubleshooting procedures (if instrumentation used)
   - Documentation of results and proper follow-up of abnormal test results in a timely fashion

4. Demonstrate proper quality control testing and documentation of results and corrective actions.

5. Discuss preventative maintenance of strips and/or instrumentation to include documentation and follow-up.

6. List and describe the indications for Blood Glucose Testing to include:
   - Those who display signs/symptoms of hypo/hyperglycemia
   - Patients currently on antidiabetic therapy
   - Special situations (children, pregnancy, certain drugs, etc.)

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7. Describe the contraindication for Blood Glucose Testing.

8. Demonstrate the correct technique for Blood Glucose Testing in a simulated situation.

9. Discuss the role of Medical Control for Blood Glucose Testing.

10. Discuss the role of compliance with CLIA '88 Regulations.

11. Discuss the terms of the approval status and correctly identify that the approval status runs concurrent with Paramedic certification.

12. Pass a skills checklist, to be administered by the State or its approved agent, with 100% competency within 3 attempts.

Course Content:

Module One - Lecture

I. **Description:**

A. Blood Glucose Testing is an invasive diagnostic aid to assist in the management of ALS patients with specific signs and symptoms. Patient care, treatment and outcome may be improved with its use.

B. Blood Glucose Testing may be performed only with the support of local Medical Control.

C. Normal supportive therapy, airway management, peripheral I.V. access should not be affected by Blood Glucose Testing.

II. **Indications:**

A. Known diabetic patient with any of the following signs/symptoms:
- Cold and clammy skin or hot dry skin/mucus membranes
- Pale or flushed color
- Diaphoresis
- Headache, dizziness
- Palpitations and/or dysrhthymias on monitor
- Visual disturbances
- Shakiness or states "feels funny"
- Any altered LOC (Lethargy, confusion, change in usual behavior)
- Slurred speech
- Excessive urination/thirst

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- Acetone (fruity) breath
- Unconscious patient
- Kussmaul respiration
- Seizures

B. Unconscious patients, etiology unknown (any age group, including trauma)

C. Patients with altered LOC, etiology unknown (including trauma), especially if displaying signs/symptoms as in II-A.

D. Special situations:

Pediatric patients having any of the following:
- Seizures
- Altered LOC (especially after high stress illnesses or injury - trauma)

Pregnancy
- Signs/Symptoms of hypo/hyperglycemia as above
- Signs/Symptoms of toxemia of pregnancy (pre-eclampsia, eclampsia)

Elderly, patients with history of alcoholism, overweight and/or malnourished patients

E. Patients on long term drug therapies such as:

- Steroids (Prednisone, Cortisone, Decadron, etc.)
- Hormonal therapy

III. Contraindications:

A. Use of strips or instrumentation that has failed QC Testing and with no corrective action taken.

IV. Special Considerations:

A. Infection Control

1. Adherence to Universal Blood and Body Fluid Precautions during use.

2. Disposal of lancets, disposable equipment and contaminated strips in proper containers at point of use.

3. Proper disinfection procedure for instrumentation.

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4. Certification for use of Blood Glucose Testing equipment in accordance with State and Manufacturer's guidelines.

B. Storage and Handling

1. According to manufacturer's recommendations.

2. Do not use after expiration date

3. Store at or near room temperature, avoid excessive prolonged exposure to heat, cold and humidity. Take the same precautions that are used with drugs and IV solutions.

C. Requirements for Selection of Blood Glucose Testing Equipment

1. If using instrumentation, back up visual reference

2. If using instrumentation, error codes

3. End point chemistry to enable later reading of strip

4. Ability to avoid cross contamination

5. Durable

6. Uncomplicated cleaning procedure

7. Aqueous controls with at least 6 month dating after opening

8. Exact Strip Lot to Lot calibration

9. Performance at or below a 5% CV in 3 ranges (low, normal, high)

10. Strip and instrument performance are suitable with consideration to heat, cold, light and moisture resistance

11. Strip packaging suitable for resistance to above environmental extremes

12. "Unused" color block on test strip vial

13. Ability to use alcohol wipes to cleanse site and clean the machine.

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D. Complications

Following proper technique, infection, and quality control guidelines avoids any complications.

V. **Regulatory Issues**

A. Quality Control / Preventative Maintenance
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

B. External Proficiency Testing
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

C. Competency Checks
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

D. Patient Test Records
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

VI. **Procedure for Blood Glucose Testing:**

A. Identify the need for Blood Glucose Testing (see Indications II-A)

B. Assemble and prepare equipment (adaptations acceptable according to manufacturer's instructions):
- Instrument (if used)
- Blood Glucose Test Strips
- Lancets
- Cotton balls
- Alcohol swabs
- Disposable latex gloves
- Sharps Container

C. Prepare patient for the procedure

D. Obtain specimen according to manufacturer's instructions

E. Perform test according to manufacturer's instructions

F. Report the results to medical control

G. These guidelines are not intended to alter current protocols, but to enhance them. The use of this diagnostic aid could improve patient outcome.

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H. Document: Medic number, time of test, test result and whether test was a capillary (fingerstick) or venous blood sample.

VII. Quality Control Procedure:

A. Quality control records shall be retained for a minimum of 2 years.

B. Quality control testing shall be performed with a high and low quality control solution weekly.

C. Special situations, QC should be performed additionally when:
- A new vial of strips is opened and monitor reprogrammed and/or battery replaced
- When a vial of strips is left open
- If the instrument has been dropped
- If the unused test strip pad looks darker than the "Unused" color block on the vial
- When the vial is thought to have been exposed to environmental extremes for long periods or otherwise contaminated
- When test results contradict clinical symptoms
- After cleaning strip guide

D. If QC falls within acceptable control range, proceed with patient testing.

E. If QC falls outside of acceptable control range, see Trouble Shooting in User's Manual and correct problem before using for patient testing.

F. Control solutions should be stored and used according to manufacturer's directions.

G. QC information shall be recorded according to individual hospital policy.

H. Prehospital instruments may be involved in periodic testing of unknown glucose samples provided by an outside third party. Refer to individual hospitals' external proficiency program.

I. For actual Quality Control Test follow manufacturer's instructions.

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VIII. **Medical Control:**

A. Many prehospital providers work for multiple agencies. Therefore, the provider is responsible for knowing the local policies and protocols.

B. The performance of Blood Glucose Testing must be appropriately documented.

C. The Medical Director has the authority to withdraw medical direction for Blood Glucose Testing. Medical Control is required to report such action to the Office Of EMS.

D. Review Base Station policies.

Module Two - LAB

I. Given control solutions and the equipment to be used, the student will practice the proper technique for performing Blood Glucose Testing and QC procedures.

II. Given the equipment to be used, in a one on one situation, the instructor will guide the student to perform the skill to proficiency.

III. In a one on one situation, the instructor will create a minimum of three scenarios which meet one or more of the following criteria:

(a) There is an indication for Blood Glucose Testing (ie: altered LOC) and the test results fall within normal range values.

(b) There is an indication for Blood Glucose Testing (ie: known diabetic with altered LOC) and the test results are abnormal on the high side.

(c) There is an indication for Blood Glucose Testing (ie: known diabetic with altered LOC) and the test results are abnormal on the extreme low side.

(d) The equipment used for Blood Glucose Testing failed QC test.

The student must identify each situation correctly and perform the indicated tasks appropriately.

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Module Three - Practical Testing

I. Practical Testing

Given control solutions and the equipment to be used, in a one on one testing situation, and using the attached skills checksheet, the student will correctly perform a Blood Glucose Test with 100% proficiency.

Note: When conducting the practical examination the following conditions must be maintained:

1. The practical test must be conducted in a testing environment. Students must understand that they are being evaluated. Corrective guidance during the evaluation is not permitted.

2. The evaluator must not reveal the specific criteria for failure.

3. The Medical Director may review the skills checksheet prior to a generalized counselling session with the student.

4. The student will be allowed three attempts to perform the skill with 100% competency. Students who fail to do so must attend another training session.

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STATE OF ARIZONA • OFFICE OF EMS

Blood Glucose Monitoring Practical Examination

Student's name:_____ SS#:_____

Date:_____ Attempt#:_____ Evaluator:_____

Criteria	Pts. Poss	Pts. Attain
Assesses patient and correctly identifies the need for Blood Glucose Testing (PMH, Signs/Symptoms, etc.)	2	
Prepares the patient for testing	1	
Assembles materials and prepares environment	1	
Calibrates instrument (if using instrument) or checks unused strip against "unused" block on vial	1	
Using UBBFP obtains blood sample (simulated)	1	
Correctly performs procedure according to manufacturer instructions	1	
Reports value, correct treatment suggestion	1	
Indicates proper documentation of the procedure on the first care form.	1	
Total	9	

Critical Criteria:
(Meeting any of the critical criteria constitutes automatic failure. The student must be counselled by the Medical Director prior to retesting)

___ Fails to properly perform Blood Glucose Testing.
___ Performs any technique resulting in potential harm to the patient.

I attest to the accuracy and validity of the above information. I certify that the above named student has met the applicable conditions put forth by the Arizona Department of Health Services for utilization of Blood Glucose Testing.

_____ _____
Medical Director's signature Date

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EXHIBIT D

Arizona Advanced Life Support
Refresher and Challenge Curricula
1994

This text contains the Arizona minimum standard curriculum for: Intermediate Refresher, Intermediate Challenge Paramedic Refresher, and Paramedic Challenge courses.

There is a statutory mandate for standardized training by EMS training programs. This text is comprehensive and is intended to be used in its entirety. A training program may not excerpt any portion of this document when conducting EMS training.

The curricula contained in this text are based on modifications to, and meet the all requirements of, the U.S. Department of Transportation, Emergency Medical Technician--Paramedic (and Refresher) National Standard Curriculum, 1985 (DOT). These courses met all the requirements of the refresher curricula, but more closely follow the primary curricula format.

The Intermediate and Paramedic refresher courses shall consist of didactic instruction. Because the focus of the course is designed to update the student on new standards and technologies, to review requisite knowledge and to validate skills, the training program must design a course using lecture and assessment that incorporates all objectives in each Section of each Division.

The Intermediate and Paramedic challenge courses shall consist of didactic and clinical instruction. These courses are designed to train and educate out of state applicants in knowledge, procedures, medications and skills specific to Arizona's system. Additionally, these courses are used to remediate a student who has been unsuccessful three times on the certification examinations, and to refresh applicants who have expired certifications and desire re-entry into the EMS system. These courses differ from the Refresher course not only be adding clinical instruction, but by requiring the training program to make an extensive evaluation of the student's needs and providing a specialized focus based on that evaluation.

Each Division shall have a minimum contact hour requirement that must be met. However, because the emphasis of training is on the development of student competency, the instructional content of each course shall be focused on competency of stated objectives. A student shall have successfully completed the course only after he has demonstrated mastery of all stated objectives.

Because this is a competency based curriculum, the training program must be able to demonstrate, upon request, at what point in the schedule any specific objective will be met.

Course outlines submitted to the Office of EMS for review shall utilize the following format for each lecture presented:

Date	Time	Division/Section	Topic	Lecturer

Course Descriptions:

Intermediate Refresher Course -

The I-EMT Refresher course is designed to provide updated information and refresher instruction in all Divisions of the curriculum. Unlike the DOT, this curriculum is based on a comprehensive review of the primary Arizona I-EMT curriculum. Compliance to this curriculum shall exceed all DOT requirements and shall meet the National Registry of EMT's re-registration requirements of sections I-A. & I-C.

The I-EMT Refresher curriculum is a competency driven curriculum. There are stated objectives for the course and each and every objective **must** be met by each student. The training program is responsible for assuring that students who are absent receive special instruction in order to meet each objective.

In addition to the stated objectives, there are minimum contact hours for each Division in the curriculum. A program should consider the word "minimum" carefully. It is very possible that a program may need additional contact hours to assure that each and every objective is met by each student.

The I-EMT Refresher course outline is as follows:

Division 1	Prehospital Environment	Minimum Hours 2
Section 1	Roles and Responsibilities	
Section 2	EMS Systems	
Section 3	Medical/Legal Considerations	
Section 4	EMS Communications	
Section 5	Rescue/Vehicular Extrication	
Section 6	Major Incident Response	
Section 7	Stress Management	
Division 2	Preparatory	Minimum Hours 8
Section 1	Medical Terminology	
Section 2	General Patient Assessment	
Section 3	Airway and Ventilation	
Section 4	Pathophysiology of Shock	
Section 5	General Pharmacology	
Division 3	Trauma	Minimum Hours 12
Section 1	Trauma	
Section 2	Burns	
Division 4:	Medical	Minimum Hours 18
Section 1	Respiratory Section	
Section 2	Cardiovascular Section	
Section 3	Endocrine Emergencies	
Section 4	Nervous System	
Section 5	Acute Abdomen	
Section 6	Anaphylaxis	
Section 7	Toxicology, Alcoholism, Drug Abuse	
Section 8	Infectious Diseases	
Section 9	Environmental Injuries	
Section 10	Geriatrics/Gerontology	
Section 11	Pediatrics	

Division 5:	**OB/GYN/Neonatal**	Minimum Hours 4
Section 1	GYN	
Section 2	OB	
Section 3	Neonatal	
Division 6:	**Behavioral**	Minimum Hours 4
Section 1	Behavioral Emergencies	

Intermediate Challenge Course -

The I-EMT Challenge course is designed to provide updated information and refresher instruction in all Divisions of the curriculum to students who have failed the certification examinations three times, and to individuals with expired certification desirous of regaining certification.

The primary goals of this course are: (1) provide a comprehensive review of the entire curriculum, (2) provide intense review in individual areas of deficiency as assessed by the training program, and (3) develop and validate competency in all practical skills.

To accomplish the goals of this course the training program must not only cover in a review methodology all the objectives in the curricula, but they must also conduct an extensive evaluation of the students needs or deficiencies and provide intensive instruction in those areas.

The I-EMT Challenge course outline is as follows:

Didactic

Division 1	Prehospital Environment	Minimum Hours 2
Section 1	Roles and Responsibilities	
Section 2	EMS Systems	
Section 3	Medical/Legal Considerations	
Section 4	EMS Communications	
Section 5	Rescue/Vehicular Extrication	
Section 6	Major Incident Response	
Section 7	Stress Management	
Division 2	Preparatory	Minimum Hours 8
Section 1	Medical Terminology	
Section 2	General Patient Assessment	
Section 3	Airway and Ventilation	
Section 4	Pathophysiology of Shock	
Section 5	General Pharmacology	
Section 6	Advanced Pharmacology	
Division 3	Trauma	Minimum Hours 12
Section 1	Trauma	
Section 2	Burns	

Division 4:	**Medical**	Minimum Hours 18
Section 1	Respiratory Section	
Section 2	Cardiovascular Section	
Section 3	Endocrine Emergencies	
Section 4	Nervous System	
Section 5	Acute Abdomen	
Section 6	Anaphylaxis	
Section 7	Toxicology, Alcoholism, Drug Abuse	
Section 8	Infectious Diseases	
Section 9	Environmental Injuries	
Section 10	Geriatrics/Gerontology	
Section 11	Pediatrics	
Division 5:	**OB/GYN/Neonatal**	Minimum Hours 4
Section 1	GYN	
Section 2	OB	
Section 3	Neonatal	
Division 6:	**Behavioral**	Minimum Hours 4
Section 1	Behavioral Emergencies	

Clinical

Emergency Department	Minimum Hours	24

Paramedic Refresher Course -

The Paramedic Refresher course is designed to provide updated information and refresher instruction in all Divisions of the curriculum. This curriculum exceeds all requirements of the DOT Refresher curriculum.

The Paramedic Refresher curriculum is a competency driven curriculum. There are stated objectives for the and each and every objective **must** be met by each student. The training program is responsible for assuring that students who are absent receive special instruction in order to meet each objective.

In addition to the stated objectives, there are minimum contact hours for each Division in the curriculum. A program should consider the word "minimum" carefully. It is very possible that a program may need additional contact hours to assure that each and every objective is met by each student.

The Paramedic Refresher course outline is as follows:

Didactic

Division 1	Prehospital Environment	Minimum Hours 2
Section 1	Roles and Responsibilities	
Section 2	EMS Systems	
Section 3	Medical/Legal Considerations	
Section 4	EMS Communications	
Section 5	Rescue/Vehicular Extrication	
Section 6	Major Incident Response	
Section 7	Stress Management	
Division 2	Preparatory	Minimum Hours 8
Section 1	Medical Terminology	
Section 2	General Patient Assessment	
Section 3	Airway and Ventilation	
Section 4	Pathophysiology of Shock	
Section 5	General Pharmacology	
Section 6	Advanced Pharmacology	
Division 3	Trauma	Minimum Hours 12
Section 1	Trauma	
Section 2	Burns	

Division 4:	**Medical**	Minimum Hours 18
Section 1	Respiratory Section	
Section 2	Cardiovascular Section	
Section 3	Endocrine Emergencies	
Section 4	Nervous System	
Section 5	Acute Abdomen	
Section 6	Anaphylaxis	
Section 7	Toxicology, Alcoholism, Drug Abuse	
Section 8	Infectious Diseases	
Section 9	Environmental Injuries	
Section 10	Geriatrics/Gerontology	
Section 11	Pediatrics	
Division 5:	**OB/GYN/Neonatal**	Minimum Hours 4
Section 1	GYN	
Section 2	OB	
Section 3	Neonatal	
Division 6:	**Behavioral**	Minimum Hours 4
Section 1	Behavioral Emergencies	

Paramedic Challenge Course -

The Paramedic Challenge course is designed to provide updated information and refresher instruction in all Divisions of the curriculum to out of state paramedic applicants, students who have failed the certification examinations three times, and to individuals with expired certification desirous of regaining certification.

The primary goals of this course are: (1) provide a comprehensive review of the entire curriculum, (2) provide intense review in individual areas of deficiency as assessed by the training program, and (3) develop and validate competency in all practical skills.

To accomplish the goals of this course the training program must not only cover in a review methodology all the objectives in the curricula, but they must also conduct an extensive evaluation of the students needs or deficiencies and provide intensive instruction in those areas.

The Paramedic Challenge course outline is as follows:

Didactic

Division 1	Prehospital Environment	Minimum Hours 2
Section 1	Roles and Responsibilities	
Section 2	EMS Systems	
Section 3	Medical/Legal Considerations	
Section 4	EMS Communications	
Section 5	Rescue/Vehicular Extrication	
Section 6	Major Incident Response	
Section 7	Stress Management	
Division 2	Preparatory	Minimum Hours 8
Section 1	Medical Terminology	
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Section 3	Airway and Ventilation	
Section 4	Pathophysiology of Shock	
Section 5	General Pharmacology	
Section 6	Advanced Pharmacology	
Division 3	Trauma	Minimum Hours 12
Section 1	Trauma	
Section 2	Burns	

Division 4:	**Medical**	Minimum Hours 18
Section 1	Respiratory Section	
Section 2	Cardiovascular Section	
Section 3	Endocrine Emergencies	
Section 4	Nervous System	
Section 5	Acute Abdomen	
Section 6	Anaphylaxis	
Section 7	Toxicology, Alcoholism, Drug Abuse	
Section 8	Infectious Diseases	
Section 9	Environmental Injuries	
Section 10	Geriatrics/Gerontology	
Section 11	Pediatrics	
Division 5:	**OB/GYN/Neonatal**	Minimum Hours 4
Section 1	GYN	
Section 2	OB	
Section 3	Neonatal	
Division 6:	**Behavioral**	Minimum Hours 4
Section 1	Behavioral Emergencies	

Clinical

Critical Care	Minimum Hours	12
Emergency Department	Minimum Hours	24

Division 1

Prehospital Environment

Section 1

Roles and Responsibilities

Division 1 — Prehospital Environment

Section 1 — Roles and Responsibilities

Lecturer qualifications: The lecturer for this section must be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.1.1	Identify and describe those activities preformed by an advanced level EMT in the field.
1.1.2	Define the role of an advanced level EMT
1.1.3	Describe and contrast the difference between an EMT-Ambulance, EMT-Intermediate, and EMT-Paramedic training program.
1.1.4	Define the terms "ethics" and "professionalism".
1.1.5	Describe the differences between ethical behavior and legal requirements.
1.1.6	State specific activities that are most appropriate to ethical behavior.
1.1.7	Identify whether a particular activity is unethical and/or illegal, given certain patient care situations.
1.1.8	Identify whether a particular activity is ethical or unethical given certain patient care situations.
1.1.9	Define the term "professional."
1.1.10	Define the term "health care professional."
1.1.11	Identify whether a particular activity is professional or unprofessional given certain patient care situations.
1.1.12	State certain activities that are most appropriate to professional behavior.
1.1.13	List current state requirements for Advanced level EMT continuing education.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.1.14	Define and discuss at least three reasons why continuing education is important for the Advanced level EMT.
1.1.15	Define the terms "certification, licensure, and registration."
1.1.16	Name and describe current state legislation outlining the scope of prehospital Advanced Life Support.
1.1.17	State the reason that it is important to keep one's advanced level EMT certification current.
1.1.18	State the major purposes of a national association.
1.1.19	State the major purposes of a national registration agency.
1.1.20	State the major benefits of subscribing to professional journals.
1.1.21	State the benefits of advanced level EMT teaching in their community.

Division 1
Prehospital Environment

Section 2
EMS Systems

Division 1 Prehospital Environment

Section 2 EMS Systems

Lecturer qualifications: The lecturer for this section must be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.2.1	Discuss citizen access and the various mechanisms of obtaining it.
1.2.2	Discuss prehospital care as an extension of hospital care.
1.2.3	Define stabilization of patients.
1.2.4	Define and describe medical control.
1.2.5	Describe physician responsibility for Medical Control.
1.2.6	Describe the relationship between the physician on the scene, the advanced level EMT and the physician on the radio. a. The physician who is with the patient when the advanced level EMT arrives. b. The physician who arrives on the scene after the advanced level EMT's have started evaluating and treating the patient.
1.2.7	Describe the benefits of advanced level EMT follow-up on patient condition, diagnosis, and retrospective review of prehospital care.
1.2.8	Describe KKK Ambulance standards.
1.2.9	Define the American College of Surgeons Essential Equipment List and how it relates to local state laws.
1.2.10	Define the national standard levels of prehospital provider as defined by curriculum, respectively.
1.2.11	Discuss ambulance placement and the parameters that should be utilized in its development, include the differences in urban, suburban and rural settings.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.2.12	Discuss the medical community role in overseeing prehospital care.
1.2.13	Define protocols and standing orders.
1.2.14	Describe the development of protocols.
1.2.15	Define local training standards.
1.2.16	Describe the legislative and regulatory process as regards prehospital care.
1.2.17	Describe integration of prehospital care into the continuum of total patient care with the Emergency Department phase of hospital care.
1.2.18	Discuss replacement of equipment and supplies.
1.2.19	Discuss the advanced level EMT's initial responsibilities when arriving on the scene.
1.2.20	Describe the relationship between the physician on the radio and the advanced level EMT at the scene.
1.2.21	Discuss the varying philosophies between the management of medical patients and trauma patients, prehospital.
1.2.22	Describe the transition of patient care from the advanced level EMT, including: a. Transfer of responsibility (legal and medical). b. Reporting of patient status to physician or nurse.
1.2.23	Describe the ability of physician run critique based on documentation.
1.2.24	Describe retrospective evaluation of patient care including run report review, continuing education, skill practice and skill deterioration.

Division 1
Prehospital Environment

Section 3
Medical/Legal Considerations

Division 1 — Prehospital Environment

Section 3 — Medical/Legal Considerations

Lecturer qualifications: The lecturer for this section must be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director; or an Attorney or Risk Manager with specific knowlege of Advanced Life Support Prehospital Care.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.3.1	Discuss the significance and scope of the following in relationship to EMT practice: a. State Medical Practice Act b. Good Samaritan Act/Civil Immunity c. State EMS Statutes d. State Motor Vehicle Codes e. State and local guidelines for "Do Not Resuscitate"
1.3.2	Define the following: a. Negligence b. Medical Liability c. Tort d. Duty to Act e. Battery f. Slander g. Informed Consent h. Expressed Consent i. Implied Consent j. Abandonment k. Liable l. Assault m. False Imprisonment
1.3.3	Describe the significance of accurate documentation and record keeping in substantiating incidents.
1.3.4	Identify those situations that require the advanced level EMT to report those incidents to appropriate authorities.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.3.5	Describe the four elements required to prove medical liability.
1.3.6	Describe the significance of obtaining expressed consent.
1.3.7	Describe the extent to which force and restraint may be used to protect the EMT, the patient and the third party.

Division 1
Prehospital Environment

Section 4
EMS Communication

Division 1 — Prehospital Environment

Section 4 — EMS Communications

Lecturer qualifications: The lecturer for this section must be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director; or a telecommunications expert with specific knowlege of Advanced Life Support Prehospital Care.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.4.1	Describe the phases of communications necessary to complete a typical EMS event.
1.4.2	Name the possible components of an EMS communications system and explain the function of each.
1.4.3	Define ALS Base Hospital.
1.4.4	Name factors that affect the coverage of mobile transmitter/receivers.
1.4.5	Describe the position of the antenna on a portable transmitter/receiver that will deliver maximum coverage.
1.4.6	Describe an advantage of a repeater system over a non-repeater system.
1.4.7	Describe the vehicular repeater system.
1.4.8	Describe the purpose of a remote console.
1.4.9	Describe the function of a satellite receiver.
1.4.10	Describe the functions of an encoder and a decoder.
1.4.11	Define hertz, kilohertz, and megahertz.
1.4.12	Define the terms UHF and VHF and distinguish between the two.
1.4.13	Describe the most common causes of interference in biotelemetry communications.
1.4.14	Describe simplex, duplex, and multiplex radio systems.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.4.15	Describe functions and responsibilities of the FCC.
1.4.16	Describe the responsibilities of an EMS dispatcher.
1.4.17	Name information items that must be gathered from a caller by the dispatcher.
1.4.18	Describe the ten-code used in the local community.
1.4.19	Describe three communications techniques that influence the clarity of radio transmissions.
1.4.20	Describe three communications techniques that influence the content of radio transmissions.
1.4.21	Describe the importance of written medical protocols.
1.4.22	Describe two purposes of verbal communication of patient information to the hospital.
1.4.23	Describe information that should be included in patient assessment information verbally reported to the physician.
1.4.24	Organize a list of patient assessment information in the correct order for radio transmission to the physician according to the format used locally.
1.4.25	Name five uses of the written EMS run form.
1.4.26	Demonstrate the proper use of a mobile transmitter/receiver to receive and transmit information.
1.4.27	Demonstrate the proper use of a portable transmitter/receiver to receive and transmit information.
1.4.28	Demonstrate the proper use of a digital encoder.
1.4.29	Demonstrate the proper use of a mobile or portable transmitter in a real or simulated patient situation to: a. Organize and transmit patient assessment information, using a standardized format; and; b. Transmit an ECG.
1.4.30	Properly complete a written EMS form based on a real or simulated patient situation.

Division 1

Prehospital Environment

Section 5

Rescue/Vehicular Extrication

Division 1 — Prehospital Environment

Section 5 — Rescue/Vehicular Extrication

Lecturer qualifications: The lecturer for this section shall be a Paramedic or Basic EMT employed by a Fire Department, Ambulance Service, or Rescue Service with at least 20 documented extrications as the lead rescuer.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.5.1	List the equipment utilized for personal and patient safety during a rescue.
1.5.2	Identify safety hazards that may be encountered in a rescue operation.
1.5.3	Describe the pre-planning phase of a safe rescue.
1.5.4	Describe the elements and resources involved in the assessment phase of a rescue operation.
1.5.5	Define safe patient access.
1.5.6	List the types of equipment available to access an entrapped patient.
1.5.7	Describe the advanced level EMT's patient assessment and management responsibilities during a rescue operation.
1.5.8	Identify the special expertise for special rescue resources available in the advanced level EMT's response area.
1.5.9	Identify the difficulties that may be encountered in the patient removal phase of a rescue operation.
1.5.10	Explain the need for a coordinated effort during the removal phase of a rescue operation.
1.5.11	Discuss removal of the patient from the rescue scene.

Division 1
Prehospital Environment

Section 6
Major Incident Response

Division 1 — Prehospital Environment

Section 6 — Major Incident Response

Lecturer qualifications: The lecturer for this section must be a Paramedic or Basic EMT employed by a Fire Department, Ambulance Service, or Rescue Service and have at least of 2 documented Major Incident Responses in which the lecturer function as a member of the "command" structure.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.6.1	Define the term "major incident."
1.6.2	Identify the local "communication" system.
1.6.3	Describe when a major "incident" should be declared.
1.6.4	Describe the "pre-planning phase" function.
1.6.5	Describe area "response planning".
1.6.6	Describe the components of special resources.
1.6.7	Describe the function of "command."
1.6.8	Describe the function of "scene triage."
1.6.9	Describe the "transferring command function."
1.6.10	Describe section and staging management.
1.6.11	Describe a system for patient identification.
1.6.12	Describe scene medical control.
1.6.13	Identify "who's in charge."

Division 1
Prehospital Environment

Section 7
Stress Management

Division 1 — Prehospital Environment

Section 7 — Stress Management

Lecturer qualifications: The lecturer for this section must be a a member of an organized Critical Incident Stress Debrifing (CISD) team and have recieved a minimum of 16 hours of CISD training. Additionally, the lecturer shall have clinical expirence in prehospital or emergency medicine.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.7.1	Define the term "stress".
1.7.2	Name the causes of stress.
1.7.3	Describe the three phases of the stress response.
1.7.4	Name and describe at least five defense mechanisms commonly used to deal with stress.
1.7.5	Describe factors that determine whether anxiety is a positive or negative response.
1.7.6	Describe the common physiologic effects of stress.
1.7.7	Describe behavior that is a manifestation of stress in: a. patients b. patients' families, and c. the advanced level EMT
1.7.8	Name common causes of job stress for the advanced level EMT.
1.7.9	Describe various techniques the advanced level EMT may use to manage stress.
1.7.10	Describe the stages of the grief process.
1.7.11	Describe common needs of a) the patient, b) the family, and c) the advanced level EMT in dealing with death and dying.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
1.7.12	Describe common management techniques used by the advanced level EMT when a patient is dead or dying.
1.7.13	Identify issues of controversy in pre-hospital care involving death and dying.

Division 2
Preparatory

Section 1
Medical Terminology

Division 2 Preparatory

Section 1 Medical Terminology

Lecturer qualifications: The lecturer for this section be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.1.1	Define and contrast medical terms.
2.1.2	Identify various medical terms given one or more anatomical parts of the body.
2.1.3	Identify common medical abbreviations.
2.1.4	Identify common root words and determine their meaning.
2.1.5	Identify and define common prefixes and suffixes.
2.1.6	Locate 25 EMS related medical terms in a medical dictionary, read them and produce a set of flash cards using these terms.

Division 2

Preparatory

Section 2

General Patient Assessment

Division 2 Preparatory

Section 2 General Patient Assessment

Lecturer qualifications: The lecturer for this section be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.2.1	Establish priorities of care based on threat to life conditions.
2.2.2	Describe the four phases of patient assessment.
2.2.3	Discuss the possible environmental hazards that the advanced level EMT may encounter and the means of protecting him in this environment.
2.2.4	Describe the environmental hazards which a patient might encounter.
2.2.5	Describe the mechanisms of stabilizing an automobile to prevent injury while extricating the patient.
2.2.6	Describe the problems an advanced level EMT might encounter in a hostile situation and describe mechanisms of management.
2.2.7	Discuss the importance of Body Substance Isolation techniques
2.2.8	Discuss OSHA regulations and CDC guidelines relating to Blood borne pathogen and Body Substance Isolation.
2.2.9	Describe the various types of protective equipment available to the advanced level EMT for self protection and patient protection.
2.2.10	Discuss the appropriate methods of patient protection in each situation.
2.2.11	Describe the emergency situations the EMT may encounter and describe the management of each.
2.2.12	Discuss backup personnel, transportation and equipment.
2.2.13	Define and describe the various classifications of emergencies which an EMT will encounter. Base this on medical needs.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.2.14	Discuss how the assessment and management differs.
2.2.15	Describe the primary survey and what areas are critical to evaluate.
2.2.16	Describe the anatomy of the following: upper airway, tongue, hypopharynx, nasopharynx oropharynx, larynx, vocal cords.
2.2.17	Describe the function of the vocal cords.
2.2.18	Describe the flow of air from outside the body into the trachea.
2.2.19	Describe the reasons for and mechanism of humidification and warming of the air as it passes through the naso and oral pharynx.
2.2.20	Describe the pathological conditions that can occur in the nose, pharynx and larynx to obstruct or retard air flow and identify the complications of laryngeal fracture.
2.2.21	Describe the methods of airway management.
2.2.22	Describe the methods and management of an obstructed airway.
2.2.23	Describe the mechanical methods of airway management including the benefits and limitations of Oral, nasal and EOA.
2.2.24	Describe the trans-tracheal mechanisms of airway ventilation, including the benefits and limitations (needle & surgical).
2.2.25	Describe how the cervical spine is protected throughout these maneuvers.
2.2.26	Describe the anatomy of the following: a. Lungs b. Trachea c. Alveolus d. Diaphragm e. Thoracic wall f. Pleural space.
2.2.27	Describe how pulmonary ventilation (inhalation and exhalation) is accomplished.
2.2.28	Describe the gaseous exchange across the alveoli-capillary membrane (02, and CO2).

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.2.29	Describe the pulmonary problems that can complicate exhalation and inhalation and the mechanisms by which they reduce ventilation and management of each problem, including: a. Open pneumothorax b. Diaphragmatic injury c. Closed pneumothorax (Simple and Tension) d. Flail chest.
2.2.30	Describe the problems of ventilation.
2.2.31	Define mouth to mask ventilation, its benefits and limitations.
2.2.32	Discuss the bag-valve mask, its benefits and limitations.
2.2.33	Discuss the techniques for evaluating the effectiveness of ventilation.
2.2.34	Describe the anatomy of the heart and the cardiovascular system.
2.2.35	Describe the problems that occur with decreased perfusion.
2.2.36	Describe the pathophysiology of cardiac arrest.
2.2.37	Describe the mechanisms of evaluating the effectiveness of perfusion, including pulse, skin color, capillary refill.
2.2.38	Discuss ventilation with an E.O.A. (benefits and limitations).
2.2.39	Discuss ventilation with an endotracheal tube (benefits and limitations).
2.2.40	Describe the equipment and method of suctioning the airway, pharynx and endotracheal tube.
2.2.41	Describe the anatomy of the skin, bones, vessels and subcutaneous tissue as they relate to hemorrhage control.
2.2.42	Discuss the benefits and complications of hemorrhage control by the following means: a. Direct pressure b. Tourniquets c. Hemostats.
2.2.43	Define a mini-neurological examination (level of consciousness).
2.2.44	Describe exposing the patient's body for total evaluation.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.2.45	Discuss when this should and should not be carried out.
2.2.46	Define shock.
2.2.47	Describe the reasons for and mechanisms of patient reassessment in the resuscitation phase.
2.2.48	Define the components of secondary survey and its benefits for patient evaluation.
2.2.49	Describe the assessment of the head, neck, thorax, abdomen, extremities and nervous system.
2.2.50	Describe the trauma score, define its usefulness and how it is accomplished.
2.2.51	Discuss the important components which must be identified in taking an appropriate history from a patient.
2.2.52	Describe which laboratory studies drawn in the field when the IV is started and their usefulness.
2.2.53	Define the definitive care phase.
2.2.54	Describe how a patient is packaged and stabilized for transportation to the hospital, including airway ventilation, IV fluids, pneumatic anti-shock garment, fracture stabilization, bandaging.
2.2.55	Describe how the patient is immobilized to the backboard.
2.2.56	Describe how the patient is immobilized to the stretcher, and to the ambulance.
2.2.57	Describe patient extrication.
2.2.58	Describe how the patient is monitored enroute to the hospital.
2.2.59	Describe how the hospitals are selected for receipt of patients based on patient need and hospital capability.
2.2.60	Describe the benefits and complications of lights and sirens and when this should be used.
2.2.62	Describe the interaction between the EMT and Medical Command Authority in regard to: receiving hospital, family physician on the scene, bystander physician on the scene, orders for patient care, needs of the family and needs of the patient.
2.2.62	Describe the usefulness of a run report.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.2.63	Describe the mechanisms of continued evaluation of the patient enroute to the hospital.
2.2.64	Perform a rapid assessment of the patient to identity priorities for care.
2.2.65	Demonstrate the assessment of the head, neck, thorax, abdomen. extremities and neurological system.

Division 2
Preparatory

Section 3
Airway and Ventilation

Division 2 Preparatory

Section 3 Airway and Ventilation

Lecturer qualifications: The lecturer for this section be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director, currently certified as an advanced cardiac life support instructor, BTLS-A, ATLS, and/or PHTLS instructor.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.3.1	Describe anatomy of the nasopharynx, or pharynx, hypopharynx, larynx, cricoid cartilage, and trachea.
2.3.2	Describe the relationship between: a. Cords and larynx b. Esophagus and larynx c. Epiglottis and larynx d. Tongue and larynx e. True cords and false cords f. Pharynx and larynx
2.3.3	Describe anatomy of the right and left mainstem bronchi, carina, bronchioles, alveoli and lungs.
2.3.4	Discuss the mechanics of respiration/ventilation.
2.3.5	Discuss normal respiratory rates of the following patients: Adult Child Infant Newborn
2.3.6	Discuss the importance of Hyperventilation
2.3.7	Describe laryngoscope, suction, endotracheal tube and bag-valve mask.
2.3.8	Discuss indications and contraindications of endotracheal intubation.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.3.9	Discuss alternatives to endotracheal intubation.
2.3.10	Discuss skill deterioration and methods of prevention.
2.3.11	Discuss need for rapid placement of ET tube.
2.3.12	Discuss methods of assuring and maintaining correct placement of ET tube.
2.3.13	Discuss indications and contraindications for the use of a mechanical cardiopulmonary resuscitation device (Thumper). And an automatic transport ventilator.
2.3.14	Demonstrate effective cardiopulmonary resuscitation.
2.3.15	Demonstrate effective mouth-to-mask ventilation.
2.3.16	Demonstrate effective ventilation with bag valve and: a. Mask b. EOA c. ET
2.3.17	Demonstrate the manual methods of airway management.
2.3.18	Demonstrate the mechanical methods of airway management. a. Nasal ET b. Oral ET c. Digital ET d. EOA/EGTA e. Cricothyrotomy (surgical & needle) f. Needle Thoracostomy g. Nasopharyngeal airway h. Oropharyngeal airway i. Gastric decompression j. Sellick's maneuver
2.3.19	Demonstrate placement (within 30 seconds) of ET tube.
2.3.20	Demonstrate method by assuring and maintaining correct placement of ET tube.
2.3.21	Demonstrate reventilation for missed intubation.
2.3.22	Demonstrate the methods of management of an obstructed airway.
2.3.23	Demonstrate the use of various types of portable and fixed suction devices.
2.3.24	Demonstrate Skills described above both on mannikin and a live patient or cadaver.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.3.25	Demonstrate the use of automatic transport ventilators and mechanical cardiopulmonary device (thumpers).
2.3.26	Demonstrate the placement of an oral gastric lavage tube and state indications, contraindications, and complications as it pertains to airway management.

Division 2
Preparatory

Section 4
Pathophysiology of Shock

Division 2 — Preparatory

Section 4 — Pathophysiology of Shock

Lecturer qualifications: The lecturer for this section shall be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director, currently certified as a, BTLS-A, ATLS, and/or PHTLS instructor.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.4.1	Define shock based on aerobic and anaerobic metabolism.
2.4.2	Define management based on the Fick Principle.
2.4.3	Discuss the prevention of anaerobic metabolism.
2.4.5	Discuss red blood cell oxygenation in the lungs based on alveolar 2° levels and transportation across the alveolar capillary wall.
2.4.6	Discuss tissue oxygenation based on tissue profusion and off-loading of oxygen.
2.4.7	Discuss the role played by respiration and inadequate ventilation in the management of shock.
2.4.8	Describe perfusion and the mechanisms of improvement of cardiac output based on the strength and rate of contractions.
2.4.9	Discuss the role of preload in improving cardiac output.
2.4.10	Discuss the fluid component of the cardiovascular system and the relationship between the volume of the fluid and the size of the container.
2.4.11	Discuss afterload (systemic vascular resistance), the relationship of diastolic pressure to the SVR and the effect of diastolic pressure on coronary circulation.
2.4.12	Discuss the container size in its relationship to the fluid volume and the effect on pre-load.
2.4.13	Discuss body fluids based on total body water, intracellular fluid, and extracellular fluid.
2.4.14	Identify the significant anions and cations in the body.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.4.15	Describe the role of protein.
2.4.16	Discuss osmosis. Define semi-permeable membranes, and discuss their function.
2.4.17	Define isotonic fluids, hypotonic fluids, and hypertonic fluids.
2.4.18	Define and discuss diffusion.
2.4.19	Define active transport.
2.4.20	Describe the mechanisms of concentration of electrolytes.
2.4.21	Define Acid-Base balance.
2.4.22	Discuss Acid-Base balance based on hydrogen ion concentration, pH and buffer systems.
2.4.23	Define and discuss the following: a. Respiratory acidosis. b. Respiratory alkalosis. c. Metabolic acidosis. d. Metabolic alkalosis.
2.4.24	Describe the mechanism of the body response to perfusion change.
2.4.25	Identify the role of the baro-receptor.
2.4.26	Describe how the actions of the baro-receptor affect blood pressure and perfusion.
2.4.27	Describe compensated shock.
2.4.28	Describe uncompensated shock, both cardiac and peripheral effects.
2.4.29	Describe how anaerobic metabolism at the cellular level can lead to death several days later.
2.4.30	Discuss the effects of decreased perfusion at the capillary level, both on the capillary lining as well as the cell; include a discussion of increased interstitial fluid.
2.4.31	Describe the three phases in the capillary cellular relationship (ischemia, stagnant, and washout).
2.4.32	Discuss the evaluation of the patient's perfusion status, based on physical observations within the primary survey, including pulse, skin, temperature, capillary refill.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.4.33	Discuss the relationship of the neurological exam to evaluation of hypoperfusion and oxygenation.
2.4.34	Describe the information provided by the following in a physical examination: pulse, blood pressure, diastolic pressure, systolic pressure, skin color, appearance, temperature, and respiration.
2.4.35	Discuss resuscitation of a shocky patient. Include red cell oxygenation, tissue ischemic sensitivity, IV fluids and the Pneumatic Anti-Shock Garment.
2.4.36	Describe the beneficial and detrimental effects of the Pneumatic Anti-Shock Garment.
2.4.37	Describe the indications and contraindications for the Pneumatic AntiShock Garment and how it affects the patient in each.
2.4.38	Discuss fluid replacement, the types of fluid that are available, the benefits and detrimental effects of each.
2.4.39	Discuss how fluid replacement is monitored and controlled.
2.4.40	Discuss the routes of fluid replacement and the advantages and disadvantages of each.
2.4.41	Demonstrate in order of priority the steps of shock resuscitation.
2.4.42	Demonstrate the use of the Pneumatic AntiShock Garment.

Division 2

Preparatory

Section 5

General Pharmacology

Division 2 Preparatory

Section 5 General Pharmacology

Lecturer qualifications: The lecturer for this section shall be a physician, nurse, paramedic, or Pharm.D.

Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.5.1	**Name four drug sources and give an example of a drug derived from each source.**
2.5.2	Name and contrast the various names of a drug (i.e., generic vs. trade name vs. official vs. chemical).
2.5.3	State why drug standards are necessary.
2.5.4	Identify those agencies that are responsible for regulating drugs and provide examples.
2.5.5	Name three legislative acts that regulate drugs.
2.5.6	List the five schedules of controlled substances and give an example of a medication from each.
2.5.7	Define the following terms: • capsules • vials • fluid extracts • powders • suppositories • tinctures • pills • ointments • spirits • tablets • lozenges • suspensions • ampules • solutions
2.5.8	Identify those pharmaceutical preparations used internally.

Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.5.9	Identify and state the given dosage of prepackaged pharmaceutical preparations.
2.5.10	State the purpose and use(s) of the *Physician's Desk Reference* (PDR).
2.5.11	Identify local and general or systemic effects of drugs.
2.5.12	Describe the factors that influence the actions of a drug on an individual patient, including: • age of patient • body mass • physical condition • drug dosage • drug interactions
2.5.13	Compare the relative speed of absorption of the following routes of drug administration: oral, intravenous, topical, rectal, intramuscular, sublingual, subcutaneous, endotracheal and intradermal.
2.5.14	Name the five routes by which drugs are absorbed.
2.5.15	Define the following terms: • depression • cumulative effect • physiological • tolerance • therapeutic • synergism • untoward • potentiation • initiation • additive • antagonism • habituation • idiosyncrasy • hypersensitivity • indication • contraindication • side effect
2.5.16	From the terms above, select the term that best describes any specific drug.

Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.5.17	Identify and discuss the following nine items as they relate to the administration of any drug: • dose • dilution • action • contraindications • antidotes • indications and use • precautions • incompatibility • side effects
2.5.18	List the two systems of weights and measures being used today.
2.5.19	Determine which weights and measures belong to the apothecary system or to the metric system.
2.5.20	State three advantages of the metric system.
2.5.21	Demonstrate the conversion of various measures between milligrams to grams.
2.5.22	Given a drug dose in milligrams and its specific concentration in tablet form, calculate how many tablets should be given to a patient.
2.5.23	Demonstrate the conversion of various measures between milliliters to liters.
2.5.24	Given a desired dose and concentration of a drug, calculate the volume of a drug to be administered.
2.5.25	Demonstrate the conversion of various measures between pounds to kilograms.
2.5.26	Given the weight of a patient in pounds and a drug dose in milligrams per kilogram, calculate the appropriate drug dosage for the patient.
2.5.27	State the number of macro and micro drops/cc.
2.5.28	State the formula used to determine the flow rate.
2.5.29	Given a rate of infusion for an IV fluid, determine the number of micro and/or macro drips per minute.
2.5.30	State four routes of drug administration.
2.5.31	Name at least eight safety considerations to remember when administering drugs.

Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.5.32	Identify and describe local guidelines for drug administration.
2.5.33	Describe the safe handling and disposal of sharps in the prehospital setting.
2.5.34	Describe the different types and sizes of syringes and needles and the advantages and disadvantages of each.
2.5.35	Define "parenteral drugs."
2.5.36	Identify, describe and demonstrate proficency utilizing the following routes of drug administration: ● Intradermal ● Subcutaneous ● Intramuscular ● Intravenous ● Intraosseous ● Small Volume Nebulizer ● Rectal (valium only)
2.5.37	Describe the proper approach and explanation that should be given to a patient prior to the administration of a medication.
2.5.38	State what information should be elicited from a patient prior to administration of a medication.
2.5.39	State why ampule tops should be tapped before they are used.
2.5.40	State why air must be taken into the syringe when drawing a solution from a vial.
2.5.41	State why the IV tube is pinched off above the injection site when performing an IV push.
2.5.42	State the advantages and/or disadvantages of: ● IV injections ● Subcutaneous injections ● Intramuscular injections
2.5.43	Explain why the skin is pinched when administering a subcutaneous injection.
2.5.44	Explain why the skin is stretched when administering an intramuscular injection.

Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.5.45	Withdraw a given amount of solution, given the dose, from an ampule or vial.
2.5.46	Assemble a prepackaged syringe.
2.5.47	Perform an IV push and inject a specified dose of medication into an already established IV line.
2.5.48	Perform subcutaneous and intramuscular injections at any one of several locations.
2.5.49	Explain the five rights of drug administration.
2.5.50	Describe the technique for administering drugs via an endotracheal tube.

Division 2

Preparatory

Section 6

Advanced Pharmacology

Division 2 — Preparatory

Section 6 — Advanced Pharmacology

Lecturer qualifications: The lecturer for this section shall be a physician, nurse, paramedic, or Pharm.D.

Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.6.1	Define the following terms: ● Pharmacology ● Pharmacokinetics ● Pharmacodynamics
2.6.2	List factors that slow drug absorption and factors that enhance it.
2.6.3	Define "blood brain barrier."
2.6.4	Explain how cardiovascular function affects the distribution of a drug.
2.6.5	Identify factors that influence the rate and efficiency of drug metabolism
2.6.6	List the primary organs for drug excretion.
2.6.7	Identify factors that determine where and how a drug will act in the body.
2.6.8	Describe characteristics of pediatric and geriatric patients that influence drug distribution, metabolism and excretion.
2.6.9	Describe the functions of the sympathetic and parasympathetic divisions of the autonomic nervous system.
2.6.10	Explain how autonomic nerve impulses are transmitted.
2.6.11	Define cholinergic and adrenergic receptors.

Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
2.6.12	Discuss the effects of alpha adrenergic and beta adrenergic stimulation on vital organs.
2.6.13	Describe the mechanism by which autonomic drugs exert their actions.
2.6.14	Describe the action, prehospital indications, side effects, adult and pediatric dosages, contraindications, special considerations and precautions for each drug carried in the Paramedic (IEMT) drug box.

Division 3

Trauma

Section 1

Trauma

Division 3 Trauma

Section 1 Trauma

Lecturer qualifications: The lecturer for this section shall be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director, currently certified as a, BTLS-A, ATLS, and/or PHTLS instructor.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
3.1.1	Describe the general needs of the trauma patient and the steps within each area of need which must be addressed.
3.1.2	Describe the areas in which trauma care is rendered and a general overview of care in each of those areas.
3.1.3	Define the priorities of trauma management.
3.1.4	Describe triage with multiple patients.
3.1.5	Describe the steps in the general assessment of patient care.
3.1.6	Describe the steps in the primary survey of patient care.
3.1.7	Describe the anatomy of the airway.
3.1.8	Describe the anatomy of the cervical spine.
3.1.9	Describe the physiology of the airway.
3.1.10	Describe pathophysiological problems that occur in the airway.
3.1.11	Describe the management of the airway in relationship to the individual pathophysiological problems that occur.
3.1.12	Describe the relationship of the cervical spine to airway management.
3.1.13	Describe how the airway is managed protecting the cervical spine.
3.1.14	Describe the construction of the various devices used in airway management.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
3.1.15	Describe the advantages and disadvantages of each.
3.1.16	Identify those steps in airway management that are hospital techniques and not prehospital techniques and why.
3.1.17	Describe the anatomy of the chest.
3.1.18	Describe the physiology of pulmonary expansion.
3.1.19	Describe those pathophysiological conditions that limit ventilation and pulmonary expansion.
3.1.20	Describe the assessment of ventilation and the various pathological conditions that can compromise this ventilation.
3.1.21	Describe the management of compromised ventilation.
3.1.22	Describe the management of conditions that compromise pulmonary expansion.
3.1.23	Describe the advantages and disadvantages of the various ventilation techniques and devices.
3.1.24	Describe a pneumothorax and its three variations.
3.1.25	Describe the management of circulatory and hemorrhage problems.
3.1.26	Describe the anatomy of the heart and cardiovascular system.
3.1.27	Describe the physiology and pathophysiology of shock.
3.1.28	Describe the assessment of circulatory sufficiency.
3.1.29	Describe those components of assessment which are most easily obtained in the primary survey and their individual significance.
3.1.30	Describe the management of perfusion problems.
3.1.31	Describe the pathophysiology of shock and its management in relationship to the Fick Principle.
3.1.32	Identify the methods of hemorrhage control that should be used in the prehospital setting and those that should not and why.
3.1.33	Describe the mini-neurological exam.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
3.1.34	Describe the mini-neurological exam in relationship to perfusion and cerebral injury and the management steps that must be taken to solve these problems.
3.1.35	Describe how a patient is exposed for examination.
3.1.36	Describe when a patient should and should not be exposed for such assessment.
3.1.37	Describe how assessment can be completed with only a partially exposed patient.
3.1.38	Describe resuscitation of the trauma patient based upon the Fick Principle.
3.1.39	Describe the various steps in the assessment of the effectiveness of resuscitation techniques.
3.1.40	Describe the components of a complete prehospital history and the significance of each.
3.1.41	Describe the components of the history that are important for prehospital and those that are not.
3.1.42	Describe the general overview of a physical examination.
3.1.43	Describe the physical examination as it relates to the head.
3.1.44	Describe the anatomy of the head and face.
3.1.45	Describe those pathophysiologic conditions that require prehospital assessment and management.
3.1.46	Describe the assessment of the head.
3.1.47	Describe the management of the pathophysiologic conditions of the head.
3.1.48	Describe the specific head injuries that compromise the airway and why.
3.1.49	Describe specific head injuries that produce hemorrhage and how they are managed.
3.1.50	Describe the physical examination of the neck.
3.1.52	Describe the anatomy of the neck.
3.1.53	Describe the pathophysiology of neck injuries.
3.1.54	Describe the assessment of the neck.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
3.1.55	Describe the management of neck injuries.
3.1.56	Describe the general examination of the thoracic cavity.
3.1.57	Describe the anatomy of the thoracic cavity.
3.1.58	Describe the physiology of the thoracic cavity including ventilation, respiration, and Acid-Base Balance.
3.1.59	Describe the assessment of the thoracic cavity.
3.1.60	Describe the stethoscope, how it works and its uses in the physical examination.
3.1.61	Describe how the physical examination of the thoracic cavity is conducted in steps, and the various pathophysiologic processes that each step can identify.
3.1.62	Describe the prehospital management of a pneumothorax, a tension pneumothorax, and an open pneumothorax.
3.1.63	Describe the pathophysiology of each of the above.
3.1.64	Describe the management of a flail chest.
3.1.65	Describe the pathophysiology of a flail chest.
3.1.66	Describe a hemothorax and the prehospital significance of such a condition.
3.1.67	Describe a pulmonary contusion and its prehospital significance and management.
3.1.68	Describe cardiac tamponade based on anatomy, physiology, pathophysiology, and management.
3.1.69	Describe the need/non-need of prehospital management of a cardiac tamponade.
3.1.70	Describe cardiac contusion, including anatomy, pathophysiology, methods of assessment, significance of dysrythmias that occur, and its management.
3.1.71	Describe the abdominal examination and the significance of the abdominal pathology in the prehospital phase.
3.1.72	Describe the anatomy of the abdomen.
3.1.73	Describe the physiology of the abdomen.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
3.1.74	Describe the pathophysiologic processes of the abdomen that affect prehospital care.
3.1.75	Describe the assessment of the abdomen.
3.1.76	Describe the management of these pathological processes.
3.1.77	Describe the management of extremity injuries, both upper and lower.
3.1.78	Describe the anatomy of the upper and lower extremities.
3.1.79	Describe the pathophysiological processes that affect the upper and lower extremities.
3.1.80	Describe the management of fractures.
3.1.81	Describe the management of dislocations, explaining which should be reduced prehospital, which should not and why.
3.1.82	Describe the management for lacerations.
3.1.83	Describe the various types of splints which can be used for the immobilization of fractures, and list the advantages and disadvantages for each.
3.1.84	Describe in detail the short backboard, the various types on the market, and the principles of immobilization of the cervical spine.
3.1.85	Describe the management of pelvic fractures.
3.1.86	Describe the significant pathophysiology of pelvic fractures.
3.1.87	Describe the anatomy of the spine including the cervical, thoracic, lumbar, and coccygeal regions.
3.1.88	Describe the anatomical differences in the various regions.
3.1.89	Describe the construction of the vertebrae in the various regions.
3.1.90	Describe the pathophysiologic processes that affect the spine including both the bony structures and the neurological structures.
3.1.91	Describe the assessment of the spine including the differences in the bony assessment and neurological assessment.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
3.1.92	Describe continued monitoring of a patient.
3.1.93	Describe the various scores for assessing the severity of trauma injuries that have prehospital significance and those that do not.
3.1.94	Describe how a patient is monitored.
3.1.95	Describe transportation of a patient to a hospital.
3.1.96	Describe communication with a hospital.
3.1.97	Describe the procedure for the advanced level EMT to physician communication, the steps and the important information included in each step and the priority in each of the steps.
3.1.98	Perform all of the following skills in at least five (5) simulated trauma patient scenarios: Mouth-to-mask ventilation. Mouth-to-mouth ventilation. Bag-valve mask ventilation. Demand-valve ventilation. Oral airway insertion. Nasal airway insertion. Endotracheal tube insertion. Esophageal obturator airway insertion. PTL airway insertion. Assessment of adequate ventilation. Management of an open pneumothorax. Decompression of a tension pneumothorax. Insertion of IV lines. Application of PASG. Assessment of reestablishment of perfusion. A mini-neurological examination .

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
3.1.99	Perform the following skills in a simulated trauma patient scenario: Exposure of a patient for physical exam. Physical examination of the head. Physical examination of the neck. Physical examination of the thorax. Physical examination of the abdomen. Physical examination of the upper extremities. Physical examination of the lower extremities. Physical examination of the pelvis. Neurological examination. Application of the short backboard. Application of a long backboard. Splinting techniques for the upper extremities. Splinting techniques for the lower extremities. Immobilization of the cervical spine. Rapid extrication. Application of a cervical collar. Reduction of a knee dislocation. Reduction of a shoulder dislocation. Reduction of a finger dislocation. Reduction of a fracture/dislocation of the ankle.

Division 3

Trauma

Section 2

Burns

Division 3 — Trauma

Section 2 — Burns

Lecturer qualifications: The lecturer for this section shall be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director, currently certified as a, BTLS-A, ATLS, and/or PHTLS instructor.

Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
3.2.1	Describe the structure of the integumentary system.
3.2.2	Describe the function of the integumentary system.
3.2.3	Define the movement of body fluids between plasma and interstitial compartments.
3.2.4	Define the movement of body fluids between interstitial and intercellular compartments.
3.2.5	Describe the pathophysiology of burn shock.
3.2.6	State the four major sources of burn injury.
3.2.7	Describe the four classifications of burn injury.
3.2.8	Describe the three categories of burn injury by severity.
3.2.9	List the factors altering severity of burn injury.
3.2.10	Given a diagram, calculate the percentages of body surface areas burned.
3.2.11	List and describe one of two fluid resuscitation formulas.
3.2.12	Describe assessment and management of burn injury by source.
3.2.13	Describe management of burn injury when associated with other injuries or when medical conditions are present.
3.2.14	List factors contributing to inhalation injury.

Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
3.2.15	Describe assessment and management of inhalation injury.

Division 4

Medical

Section 1

Respiratory Section

Division 4 — Medical

Section 1 — Respiratory Section

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.1.1	Identify and describe the function of the structures of the upper respiratory tract.
4.1.2	Identify and describe the function of the structures of the lower respiratory tract.
4.1.3	Define the terms respiration and pulmonary ventilation.
4.1.4	Describe the physiology of the respiratory cycle.
4.1.5	Describe the pulmonary circulation.
4.1.6	Describe the process of gas exchange in the lungs.
4.1.7	Identify the normal partial pressures of oxygen and carbon dioxide in: a. The alveoli b. Venous blood c. Arterial blood
4.1.8	Identify the systems involved in the process of regulation of respiration.
4.1.9	Describe the difference between the normal respiratory drive and the respiratory drive of the patient with chronic obstructive pulmonary disease.
4.1.10	Define and describe the following modified forms of respiration. a. Cough b. Sneeze c. Hiccough d. Sigh e. Grunting
4.1.11	List normal respiratory rates for adults, infants and children.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.1.12	Identify factors that affect respiratory rates.
4.1.13	Define the following terms: a. Dead space b. Tidal volume c. Minute volume d. Vital capacity
4.1.14	Identify factors that alter carbon dioxide levels in the blood.
4.1.15	Identify factors that alter oxygen levels in the blood.
4.1.16	Define the following terms: a. Hypoxia b. Hypoxemia c. Hypercarbia d. Respiratory failure e. Cyanosis f. Dyspnea g. Tachypnea h. Hyperpnea i. Orthopnea j. Apnea k. Hypoventilation l. Hyperventilation m. Tracheal tugging n. Nasal flaring
4.1.17	Identify the historical factors to be elicited when evaluating the respiratory system.
4.1.18	Identify specific observations and physical findings to be evaluated in the patient with a respiratory complaint.
4.1.19	Describe the techniques of inspection, auscultation, and palpation of the chest.
4.1.20	Define the following terms: a. Snoring respirations b. Stridor c. Wheezing d. Rhonchi e. Rales f. Friction rub
4.1.21	Identify the basic principles of airway management.
4.1.22	Identify the causes of upper airway obstruction, the pathophysiology, assessment and management of each.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.1.23	For the following drugs, identify the pharmacology and actions, the indication, precaution, administration and side effects for the adult and pediatric patient: a. Oxygen b. Epinephrine c. Bronkosol d. Racemic epinephrine e. Aminophylline f. Diphenhydramine
4.1.24	Discuss the pathophysiology, assessment and management of the following: a. Emphysema b. Chronic bronchitis c. Asthma i. Adult ii. Pediatric d. Pneumonia e. Toxic inhalation f. Pulmonary embolism g. Hyperventilation syndrome h. Central nervous system dysfunctions
4.1.25	Demonstrate the technique of direct laryngoscopy.
4.1.26	Demonstrate the upper airway obstruction protocol according to American Heart Association standards.
4.1.27	Demonstrate the techniques of inspection, auscultation, and palpation in examining the thorax.
4.1.28	Identify the following abnormal lung sounds: a. Stridor b. Wheezes c. Rales d. Rhonchi
4.1.29	Demonstrate the ability to obtain an appropriate history when evaluating patients with respiratory complaints.
4.1.30	Demonstrate the ability to perform an appropriate assessment when evaluating patients with respiratory complaints.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.1.31	Demonstrate the ability to appropriately administer the following drugs for the adult and pediatric patient: a. Oxygen b. Epinephrine c. Bronkosol d. Racemic epinephrine e. Aminophylline f. Diphenhydramine g. Ventolin

Division 4

Medical

Section 2

Cardiovascular Section

Division 4 — Medical

Section 2 — Cardiovascular

Lecturer qualifications: The lecturer for this section be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director, currently certified as an advanced cardiac life support instructor.

P= Present

INTER	PARA	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	P	4.2.1	Describe the size, shape, and location/orientation (in regards to other body structures) of the heart muscle.
P	P	4.2.2	Identify the location of the following structures on a diagram of the normal heart. • Pericardium • Myocardium • Epicardium • Right and left atria • Interatrial septum • Right and left ventricles • Intraventricular septum • Superior and inferior vena cava • Aorta • Pulmonary vessels • Coronary arteries • Tricuspid valve • Mitral valve • Aortic valve • Pulmonic valve • Papillary muscles • Chordae tendinea
P	P	4.2.3	Describe the function of each structure listed in Objective 4.2.2.
P	P	4.2.4	Describe the distribution of the coronary arteries and the parts of the heart supplied by each artery.
P	P	4.2.5	Differentiate the structural and functional aspects of arterial and venous blood vessels.
P	P	4.2.6	Name and describe the location of 5 major arteries and 5 major veins.

INTER	PARA	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	P	4.2.7	Describe the structure and function of capillaries.
P	P	4.2.8	Describe the course of blood flow through the normal heart and lungs.
P	P	4.2.9	Describe the cardiac cycle in terms of mechanical function and relative position of heart valve.
P	P	4.2.10	Describe the effects of increased heart rate on the contraction and relaxation phases of the cardiac cycle.
P	P	4.2.11	Describe the functional differences between the right heart and left heart pumps.
P	P	4.2.12	Define the following terms that refer to cardiac physiology: • Stroke volume • Afterload • Starling's law • Cardiac output • Preload • Blood pressure
P	P	4.2.13	Describe nerve innervation of the heart.
P	P	4.2.14	Name the chemical mediator of the parasympathetic nervous system and describe its primary effect on the heart.
P	P	4.2.15	Name the chemical mediator of the sympathetic nervous system and describe the mechanical, cardiac, and peripheral effects of: • Alpha receptor stimulation • Beta receptor stimulation
P	P	4.2.16	Name major electrolytes that affect cardiac function.
	P	4.2.17	Describe the electrical properties of the heart.
	P	4.2.18	Describe the normal sequence of electrical conduction through the heart and state the purpose of this conduction system.

INTER	PARA	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
	P	4.2.19	Describe the location and function of the following structures of the electrical conduction system: ● SA Node ● Bundle of His ● Internodal and interatrial tracts ● Bundle branches ● AV Node ● Purkinje fibers
	P	4.2.20	Define cardiac depolarization and repolarization and describe the major electrolyte changes that occur in each process.
	P	4.2.21	Name three areas of the heart possessing pacemaking capabilities and state the intrinsic (inherent) rates of each area.
	P	4.2.22	Describe an ECG.
	P	4.2.23	Define the following terms as they relate to the electrical activity of the heart: ● Isoelectric line ● P wave ● QRS complex ● T wave ● PR interval ● ST segment ● Absolute and relative refractory period
	P	4.2.24	Describe how electrical activity of the heart is affected by: ● Sympathetic stimulation ● Alpha receptors ● Beta receptors ● Parasympathetic stimulation
P	P	4.2.25	Name the common chief complaints of cardiac patients.
P	P	4.2.26	Describe why the following occur in patients with cardiac problems: ● Chest pain or discomfort ● Shoulder, arm, neck, or jaw pain/discomfort ● Dyspnea ● Syncope ● Palpitations/abnormal heart beat

INTER	PARA	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	P	4.2.27	Describe those questions to be asked during history taking for each of the common cardiac chief complaints.
P	P	4.2.28	Describe the four most pertinent aspects of the past medical history in a patient with a suspected cardiac problem.
P	P	4.2.29	Identify, in a list of common prescription drugs, those that a patient may be taking for cardiovascular problems.
P	P	4.2.30	Describe those aspects of the physical examination that should be given special attention in the patient with suspected cardiac problems.
P	P	4.2.31	Describe the significance of the following physical exam findings in a cardiac patient: • Altered level of consciousness • Peripheral edema • Cyanosis • Poor capillary refill • Cool, clammy skin • Jugular vein distension • Pulmonary rales/wheezes • Carotid artery bruit • Pulse irregularity
P	P	4.2.32	Describe the pathophysiology of atherosclerosis.
P	P	4.2.33	List the three major modifiable risk factors for atherosclerosis.
P	P	4.2.34	Describe the common characteristics of the pain/discomfort that occurs in angina pectoris and acute myocardial infarction.

INTER	PARA	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	P	4.2.35	Describe the pathophysiology, signs and symptoms, and prehospital management of each of the following conditions: ● Angina pectoris ● Acute myocardial infarction ● Right ventricular failure ● Left ventricular failure/pulmonary edema ● Cardiogenic shock ● Cardiac arrest ● Abdominal aortic aneurysm ● Dissecting aortic aneurysm ● Acute arterial occlusion ● Acute pulmonary embolism ● Venous thrombophlebitis ● Ruptured varicose veins ● Chronic peripheral arterial insufficiency ● Malignant hypertension
P	P	4.2.36	Describe 3 causes of cardiac arrest other than ASHD and describe how medical management of these situations differs.
P	P	4.2.37	Describe and contrast the etiology of cardiac arrest in infants and children from that of adult patients.

INTER	PARA	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
	P	4.2.38	Describe the action, pre-hospital indications, side effects, adult and pediatric dosages, contraindications, special considerations, and precautions for each of the following drugs: 1. Atropine sulfate 2. Lidocaine hydrochloride 3. Bretylim tosylate 4. Verapamil 5. Epinephrine 6. Norepinephrine 7. Isoproterenol 8. Dopamine 9. Sodium bicarbonate 10. Calcium chloride 11. Oxygen 12. Nitrous oxide 13. Nitroglycerin 14. Morphine sulfate 15. Furosemide 16. Aminophylline 17. Diazepam
	P	4.2.39	Describe the action, uses, and side effects of the following drugs that are not used in the field but commonly taken by cardiac patients: 1. Digitalis 2. Propranolol
	P	4.2.40	Describe the basic concept of ECG monitoring.
	P	4.2.41	Define a monitoring lead and describe how it differs from a 12-lead ECG.
	P	4.2.42	Describe what type of information can and cannot be obtained from a monitoring lead.
	P	4.2.43	Describe information obtained from the vertical and horizontal axes of the ECG graph paper.

INTER	PARA	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
	P	4.2.44	State the numerical values assigned to each small and each large box on the ECG graph paper for each axis.
	P	4.2.45	Define ECG artifact and name the causes.
	P	4.2.46	State the steps in the analysis format of ECG rhythm strips.
	P	4.2.47	Describe the normal parameters for the following aspects of an ECG rhythm strip: ● Rate ● Rhythm ● P waves ● PR interval ● QRS complex duration
	P	4.2.48	Describe two common methods for calculating heart rate on an ECG rhythm strip and the indications for using each method.
	P	4.2.49	Name 8 causes of dysrhythmia.
	P	4.2.50	Describe the mechanisms of electrical impulses formation.

INTER	PARA	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, pxactice, and evaluation with remediation to the student, to ensure his/her ability to:
	P	4.2.51	Describe the etiology, Lead II ECG characteristics, clinical significance, and emergency treatment of each of the following dysrhythmia: • Sinus bradycardia • Sinus tachycardia • Sinus arrhythmia • Sinus arrest • Wandering pacemaker • Premature atrial complexes • Atrial tachycardia (PSVT) • Atrial flutter • Atrial fibrillation • Premature junctional complexes • Junctional escape complexes and rhythm • Accelerated junctional rhythm • Paroxysmal junctional tachycardia (PSVT) • Ventricular escape complexes and rhythm • Premature ventricular complexes • Ventricular tachycardia • Ventricular fibrillation • Asystole • Artificial pacemaker rhythm • First degree AV block • Second degree AV block, Type I and Type I • Third degree AV block • Bundle branch block/aberrant ventricular conduction.
	P	4.2.52	Describe the indications for use of rotating tourniquets.
	P	4.2.53	Describe the indications for use of a precordial thump.
	P	4.2.54	Describe the indications for use of synchronized cardioversion.
	P	4.2.55	Describe energy recommendations for defibrillation of adult and pediatric patients.
	P	4.2.56	Describe the indications and complications of intracardiac injections.

INTER	PARA	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	P	4.2.57	Demonstrate the correct procedure for obtaining a history and performing a physical exam for cardiac-related problems.
P	P	4.2.58	Demonstrate assessment techniques and emergency management of patients with any of the conditions listed in Objective 4.2.35.
	P	4.2.59	Demonstrate preparation and proper administration of a prescribed dose of any of the cardiac drugs listed in Objective 4.2.38.
	P	4.2.60	Identify the following on any rhythm strip: ● P waves ● PR intervals ● QRS complexes ● ST segments ● P-P intervals ● T waves ● R-R intervals ● Isoelectric line
	P	4.2.61	Recognize each of the dysrhythmia listed in Objective 4.2.51 on Lead II rhythm strips or ECG monitor.
	P	4.2.62	Demonstrate appropriate clinical assessment and management of a cardiac patient having any of the dysrhythmia listed in Objective 4.2.51.
P	P	4.2.63	Demonstrate on an adult mannequin, the techniques for single and two-person CPR according to American Heart Association standards.
P	P	4.2.64	Demonstrate on an infant mannequin, the technique for infant CPR according to American Heart Association standards.
	P	4.2.65	Demonstrate proper application of ECG chest electrodes and obtain a sample Lead II or MCL1 rhythm strip.
	P	4.2.66	Demonstrate the proper use of the defibrillator paddle electrodes to obtain a sample Lead II rhythm strip.
	P	4.2.67	Demonstrate how to properly assess the cause of poor ECG tracing.
P	P	4.2.68	Demonstrate the proper application of rotating tourniquets.
P	P	4.2.69	Demonstrate the proper technique for administering a precordial thump.

INTER	PARA	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
	P	4.2.70	Demonstrate correct operation of a monitor-defibrillator to perform defibrillation on an adult and infant.
	P	4.2.71	Demonstrate the correct technique for performing synchronized cardioversion.
	P	4.2.72	Demonstrate on a mannequin the proper procedure for patient assessment and performance of carotid massage.
	P	4.2.73	Demonstrate the correct technique for performing non-invasive (external) cardiac pacing.
P	P	4.2.74	Demonstrate proper application and operation of mechanical CPR adjunctive device.
P	P	4.2.75	Discuss automatic/semi-automatic defibrillators and how they integrate with ALS.
P			Complete all objectives of the Semi-Automatic Defibrillation Module of the Basic-EMT special skills curricula.

INTER	PARA	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
	P	4.2.76	Transthoracic external pacing: Describe the purpose of Transcutaneous External Pacing. List and describe the indications for Transcutaneous External Pacing. List and describe the contraindications for Transcutaneous External Pacing. List and describe the special considerations for Transcutaneous External Pacing. Identify the landmarks for the placement of the pacer pads. Demonstrate the correct technique for Transcutaneous External Pacing in a simulated situation. Discuss the role of Medical Control for Transcutaneous External Pacing

Division 4

Medical

Section 3

Endocrine Emergencies

Division 4 — Medical

Section 3 — Endocrine Emergencies

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.3.1	Define hormone.
4.3.2	Discuss hormone production, including function and the single-most factor influencing production.
4.3.3	Discuss the pituitary gland, including: a. Location b. Function i. Anterior pituitary gland ii. Posterior pituitary gland
4.3.4	Discuss the thyroid gland, including: a. Location b. Function c. Parathyroid gland
4.3.5	Discuss the adrenal glands, including: a. Location b. Function i. Adrenal cortex ii. Adrenal medulla
4.3.6	Discuss the pancreas, including: a. Structure b. Location c. Function

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.3.7	Discuss the ovaries, including: a. Location b. Function i. Estrogen ii. Progesterone
4.3.8	Discuss the testes, including: a. Location b. Function
4.3.9	Discuss the function of insulin, including the cycle: a. Absorption of glucose/insulin secretion to glucose b. Insulin secretion c. Glucose metabolism d. Return to homeostasis
4.3.10	List and briefly discuss the two functions of the islets of Langerhans.
4.3.11	Discuss the function of glucogen, including the cycle: a. Lowering blood glucose concentration b. Secretion of glucogen c. Increase of blood glucose concentration d. Return to homeostasis
4.3.12	Define diabetes mellitus.
4.3.13	Discuss juvenile onset of diabetes mellitus.
4.3.14	Discuss adult onset of diabetes mellitus.
4.3.15	Discuss osmotic diuresis in diabetes.
4.3.16	Discuss the mechanism of ketone body formation and ketoacidosis.
4.3.17	Discuss kidney excretion of ketoacids and potassium.
4.3.18	Discuss the pathophysiology of hypoglycemia, including: a. Insulin and the relationship to serum glucose levels b. Epinephrine and glycogen
4.3.19	Discuss the precipitation of hypoglycemia.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.3.20	As related to hypoglycemia, list 8 resulting signs/symptoms.
4.3.21	Describe the compensating mechanism in a hypoglycemic patient.
4.3.22	Describe the onset of hypoglycemia.
4.3.23	Discuss the effects that low insulin levels have on the body.
4.3.24	Discuss the effects that increased glucose levels have on the body.
4.3.25	Discuss the pathophysiology of diabetic ketoacidosis, including: a. Blood sugar level b. Insulin level
4.3.26	Discuss the precipitation of diabetic ketoacidosis.
4.3.27	As related to diabetic ketoacidosis, list 8 signs/symptoms.
4.3.28	As related to the ketoacidotic patient, discuss the body's compensating mechanism.
4.3.29	Discuss the general management of the hypoglycemic patient or hyperglycemic patient who is conscious, including: a. Airway management b. Intravenous therapy c. Drug therapy d. Circulation
4.3.30	Discuss the general management of the hypoglycemic patient who is unconscious, including: a. Airway management b. Blood Glucose Monitoring c. Intravenous therapy d. Drug therapy e. Circulation
4.3.31	Discuss the general management of the ketoacidotic patient who is unconscious, including: a. Airway management b. Blood Glucose Monitoring c. Intravenous therapy d. Drug therapy e. Circulation

Division 4

Medical

Section 4

Nervous System

Division 4 — Medical

Section 4 — Nervous System

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.4.1	Identify the parts of a neuron and describe their function.
4.4.2	Describe the process of impulse transmission for nerve cells.
4.4.3	Describe the types of nerve cells by function.
4.4.4	Identify and describe the protective mechanisms of the brain.
4.4.5	Describe the arterial and venous circulation to the brain.
4.4.6	Locate the following areas of specialization in the brain for: a. Speech b. Vision c. Personality d. Balance and coordination e. Sensory f. Motor
4.4.7	List the parts of the brain.
4.4.8	Identify the functions of the spinal cord.
4.4.9	Describe the protective mechanisms for the spinal cord.
4.4.10	Identify the divisions of the spinal column.
4.4.11	Identify the divisions of the spinal cord.
4.4.12	Identify the location of the brachial plexus and the lumbar-sacral plexus.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.4.13	Identify the divisions of the autonomic nervous system and describe the functions and effects of each.
4.4.14	Identify the historical factors to be elicited when evaluating the nervous system including trauma-related and nontrauma-related problems.
4.4.15	Identify specific observations and physical findings to be evaluated in the patient with a nervous system disorder including: a. Primary survey b. Vital signs c. Neurologic evaluation d. Head to toe survey i. Pupils ii. Extraocular movements iii. Spinal evaluation
4.4.16	Describe the rating system for the Glasgow Coma Scale.
4.4.17	Describe the pathophysiology, assessment and management of the following: a. Coma b. Seizures c. Status epilepticus d. Stroke e. Transient ischemic attacks
4.4.18	For the following drugs, identify the pharmacology and actions, the indications, precautions, administration and side effects, for the adult and pediatric patient. a. Glucose 50% b. Naloxone c. Diazepam
4.4.19	List possible causes of coma.
4.4.20	Differentiate between syncope and seizures.
4.4.21	Describe and differentiate the major types of seizures.
4.4.22	Describe the phases of a generalized seizure.
4.4.23	Demonstrate the ability to obtain an appropriate history when evaluating patients with nervous system disorders.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.4.24	Demonstrate the ability to perform an appropriate assessment when evaluating patients with nervous system disorders.
4.4.25	Demonstrate a complete neurologic examination.
4.4.26	Demonstrate the ability to appropriately evaluate a patient utilizing the Glasgow Coma Scale.
4.4.27	Demonstrate the ability to appropriately administer the following drugs for the adult and pediatric patient. a. Dextrose 50% b. Naloxone c. Diazepam
4.4.28	Demonstrate the ability to appropriately manage a patient with a nervous system disorder.

Division 4

Medical

Section 5

Acute Abdomen

Division 4 — Medical

Section 5 — Acute Abdomen

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.5.1	Describe and discuss the function of the primary gastrointestinal organs, including: a. Mouth b. Pharynx c. Esophagus d. Stomach e. Intestines (large/small) f. Rectum g. Peritoneum.
4.5.2	Describe and discuss the function of the gastrointestinal accessory organs, including: a. Salivary glands b. Teeth c. Liver d. Gallbladder e. Pancreas f. Veriform appendix.
4.5.3	Name the organs located: a. Right upper quadrant b. Left upper quadrant c. Right lower quadrant d. Left lower quadrant.
4.5.4	Describe the borders of the abdominal cavity.
4.5.5	Name the two major blood vessels in the abdomen.
4.5.6	List solid organs in the abdominal cavity and retroperitoneal space.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.5.7	List hollow organs in the abdominal cavity and retroperitoneal space.
4.5.8	Discuss the following non-hemorrhagic causes of acute abdominal pain. a. Local inflammation: edema, local obstruction. b. Peritoneal inflammation: edema, pain secondary to edema. c. General inflammation: edema, significant fluid loss.
4.5.9	List disease processes as related to nonhemorrhagic abdominal pain.
4.5.10	Define: a. Hematemesis b. Melena.
4.5.11	List hemorrhagic causes of acute abdominal pain.
4.5.12	Discuss the specific questions you would ask to obtain a history in a patient with abdominal pain.
4.5.13	Discuss signs and symptoms of: a. Local inflammation b. Peritoneal inflammation c. General inflammation.
4.5.14	Describe signs and symptoms of: a. Upper gastrointestinal bleed b. Lower gastrointestinal bleed.
4.5.15	Discuss management of the patient with acute abdominal pain.
4.5.16	Discuss general causes of genitourinary disorders.
4.5.17	Discuss pathophysiology, including causes and complications of: a. Acute renal failure b. Chronic renal failure c. Kidney stones d. Urinary tract infection.
4.5.18	Discuss pathophysiology of urinary assessment, including signs and symptoms of renal failure.
4.5.19	Describe management of renal failure.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.5.20	Discuss assessment, including signs and symptoms of a kidney stone.
4.5.21	Describe management of the patient with a kidney stone.
4.5.22	Discuss assessment, including signs and symptoms related to a urinary tract infection.
4.5.23	Describe management of the patient with urinary tract infection.
4.5.24	Discuss types of dialysis.
4.5.25	Discuss complications related to dialysis.
4.5.26	Discuss the assessment and management of the dialysis patient.
4.5.27	Define: a. Testes b. Prostate c. Penile urethra d. Epididymis e. Vas deferens
4.5.28	Discuss signs and symptoms of: a. Epididymitis b. Torsion of testes
4.5.29	Discuss the assessment and management of the male patient.
4.5.30	Demonstrate the ability to take a relevant history from the patient with: a. Acute abdomen b. Genitourinary disorder c. Dialysis related disorders d. Reproductive system disorders
4.5.31	Demonstrate the ability to perform a complete physical assessment on the patient with: a. Acute abdomen b. Genitourinary disorder c. Dialysis related disorders d. Reproductive system disorders

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.5.32	Demonstrate competency in effectively treating the patient with: (including drug therapy) a. Specific acute abdominal emergency b. Specific genitourinary disorders c. Specific dialysis related disorders d. Specific reproductive system disorders.

Division 4

Medical

Section 6

Anaphylaxis

Division 4 — Medical

Section 6 — Anaphylaxis

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.6.1	Discuss antigens, including: a. Definition b. Examples c. Four ways antigens are introduced.
4.6.2	Define antibody and discuss production.
4.6.3	Define anaphylaxis.
4.6.4	Describe the pathophysiology of anaphylaxis.
4.6.5	Discuss effects that anaphylaxis may have on the following body systems: a. Respiratory b. Cardiovascular c. Gastrointestinal tract d. Central nervous e. Skin
4.6.6	In a patient with anaphylaxis, identify signs and symptoms as related to: a. Respiratory system b. Cardiovascular system c. Gastrointestinal system d. Nervous system e. Skin
4.6.7	Describe the assessment and management of anaphylaxis.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.6.8	Describe the pharmacology/actions; indications; precautions; administration (adult and pediatric); side effects/special notes for the following drugs: a. Oxygen b. Epinephrine: 1:1000; 1:10,000 c. Diphenhydramine (Benadryl) d. Aminophylline.
4.6.9	Demonstrate the ability to take a relevant history from the patient with anaphylaxis.
4.6.10	Demonstrate competency in effective assessment and management of the patient with anaphylaxis, including drug therapy.

Division 4

Medical

Section 7

Toxicology, Alcoholism, and Drug Abuse

Division 4 — Medical

Section 7 — Toxicology, Alcoholism, Drug Abuse

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.7.1	Discuss the relative importance of toxicologic emergencies in prehospital care.
4.7.2	Describe the routes of entry of toxic substances into the body.
4.7.3	Discuss the role of Poison Control Centers in the EMS system and in the management of patients with toxicological emergencies.
4.7.4	Describe the aspects of the patient's history that are relevant in the management of a patient with ingested poison.
4.7.5	Describe the general principles of management of a patient with ingested poison.
4.7.6	Discuss the factors affecting the decision to induce vomiting in a patient with ingested poison.
4.7.7	Describe the signs, symptoms and management of the following specific cases of ingested poisons: a. Strong acids or alkalies b. Hydrocarbon products c. Methyl alcohol or ethylene glycol d. Cyanide e. Food poisoning f. Poisonous plants
4.7.8	Describe the general principles of management of a patient with inhaled poison.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.7.9	Describe the signs, symptoms and management of the following specific cases of inhaled poisons: a. Carbon monoxide b. Freon c. Ammonia d. Chlorinated hydrocarbons e. Methyl chloride
4.7.10	Describe the general principles of management of a patient with injected poison.
4.7.11	Describe the signs, symptoms and management of the following specific cases of injected poison: a. Bees, hornets, wasps or yellow jackets b. Brown recluse spider c. Black widow spider d. Scorpion e. Rattlesnakes, copperhead or cotton-mouth water moccasin. f. Coral snake g. Marine animals
4.7.12	Describe the special consideration when dealing with an Africanized Honeybee attack.
4.7.13	Describe the general principles of management of a patient with a surface absorbed poison.
4.7.14	Describe the signs, symptoms and management of the following specific cases of surface absorbed poison: a. Organophosphate chemicals b. Cyanide
4.7.15	Describe the general principles of management of a patient with an overdose.
4.7.16	Describe the signs, symptoms and management of the following specific cases of overdose: a. Narcotics b. Sedatives/depressants c. Aspirin d. Acetaminophen.
4.7.17	Discuss the incidence of drug abuse in the U.S.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.7.18	Define the following terms: a. Substance or drug abuse b. Substance or drug dependence c. Tolerance d. Withdrawal e. Addiction.
4.7.19	List the most commonly abused drugs (both by chemical name and "street names") and describe their physiological and psychological effects.
4.7.20	Describe the management of emergencies stemming from the use of the following: a. Hallucinogens (LSD, mescaline, DMT, psilocybin) b. Phencyclidine (PCP) c. Cocaine d. Cannabis (marijuana) e. Amphetamine
4.7.21	Discuss the incidence of alcoholism in the U.S.
4.7.22	Discuss the signs, symptoms and management of acute alcohol overdose.
4.7.23	Discuss the signs and symptoms of chronic alcohol use.
4.7.24	Discuss the signs, symptoms and management of alcoholic withdrawal (delirium tremens or "DT's").
4.7.25	Demonstrate the application of a constricting band.
4.7.26	Demonstrate the procedures for incising a snake bite wound.

Division 4

Medical

Section 8

Infectious Diseases

Division 4 — Medical

Section 8 — Infectious Diseases

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.8.1	Define: a. Virus. b. Bacteria. c. Fungus.
4.8.2	Discuss the body's immune system.
4.8.3	Define: a. Antigen. b. Antibody. c. Antigenic determinants. d. Clone cells. e. Leukocyte.
4.8.4	Discuss the major components of the immune system.
4.8.5	Define lymph.
4.8.6	Define interstitial fluid.
4.8.7	Discuss composition of lymph and interstitial fluid.
4.8.8	Discuss the lymphatic system.
4.8.9	Discuss lymph circulation.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.8.10	Discuss the function of: a. Lymph b. Antibody c. Thymus d. Spleen.
4.8.11	Discuss the formation and types of lymphocytes.
4.8.12	Discuss the development, activation and function of B cells.
4.8.13	Discuss the development, activation and function of T cells.
4.8.14	Identify and discuss the location of lymphocytes.
4.8.15	Describe the structure and types of antibodies.
4.8.16	Discuss gammaglobulinemia.
4.8.17	Define autoimmune diseases.
4.8.18	Define infectious disease and the general cause.
4.8.19	List 3 examples of infectious diseases and the general cause.
4.8.20	Discuss how infectious diseases are transmitted.
4.8.21	Define communicable disease.
4.8.22	Give an example of a highly communicable disease caused by a virus.
4.8.23	Give an example of a communicable disease caused by bacteria.
4.8.24	Give an example of a communicable disease caused by fungi.
4.8.25	Discuss how stress may be related and affect disease.
4.8.26	Refer also to anatomy and physiology of specific body systems, which are affected by specific diseases.
4.8.27	Identify the pertinent history-related questions to be asked when evaluating the patient with an infectious disease.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.8.28	Identify signs and symptoms to be evaluated in a patient with an infectious disease, including: a. Primary survey, including level of consciousness b. Vital signs c. Secondary survey (head-to-toe survey) d. Neurological evaluation.
4.8.29	Define tuberculosis.
4.8.30	Discuss the pathophysiology of tuberculosis, including: a. Acute generalized form b. Chronic localized form.
4.8.31	Discuss the body systems commonly affected by tuberculosis.
4.8.32	Discuss signs and symptoms related to the patient with tuberculosis.
4.8.33	Discuss assessment and management of the patient with tuberculosis.
4.8.34	Discuss EMT safety as related to handling the patient with tuberculosis.
4.8.35	Define hepatitis.
4.8.36	Discuss the pathophysiology of hepatitis.
4.8.37	Discuss the body systems commonly affected by hepatitis.
4.8.38	Discuss symptoms related to the patient with: a. Hepatitis acute anicteric b. Hepatitis cholangiolitic c. Hepatitis fulminant d. Infectious hepatitis (include: how transmitted) e. Serum hepatitis (include: how transmitted) f. Toxic hepatitis g. Viral hepatitis 1. Type A 2. Type B
4.8.39	Discuss assessment and management of the patient with hepatitis.
4.8.40	Discuss EMT safety as related to handling the patient with hepatitis.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.8.41	Define meningitis.
4.8.42	Discuss the causes of meningitis.
4.8.43	Discuss the pathophysiology of meningitis.
4.8.44	Discuss the body systems commonly affected by meningitis.
4.8.45	Discuss signs and symptoms related to the patient with meningitis
4.8.46	Briefly discuss the following: a. Acute meningitis b. Cerebral meningitis c. Cerebrospinal meningitis d. Pneumococcal meningitis e. Spinal meningitis f. Traumatic meningitis g. Tuberculous meningitis
4.8.47	Discuss assessment and management of the patient with meningitis.
4.8.48	Discuss EMT safety as related to handling the patient with meningitis.
4.8.49	Define syphilis.
4.8.50	Discuss the types of syphilis.
4.8.51	Discuss the pathophysiology of syphilis.
4.8.52	Discuss the body systems commonly affected by syphilis.
4.8.53	Discuss the signs and symptoms related to the patient with syphilis.
4.8.54	Define gonorrhea.
4.8.55	Discuss the pathophysiology of gonorrhea.
4.8.56	Discuss the body systems commonly affected by gonorrhea.
4.8.57	Discuss the signs and symptoms related to the patient with gonorrhea.
4.8.58	List two types of herpes simplex

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.8.59	Discuss the pathophysiology of herpes simplex type 2.
4.8.60	Discuss the body systems commonly affected and incubation period of herpes simplex type 2.
4.8.61	Discuss the signs and symptoms related to the patient with herpes simplex type 2.
4.8.62	Define Acquired Immune Deficiency Syndrome (AIDS).
4.8.63	Discuss the pathophysiology of AIDS.
4.8.64	Discuss the body systems commonly affected and incubation period of AIDS.
4.8.65	Discuss the signs and symptoms related to the patient with AIDS.
4.8.66	Discuss assessment and management of the patient with a sexually transmitted disease.
4.8.67	Discuss EMT safety as related to handling the patient with a sexually transmitted disease.
4.8.68	Define and discuss the pathophysiology of scabies.
4.8.69	Define and discuss the pathophysiology of lice.
4.8.70	Discuss the body systems commonly affected by scabies/lice.
4.8.71	Discuss the signs and symptoms related to the patient with scabies/ lice.
4.8.72	Discuss assessment and management of the patient with scabies/lice.
4.8.73	Discuss EMT safety as related to handling the patient with scabies/ lice.
4.8.74	Define measles.
4.8.75	Discuss the pathophysiology of measles.
4.8.76	Discuss the signs and symptoms related to the patient with measles.
4.8.77	Define mumps.
4.8.78	Discuss the pathophysiology of mumps.
4.8.79	Discuss the signs and symptoms related to the patient with mumps.
4.8.80	Define chickenpox.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.8.81	Discuss the pathophysiology of chickenpox.
4.8.82	Discuss the signs and symptoms related to the patient with chickenpox.
4.8.83	Discuss the assessment and management of the patient with a childhood disease.
4.8.84	Discuss EMT safety as related to handling the patient with a childhood disease.
4.8.85	Discuss follow-up after exposure: a. Notification procedures by hospital b. Notification procedures by EMT
4.8.86	Discuss EMT personnel hygiene.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.8.87	Discuss vehicle cleaning procedures.
4.8.88	Demonstrate the ability to take a history from the patient with an infectious disease.
4.8.89	Demonstrate the ability to perform a complete physical assessment on the patient with an infectious disease.

Division 4

Medical

Section 9

Environmental Injuries

Division 4 — Medical

Section 9 — Environmental Injuries

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.9.1	Define steady-state metabolism and identify the oral and rectal temperatures associated with a metabolic steady state.
4.9.2	List the two terms associated with bodily temperature extremes.
4.9.3	List and define the function of two structures in the body's primary thermoregulatory mechanism.
4.9.4	List two mechanisms of thermal generation within the body and the basic mechanism associated with each.
4.9.5	Describe the body's compensatory mechanism for excess thermal gain.
4.9.6	Describe four ways in which the body dissipates heat into the external environment.
4.9.7	Describe the body's compensatory mechanism for excess thermal loss.
4.9.8	State three common forms of heat disorder.
4.9.9	Define the role of sodium in heat cramps.
4.9.10	List the signs and symptoms associated with heat cramps.
4.9.11	Describe the treatment of heat cramps.
4.9.12	Define the role of sodium in heat exhaustion.
4.9.13	List the signs and symptoms associated with heat exhaustion.
4.9.14	Describe the treatment of heat exhaustion.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.9.15	List two environmental factors associated with heat stroke.
4.9.16	Describe the role of the body's primary thermoregulatory mechanism in heat stroke.
4.9.17	State the critical upper range temperature at which cellular deterioration begins.
4.9.18	Differentiate the following parameters among heat cramps, heat exhaustion and heat stroke: a. Pathophysiology b. Cramping c. Mental status d. Skin condition e. Internal temperature f. Pulse g. Blood pressure
4.9.19	State the treatment modality that is common to heat cramps, heat exhaustion and heat stroke besides the ABC's of basic life support.
4.9.20	List predisposing factors and preventative measures associated with heat disorders.
4.9.21	Define fever (pyrexia) and identify the pathophysiological mechanisms causing the disorder.
4.9.22	Define hyperpyrexia and identify pathophysiological mechanisms.
4.9.23	State the field treatment of pyrexia.
4.9.24	State the causative factor associated with acute systemic hypothermia.
4.9.25	State the temperature range, signs and symptoms associated with mild systemic hypothermia.
4.9.26	State the temperature range, signs and symptoms associated with severe systemic hypothermia.
4.9.27	Describe the metabolic responses to both mild and severe systemic hypothermia and the implications of these responses to pharmacotherapy and defibrillation.
4.9.28	Discuss the treatment of hypothermia.
4.9.29	State conditions under which rewarming should be initiated in the field.
4.9.30	Define "afterdrop phenomenon" and its prognostic implications.
4.9.31	List two metabolic factors that may be associated with chronic hypothermia.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.9.32	List individuals who are at greatest risk for hypothermia.
4.9.33	Differentiate between frostnip, superficial frostbite and deep frostbite.
4.9.34	State the steps in the field management of frostbite.
4.9.35	State the immersion rewarming temperature for frostbitten extremities and the rationale for this temperature.
4.9.36	State the importance of near-drowning as a leading cause of accidental death in the U.S.
4.9.37	Describe the usual physiologic sequence of events in a near-drowning episode.
4.9.38	Describe the pulmonary and systemic pathophysiology in near-drowning patients.
4.9.39	State the factors affecting survival times and probability of successful resuscitation in near-drowning patients.
4.9.40	Describe the management of the near-drowning patient.
4.9.41	Identify the common types and sources of ionizing radiation.
4.9.42	Identify sources of normal background radiation.
4.9.43	Describe the pathophysiology of ionizing radiation received over acute and/or chronic exposure.
4.9.44	Describe the signs, symptoms and management of the radiated patient.
4.9.45	Describe the relative risks to the paramedic in handling the radiated patient.
4.9.46	Describe the anatomy and physiology of breathing gas under pressure.
4.9.47	List the common medical problems associated with diving accidents.
4.9.48	Describe the various major physiologic factors which may predispose a diver to decompression sickness.
4.9.49	Describe the pathophysiology of decompression sickness.
4.9.50	Describe the signs, symptoms and management of decompression sickness.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.9.51	Describe the pathophysiology of pulmonary overpressure accidents.
4.9.52	Describe the signs, symptoms and management of pneumomediastinum.
4.9.53	Describe the signs, symptoms and management of subcutaneous emphysema.
4.9.54	Describe the signs, symptoms and management of air embolism.

Division 4

Medical

Section 10

Geriatrics/Gerontology

Division 4 Medical

Section 10 Geriatrics/Gerontology

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.10.1	Discuss statistics on aging, including increased life expectancy, percent of population over 65 years old, and leading causes of death in geriatric population.
4.10.2	Discuss at least 6 factors which contribute to the elderly being at high risk for increased medical care.
4.10.3	Discuss general decline in organ systems, including: a. Respiratory system b. Cardiovascular system c. Renal system d. Nervous system e. Musculoskeletal system f. Gastrointestinal system g. Response to emotions/stress.
4.10.4	List at least 12 diseases/disorders common in the elderly.
4.10.5	List 4 factors that complicate clinical evaluation of the geriatric patient.
4.10.6	As related to the geriatric patient's history, discuss the following considerations: a. Common complaints of the geriatric patient (not specific to any one disorder). b. 4 considerations which may mask the patient's ability to communicate significant signs/symptoms.
4.10.7	As related to the physical examination of a geriatric patient, discuss the following considerations: a. Fatigue b. Excessive clothing c. Disguised signs/symptoms.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.10.8	Define syncope.
4.10.9	Define pre-syncope.
4.10.10	Discuss the pathophysiology of syncope.
4.10.11	Discuss the following types of syncope: a. Vasodepressor syncope b. Orthostatic syncope c. Cardiac syncope.
4.10.12	Define seizure and discuss the progression of events.
4.10.13	Define vertigo and discuss the progression of events.
4.10.14	Define dementia: a. Discuss the etiologies of chronic senile dementia b. Discuss the etiologies of acute organic brain syndrome. NOTE: Important to distinguish between acute and chronic dementia.
4.10.15	Define delirium.
4.10.16	Define Alzheimer's Disease.
4.10.17	Discuss 6 signs/symptoms of Alzheimer's Disease and the progression of events.
4.10.18	Define: a. Stroke b. TIA
4.10.19	Discuss 4 causes of other focal neurological deficits.
4.10.20	List 4 drugs which may produce adverse reactions in the geriatric patient and that may culminate in cerebral dysfunction.
4.10.21	Discuss the general management of neurological disorders. Refer to Cardiovascular Section.
4.10.22	Discuss signs/symptoms of cardiovascular conditions, specific to the geriatric patient.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.10.23	Discuss syncope as related to cardiovascular conditions: a. Vasodepressor b. Orthostatic c. Vasovagal d. Cardiac
4.10.24	Discuss congestive heart failure as related to the elderly.
4.10.25	List 2 causes of dysrhythmias in the elderly.
4.10.26	Discuss the following as related to the geriatric patient: a. Aortic dissection. b. Abdominal aortic aneurysm. c. Peripheral arterial and venous conditions. d. General management. (See also Cardiovascular Section) 1. As related to general management, list 4 conditions which may cause the physician to alter cardiac drug therapy 2. Discuss precautions as related to administration of fluids.
4.10.27	As related to the elderly patient, list 6 conditions that may be associated with respiratory distress.
4.10.28	Discuss findings which may be specific to the geriatric patient suffering from pulmonary embolism.
4.10.29	Discuss findings that may be specific to the geriatric patient suffering from respiratory tract infection.
4.10.30	Discuss chronic bronchitis with reference to the geriatric.
4.10.31	Discuss management of respiratory distress with reference to the geriatric.
4.10.32	Discuss the pathophysiology of carcinoma, in general.
4.10.33	List 4 kinds of cancer directly attributable to high mortality rate.
4.10.34	List 6 signs/symptoms of carcinoma.
4.10.35	Discuss general management of the cancer patient.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.10.36	Discuss GI bleed as related to geriatric patients.
4.10.37	Discuss 2 causes of upper intestinal hemorrhage.
4.10.38	Discuss 4 causes of massive lower intestinal hemorrhage.
4.10.39	Discuss 6 significant signs of blood loss.
4.10.40	Discuss cholecystitis/biliary disease as related to the elderly patient.
4.10.41	Discuss small bowel obstruction and 2 causes.
4.10.42	Discuss large bowel obstruction, including: a. Main cause b. Main signs/symptoms
4.10.43	Discuss diverticulitis, including signs/symptoms.
4.10.44	Discuss appendicitis, including: a. Signs/symptoms b. Complications
4.10.45	Discuss pancreatitis, including common cause and symptoms.
4.10.46	Discuss peptic ulcer disease/perforation, including: a. Common cause b. Signs/symptoms
4.10.47	As related to the elderly, list related signs and symptoms as associated with gastrointestinal disorders.
4.10.48	Discuss the general management of critical GI bleed in the elderly.
4.10.49	Refer to Environmental Emergencies Section. Discuss tolerance of temperatures.
4.10.50	Discuss 6 predisposing factors for hypothermia common in geriatric patients.
4.10.51	Discuss 3 predisposing factors for hyperthermia common in geriatric patients.
4.10.52	Discuss general management of environmental emergencies.
4.10.26	List at least 6 reasons that the elderly are more prone to falls.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.10.27	List 3 reasons that the elderly are more prone to head injuries.
4.10.28	List 3 reasons that the elderly are more prone to cervical spine injuries.
4.10.29	Prehospital priorities of care for trauma in elderly are similar to those for all trauma patients; list 2 considerations.
4.10.30	Discuss trauma management considerations in the elderly for the following systems: a. Cardiovascular system b. Respiratory system c. Renal system
4.10.31	Discuss positioning, immobilization and packaging of the elderly trauma patient (with consideration of physical deformities).
4.10.32	List at least 6 factors which contribute to adverse drug reactions in the elderly.
4.10.33	List at least 10 drugs which commonly cause toxicity in the geriatric patient.
4.10.34	As related to digitalis intoxication, discuss: a. Symptoms b. Drug interactions c. Management
4.10.44	As related to diuretic use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.
4.10.45	As related to antihypertensive drug use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.
4.10.46	As related to antiarrhythmic drug use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.10.47	As related to psychotropic drug use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.
4.10.48	As related to antidepressant use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.
4.10.49	As related to salicylate use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.
4.10.50	Discuss geriatric abuse and factors which precipitate abuse.
4.10.51	Discuss signs and symptoms as related to geriatric abuse.
4.10.52	Discuss the profile of a potential geriatric abuser.
4.10.53	Discuss at least 2 considerations as related to obtaining a history from the abused geriatric.
4.10.54	Discuss, in general gerontology program services, including objectives of the program.
4.10.55	Discuss the following components of a gerontology program: a. In-home assessment b. Family conference.

Division 4
Medical

Section 11
Pediatrics

Division 4 — Medical

Section 11 — Pediatrics

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.11.1	Define the terms growth and development.
4.11.2	Identify the general goals of management of the pediatric patient.
4.11.3	Discuss the sources of historical information in the pediatric patient.
4.11.4	List the principles in the general approach to the pediatric patient.
4.11.5	Identify normal age-related vital signs in the pediatric patient.
4.11.6	Describe the normal and abnormal appearance of the anterior fontanelle in the infant.
4.11.7	For each of the following age groups identify the relevant aspects of normal growth and development, personality development, relationship to parents, history factors, common illnesses and accidents and approach. a. Neonate b. 1 to 5 months c. 6 to 12 months d. 12 to 36 months e. 3 to 5 years f. 6-12 years g. 12 to 15 years
4.11.8	Define Sudden Infant Death Syndrome (SIDS).
4.11.9	Describe the incidence of SIDS.
4.11.10	Discuss the current theories on SIDS .
4.11.11	Describe the assessment and management of SIDS cases.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.11.12	Identify the immediate needs of the SIDS family.
4.11.13	Describe the characteristics of the child abuser.
4.11.14	Describe the characteristics of the abused child.
4.11.15	Discuss the assessment of the potentially abused child including important historical information.
4.11.16	Describe the management of the victim and family in the child abuse situation.
4.11.17	Discuss legal requirements of health professionals to report suspected child abuse.
4.11.18	Describe the pathophysiology, assessment and management of pediatric seizures.
4.11.19	Describe the pathophysiology, assessment and management of dehydration in the pediatric patient.
4.11.20	Describe the pathophysiology, assessment and management of the child with suspected meningitis.
4.11.21	Describe the pathophysiology, assessment and management of the child with suspected septicemia.
4.11.22	Describe the pathophysiology, assessment and management of the child with suspected Reyes Syndrome.
4.11.23	Identify the steps in relieving airway obstruction in the infant and child according to American Heart Association standards.
4.11.24	Discuss the pathophysiology, assessment and management of the following respiratory disorders: a. Bronchiolitis b. Croup c. Epiglottitis d. Asthma
4.11.25	Discuss the pathophipiology, assessment and management of shock in the pediatric patient.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.11.26	Discuss the pathophipiology, assessment and management of trauma in the pediatric patient. a. Drowning c. Bicycle accidents e. Burns b. Auto accidents d. Fractures/Falls f. Sports Injuries
4.11.27	Discuss the pathophipiology, assessment and management of toxicology emergencies in the pediatric patient. a. Ingestions b. Scorpion stings c. Drugs/Alcohol suicide gestures
4.11.28	Using AHA PALS Standards, identify the correct pediatric dosage and routes for the following: a. Epinephrine i. Atropine b. Naloxone j. Calcium Chloride 10% c. Sodium bicarbonate k. Adenosine d. Valium l. lidocaine e. Phenobarbital m. Bretylium f. Dextrose (D25) n. Aminophylline g. Proventil o. Dopamine h. Bronkosol
4.11.29	Describe the technique for endotracheal intubation in the pediatric patient.
4.11.30	Identify appropriate blade sizes and endotracheal tube sizes for the pediatric patient.
4.11.31	Describe the site selection for intravenous infusions in the pediatric patient.
4.11.32	Describe the equipment selection for intravenous therapy in the pediatric patient.
4.11.33	Demonstrate the ability to assess vital signs in the pediatric patient utilizing the appropriate equipment.
4.11.34	Demonstrate the ability to obtain an appropriate history when evaluating the pediatric patient.
4.11.35	Demonstrate the ability to perform an appropriate systematic assessment when evaluating the pediatric patient.
4.11.36	Demonstrate the ability to manage airway obstruction in the neonate, infant and child.
4.11.37	Demonstrate the manual methods of airway management in the pediatric patient.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
4.11.38	Demonstrate the mechanical methods of airway management in the pediatric patient. a. Oropharyngeal airway b. Gastric decompression c. Sellick's maneuver d. Oral intubation e. Needle Cricothyrotomy f. Needle Thoracostomy
4.11.39	Demonstrate the ability to perform CPR on the pediatric patient according to American Heart Association standards.
4.11.40	Demonstrate the ability to perform electrical therapy and apply the transcutaneous external pacemaker in the pediatric patient.
4.11.41	Demonstrate the ability to perform intravenous therapy on the pediatric patient including selection of appropriate equipment, solutions and anatomical sites.

Division 5

OB/GYN/Neonatal

Section 1

GYN

Division 5 OB/GNY/Neonatal

Section 1 GYN

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
5.1.1	Identify and describe the location and functions of the following: a. Ovaries b. Uterus c. Cervix d. Labia e. Fallopian tubes f. Vagina g. Perineum h. Endometrium
5.1.2	Describe the normal menstrual cycle.
5.1.3	Identify specific details of history that should be obtained in the gynecologic patient.
5.1.4	Identify specific physical findings that should be assessed in the gynecologic patient.
5.1.5	List the side effects of commonly used contraceptives.
5.1.6	Describe the typical signs, symptoms and management of pelvic inflammatory disease.
5.1.7	Identify sources of nontraumatic abdominal pain.
5.1.8	Identify potential sources of trauma to the external genitalia and management of injuries.
5.1.9	Discuss the assessment of a sexual assault victim and identify the ways in which it differs from usual assessment.
5.1.10	Identify principles of management for the sexual assault victim.
5.1.11	Demonstrate the ability to properly assess the patient with a possible gynecologic disorder.

Division 5
OB/GYN/Neonatal

Section 2

OB

Division 5 — OB/GNY/Neonatal

Section 2 — OB

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
5.2.1	Identify the normal site of: a. Ovum fertilization b. Ovum implantation
5.2.2	Identify and describe the functions of the following: a. Placenta b. Umbilical cord c. Amniotic sac and fluid
5.2.3	Describe fetal development and circulation.
5.2.4	Define the following terms: a. Antepartum b. Natal c. Primigravida d. Multigravida e. Postpartum f. Prenatal g. Primipara h. Multipara
5.2.5	Identify specific details of history that should be obtained in the obstetric patient.
5.2.6	Identify specific physical findings that should be assessed in the obstetric patient.
5.2.7	List early signs and symptoms of pregnancy.
5.2.8	Discuss the possible effects of trauma on both mother and fetus.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
5.2.9	Discuss the effect of pregnancy on the following pre-existing diseases: a. Diabetes b. Essential hypertension c. Neuromuscular disorders d. Cardiac disorders
5.2.10	Define the following terms: a. Spontaneous abortion b. Therapeutic abortion
5.2.11	Describe the pathophysiology, assessment and management of the patient who has had, or is having an abortion.
5.2.12	Describe the pathophysiology, assessment and management of the following: a. Ectopic pregnancy b. Abruptio placenta c. Placenta previa
5.2.13	Describe Braxton-Hicks contractions and their significance.
5.2.14	Describe the pathophysiology, assessment and management of eclampsia and preeclampsia
5.2.15	Describe the signs, symptoms and management of supine hypotensive syndrome.
5.2.16	Define the stages of labor and the length of each.
5.2.17	Describe the progression of labor.
5.2.18	Define the following terms: a. Effacement b. Cervical dilatation c. Crowning d. Presenting part
5.2.19	Discuss factors that influence transport decisions for the patient in labor.
5.2.20	List and describe steps for a normal delivery.
5.2.21	Describe the management during delivery when the cord is wrapped around the baby's neck.
5.2.22	Describe the pathophysiology, assessment and management of cephalopelvic disproportion (CPD).

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
5.2.23	List factors that may cause a large fetus.
5.2.24	List and describe 5 abnormal positions or presentations of the fetus during delivery and the general management principles.
5.2.25	Describe the pathology and management of a prolapsed umbilical cord.
5.2.26	Describe the management of the multiple birth delivery.
5.2.27	Describe the occurrence, complications anal management of a precipitate labor.
5.2.28	Describe the pathophysiology, assessment and management of postpartum hemorrhage.
5.2.29	Discuss the indications for and technique of fundal massage.
5.2.30	Describe the pharmacology and actions, indications, precautions, administration and side effects of oxytocin.
5.2.31	Describe the pathophysiology, assessment and management of uterine rupture.
5.2.32	Identify the pathophysiology, assessment and management of uterine inversion.
5.2.33	Identify the pathophysiology, assessment and management of pulmonary embolism during the antepartum or postpartum period.
5.2.34	Demonstrate the ability to perform an appropriate assessment when evaluating an obstetric patient.
5.2.35	Demonstrate the ability to appropriately administer oxytocin.
5.2.36	Demonstrate the technique of fundal massage.
5.2.37	Demonstrate the ability to use bulb syringe suction, and DeLee suction.
5.2.38	Demonstrate the ability to clamp and cut an umbilical cord.
5.2.39	Demonstrate the ability to properly assess the pregnant patient.
5.2.40	Demonstrate the ability to obtain an appropriate history when evaluating the patient with an obstetric chief complaint.

Division 5

OB/GYN/Neonatal

Section 2

OB

Division 5 OB/GNY/Neonatal

Section 3 Neonatal

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
5.3.1	Describe the routine care of the newborn.
5.3.2	List 4 means by which heat loss occurs in infants.
5.3.3	Describe methods of heat conservation in the newborn.
5.3.4	Discuss the effects of hypothermia on the newborn infant.
5.3.5	Define the parameters of Apgar scoring and the numerical values utilized.
5.3.6	Describe resuscitation for the distressed infant.
5.3.7	Describe 2 methods of stimulating the distressed infant.
5.3.8	Describe the appropriate administration of oxygen to the newborn.
5.3.9	Describe methods of ventilatory assistance for the newborn infant.
5.3.10	Identify the rate of ventilation to be used in the nonbreathing newborn.
5.3.11	Describe the technique for cardiac compressions on the newborn.
5.3.12	Identify the significance of meconium staining.
5.3.13	Identify the major problems that occur during transport of the neonate.
5.3.14	Identify heat sources that may and may *not* be utilized to warm the neonate.
5.3.15	Demonstrate the ability to calculate an accurate Apgar score.
5.3.16	Demonstrate the ability to appropriately manage a newborn infant.

Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
5.3.17	Demonstrate the ability to perform infant CPR according to AHA standards.

Division 6

Behavioral

Section 1

Behavioral Emergencies

Division 6 — Behavioral

Section 1 — Behavioral Emergencies

Lecturer qualifications: The lecturer for this section shall be a Basic EMT, Paramedic, Registered Nurse, or Physician with at least 1200 hour of expirence working in a psychiatric intake unit or crissis unit or mobile crissis unit (Masters Degree in a psychiatric field may substitute for the 1200 hours of expirence requirement).

I	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	Define the term "Behavioral Emergency."
P	List factors that may alter the emotional status of the ill or injured.
P	List those factors specific to the pediatric patient experiencing emotional crisis.
P	List the techniques of management of all children who are emotional.
P	List those factors specific to the elderly patient experiencing crisis.
P	Define the following terms: a. Anxiety b. Anger c. Conversion reaction d. Depression. e. Confusion f. Emotional crisis g. Fear
P	List the proper verbal communication techniques useful in managing the emotionally disturbed patient.
P	List the reasons for taking appropriate means to insure the safety of the paramedic.
P	Describe the reason for reassuring the patient experiencing an emotional crisis.
P	Describe the circumstances when bystanders and relatives should be removed from the scene.
P	List those factors that increase the risk of suicides.
P	Describe those behaviors that are indirect indicators of an impending suicide attempt.

I	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	Describe those overt behavioral modifications associated with: a. Rage b. Suicide c. Depression d. Paranoia. e. Hostility f. Violence g. Hyperactivity
P	Define the following terms: a. Facilitation b. Open-ended questions c. Posture d. Confrontation e. Affect f. Mental status.
P	Describe the techniques that facilitate the systematic gathering of information from the disturbed patient.
P	Describe the techniques that are useful in managing the effects of crisis situations on the advanced level EMT.
P	Define the term "debriefing" as a technique for controlling advanced level EMT stress following a stress situation.
P	Describe the techniques that may be useful in redirecting anxiety in relatives and bystanders.
P	Describe the appropriate action of the advanced level EMT when confronted by the uncontrollable armed patient.
P	Describe the appropriate techniques used in restraining the patient.
P	Describe those techniques useful in protecting the advanced level EMT when attacked by a violent patient.
P	List those situations in which the advanced level EMT is expected to restrain or transport a patient forcibly and against his will.
P	List the appropriate communications of significant findings to the resource hospital.
P	Describe the techniques that are useful in managing the effects of crisis situations on the EMT.
P	Define the term "debriefing" as a technique for controlling advanced level EMT stress following a stress situation.

Clinical Instruction

Emergency Department

Emergency Department

The Emergency Department rotation consists of students being assigned to a Registered Nurse, Nurse Practitioner, or Physician preceptor in the Emergency Department.

The program Director must meet with the head of the Emergency Department as required in rule and review this portion of the curriculum. Preceptors are required to supervise and provide remedial training for each objective.

Objective: At the conclusion of this clinical rotation, under the supervision of the assigned preceptor, the student must:
Perform, and document on a training program skills sheet, an adequate physical examination and assessment of patient's condition, obtain an accurate medical history, and perform auscultation of heart and lung sounds on at least ten (10) patients.
Obtain, and record on a training program skills sheet, a complete set of vital signs on at least twenty-five (25) patients.
Describe signs and symptoms of the presenting problem, to the preceptor, in a comprehensive and orderly fashion on at least ten (10) patients.
Prepare and administer any of the drugs carried in the paramedic (I-EMT) drug box via IV, IM, Sub Q, and oral routes.
Establish, and record on a training program skill sheet, an intravenous (IV) line on at least fifteen (15) patients.
Observe the emergency department physician interview and assess at least 10 patients. Make an analysis the systematic approach the physician uses and determine if there are any variations from the approach taught in the training program. Discuss with the physician the rationale for any variations.
Develop skills in the recognition of infiltration, and discontinuing IV lines.
Assist in the triage of at least ten (10) patients.
Place and change monitor leads on at least ten (10) patients.
Develop skills in the recognition or cardiac arrhythmias with emphasis on knowledge of standard emergency care and treatment.

Objective: At the conclusion of this clinical rotation, under the supervision of the assigned preceptor, the student must:
Assist with defibrillation and/or cardioversion of any patient requiring said treatment in the Emergency Department.
Discuss with the preceptor and demonstrate knowledge of emergency drugs including pharmacological properties, dosage, clinical indications, contra indications, and possible side effects.
Assist in application of casts and splints on any patient requiring said treatment in the Emergency Department.
Assist in the care of lacerations, suturing, control of bleeding, and application of dressing of any patient requiring said treatment in the Emergency Department.
Develop skills in the insertion and maintenance of nasogastric tubes and foley catheters and be aware of possible complications in their use on any patient requiring said treatment in the Emergency Department.
Obtain blood samples on any patient requiring said procedure in the Emergency Department.
Accurately and comprehensively report treatment and response to treatment of emergency department patients to the preceptor.
Observe each use of the telemetry unit between paramedic/I-EMT unit in the field and Emergency Department personnel, and assess the quality and quantity of information given by unit in the field and response of emergency room personnel on information given.
Perform all airway skills including endotracheal and nasotrachial intubation on any patient requiring said procedure in the Emergency Department.

Clinical Instruction

Critical Care

Critical Care Paramedic Challenge Course only.

The Critical Care rotation consists of students being assigned to a Registered Nurse, Nurse Practitioner, or Physician preceptor in the ICU, CCU, Surgical-ICU, Nuro-ICU in any combination. Additionally a program may schedule up to 20 hours in the Post-Anesthesia Care Unit (excluding time in the operating room).

The program director must meet with the head of the Critical Care unit(s) as required in rule and review this portion of the curriculum. Preceptors are required to supervise and provide remedial training for each objective.

Objective: At the conclusion of this clinical rotation, under the supervision of the assigned preceptor, the student must:
Perform a patient assessment on at least four (4) patients.
Obtain a medical history on at least four (4) patients.
Identify and discuss with the preceptor, the proper management of EKG rhythms of at least eight (8) patients
Identify any paced rhythms and malfunctioning pacemakers for any patient in the unit and discuss the unit and discuss with the preceptor, the proper management.
Demonstrate to the preceptor, the ability to calculate the rate on at least four (4) different EKGs using three different calculating methods.
Review the medications being administered to at least two patients and correctly identify, to the preceptor, the indications, contraindications, side effects, and dosages.
Report any observed changes in an EKG rhythm appropriately.

EXHIBIT E

Arizona Basic EMT Refresher Curriculum
1994

The Arizona Basic EMT Refresher Curriculum consists of four sections:

1. 25 Hours - EMT - Basic Transitional Program: National Standard Curriculum, 1994.

Curriculum (objectives) incorporated by reference.

Copies are available from the U.S. Printing Office.
Superintendent of Documents
P.O. Box 371954
Pittsburgh, Pennsylvania 15250-7954.
Fax orders:(202) 512-2259 Phone orders:(202) 512-1800

Module 1	Introduction	1-2 Hours
Module 2	Patient Assessment	9-10 Hours
Module 3	Airway	2-4 Hours
Module 4	Interventions	9-11 Hours
Module 5	Infants & Children	2-3 Hours
Module 6	Summary	2-4 Hours

*2. 1.5 Hours - Blood Glucose Monitoring Curriculum.

*3. 3 Hours - Intravenous Monitoring Curriculum.

*4. 0.5 Hours - Sudden Infant Death Syndrome Training Fact Sheet and Video.

30 Hours — Total Minimum Time

* Minimum contact times are required only for students that have never been trained under these curricula. Programs may adjust the times, as necessary, in these three areas if the students have already been trained. NOTE: The content must still be covered.

MODULE - IV MONITORING

IV MONITORING CURRICULUM - OBJECTIVES

1. Describe the purpose of Intravenous (IV) lines.
2. Describe the purpose for monitoring IV Lines by EMT-Basics.
3. Identify the various types of IV catheters.
4. Identify the various sizes of IV catheters.
5. Identify the different types of IV fluids.
6. Identify the various types of IV tubing.
7. Define infiltration of an IV solution.
8. Discuss the importance of body substance isolation and techniques related to IV monitoring procedures.
9. Describe signs and symptoms of infiltration.
10. Discuss the procedure for assessment for proper placement of IV lines.
11. Demonstrate the ability to calculate IV infusion flow rates.
12. Discuss the role of Medical Control for IV Monitoring.
13. Identify the purpose of a Hep-Lock® catheter.
14. Identify and discuss various types of permanent indwelling catheters.
15. Identify and discuss analgesic pumps, types, operations, drugs used with the pumps and EMT-Basic interventions.
16. Discuss signs and symptoms and BLS treatment of narcotic overdose.
17. Explain the importance of prehospital Advanced Life Support (ALS) intervention for drug overdose.
18. Discuss the differences between peripheral lines and central lines.
19. Define the types of IVs approved to be transported by EMT-Basics.
20. List the IVs that shall not be transported by the EMT-Basics.

AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-B will be able to:

1. Defend the reason for obtaining initial training and continuing education in IV monitoring.
2. Defend the reason for medical control for IV monitoring.
3. Defend the reason for obtaining initial training in monitoring analgesic pumps.
4. Defend the reason for medical control for monitoring analgesic pumps.

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-B will be able to:

1. Demonstrate the assessment of the patient with an IV infusion.
2. Demonstrate the assessment of the IV insertion site.
3. Demonstrate the ability to calculate IV infusion rates.
4. Demonstrate the procedure for irrigation of the IV line.
5. Demonstrate the procedure for discontinuing the IV line.
6. Demonstrate the assessment of the patient with an analgesic pump.
7. Demonstrate body substance isolation techniques related to any IV monitoring procedure.

PREPARATION

Motivation: Intravenous (IV) monitoring is a routine function performed by EMT-Basics during the course of general transport from home to facility, between facilities and from facility to home. Often the patient will have an intravenous infusion in place. It is imperative that the EMT-Basic know which types of (patient) IVs they may transport and how to safely transport that patient.

While Medical Control is not required, when the EMT-Basic is under medical control of a base hospital, the EMT-Basic must function under that ALS Base Hospital's policies.

As with any additional skill, the ALS Base Hospital will be responsible for: (1) Managing skills retention through continuing education and Quality Assurance monitoring. (2) Reporting to the Department performance issues or withdrawal of medical control.

Prerequisites: Certified EMT Basic.

MATERIALS

A-V equipment: Utilize various audio-visual materials relating to IV monitoring.Handout Materials and related study guides should be edited to assure meeting the objectives of this curriculum.

EMS Equipment: Intravenous (IV) training arm, IV tubing (regular, blood, pediatric), IV catheters (14g, 16g, 18g, 20g, 22g, 24g, butterfly) IV fluids (D_5W) Lactated Ringers, Normal Saline); Tape, 2x2's, tourniquets.
Latex gloves, disposable bags, SHARPS container

Analgesic pump or training film

PERSONNEL

Primary Instructor: The lead instructor must be certified in the State of Arizona as an I-EMT, Paramedic, Registered Nurse, Physician's Assistant or Physician.The lead instructor should have previous teaching experience.

Recommended Minimum
Time to Complete: Three hours

PRESENTATION

Declarative (What)

I. Purpose of IV lines:

A. Route for replacement of fluids

B. Route for administration of drugs

II. Purpose for EMT-Basics to monitor IV infusion:

A. This procedure is designed only for inter-facility transports and non-emergency transports (between hospitals, home, nursing home, doctor's office, clinic) of patients with IVs.

B. Comfort of patient by not having to discontinue their IV at one facility only to have it restarted upon arrival at the receiving facility.

C. EMT-Basics shall not be monitoring the IV of a patient who is in a critical or unstable condition or who requires ALS treatment/monitoring.

D. Monitoring of IVs inserted in a prehospital emergency is specifically excluded.

III. Types of Intravenous Cannulas:

A. Hollow needle (butterfly)

B. Plastic catheter inserted over a hollow needle

C. Buff caps® (Hep-Locks®, saline locks)

D. Surgically placed indwelling catheters (Portacath®, Hickman®, etc...)

IV. Sizes of Intravenous Cannulas:

A. 14 gauge - 20 gauge used on adults

B. 20 gauge - 25 gauge used on children

C. Length of cannulas vary from 1/2" - 3" depending on gauge size of cannula

V. Types of Intravenous tubing:

A. Pediatric (aka mini-drip) tubing

B. Regular tubing

C. Blood tubing

D. Flow rate calculations for each

E. Filters

VI. Approved IV fluids the EMT-Basic may monitor:

A. 5% Dextrose and water

B. Normal Saline (0.9 % & 0.45%)

C. Lactated Ringers

D. Combinations of above listed fluids

VII. EMT-Basics shall not transport patients with:

A. IV fluid additives defined as:

1. Medications

2. Minerals

3. Vitamins

B. IVs started in a prehospital setting

C. Unstable patients with an IV in place.

VIII. Intravenous infiltration:

A. Signs/Symptoms of infiltration

1. Swelling and pain at the IV site

2. Edema - Compare extremities for questionable swelling

3. Pain at IV site - differentiate causes of pain other than infiltration

4. Discontinue the IV infusion

IX. Assessment of the Intravenous Cannula:

A. Light touch over approximate end of cannula to check effect on flow in drip chamber

B. Lower IV fluid below IV site to check for blood return into IV tubing

C. Look for signs/symptoms of intravenous infiltration

X. Trouble-shooting IVs not infusing:

1. Assess for an object constricting circulation above IV site

2. Assess IV tubing attachments

3. Assess air venting into bottled fluids

4. Assess for a flooded drip chamber

5. Check height of IV fluid. Cramped quarters in transport vehicles often inhibits gravity required for proper flow of intravenous fluid

6. As last resort, use sterile technique to irrigate IV tubing with 3cc of IV fluid being infused.

7. If unable to trouble-shoot intravenous infusion leave IV alone unless infiltration is apparent

8. Discontinue IV only if infiltration has occurred

XI. IV flow calculations:
Various standard drip rates for orders such as to-keep-open (TKO) and discuss calculation for each type of tubing.

1. Pediatric tubing

2. Regular tubing (10 **and** 15 gtts)

3. Blood tubing

XII. Types of IVs approved for transport by EMT-Basics with IV monitoring status:

1. Any peripheral IV as described in Section VI, in a stable patient.

2. Any permanent indwelling catheter with or without an analgesic pump, in a stable patient.

3. Any central line that is capped and not infusing in a stable patient.
Note: EMT-Basics are shall not monitor IVs started in a prehospital setting.

XIII. Overview of Analgesic Pumps:

1. Purpose of pumps and the types of patients who might be on these pumps.

2. Pump operations

3. Differentiate between locked (preset) and open pumps.

4. Discuss the purpose of the "demand button" on pump and precalculation mechanism for analgesic medication.

5. Drugs commonly used with these pumps.

6. Signs and symptoms of narcotic overdose.

7. Discuss BLS treatment of narcotic overdose.(ABCs and initiating ALS response)

8. Responsibility and operations of all analgesic pumps belongs to the patient or home care-giver. The EMT will only intervene in emergency situations and must initiate ALS response in these situations.

APPLICATION

Procedural (How)

1. Demonstrate the assessment and care of the patient with an IV infusion.

2. Demonstrate the calculation of IV infusion flow rates.

3. Demonstrate the assessment of signs of infiltration.

4. Demonstrate IV irrigation technique.

5. Demonstrate lifting and moving a patient with an IV infusion.

6. Demonstrate lifting and moving a patient with an analgesic p

Contextual (When, Where, Why)

The EMT-Basic must prepare to assess and manage patients during inter-facility transport with IV infusions and analgesic pumps. The training lab must provide simulated situations for the student to practice demonstrated skills. The student must be able to integrate skills into simulated scenarios in order to perform safe and effective practice.

STUDENT ACTIVITIES

Auditory (Hear)

1. The student should hear the instructor simulate instructions on protocols for assessment of IV infusion status.

2. The student should hear of actual cases where infiltration was identified.

3. The student should hear of cases when irrigation of the IV was successful in reestablishing the infusion.

Visual (See)

1. The student should see an instructor appropriately assess an IV infusion site.

2. The student should see an instructor appropriately irrigate an IV infusion site.

3. The student should see an analgesic pump in action.

Kinesthetic (Do)

1. The student should practice the assessment of an IV infusion site.

2. The student should practice calculations of drip rates with various sizes of tubing and drip chambers.

3. The student should practice maintenance checks of IV site for infiltration.

4. The student should practice irrigation techniques.

5. The student should practice discontinuing the IV.

6. The student should practice completing a prehospital care report for a patient with IV infusion.

INSTRUCTOR ACTIVITIES

I. Supervise student practice.

II. Reinforce student progress in cognitive, affective, and psychomotor domains.

III. Redirect students having difficulty in content (complete remediation forms).

EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-B students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor/course guide.

ENRICHMENT

What is unique in the local area concerning this topic?
Complete enrichment sheets from the instructor/course guide and attach with lesson plan.

Prehospital Blood Glucose Testing
CURRICULUM

Course description:

Blood Glucose Testing is a procedure approved by the Medical Direction Commission of the Arizona Department of Health Services, Office of EMS, for use by certified Basic EMT's, Intermediate EMT's and EMT-Paramedics, **only** when under the Direction of an ALS Base Hospital that supports this procedure.

Successful completion of this course will constitute eligibility for certified Basic EMT's, EMT-Intermediates and EMT-Paramedics to utilize Blood Glucose Testing **only** when under the Medical Direction of an ALS Base Hospital.

NOTE: As with any advanced skill, the ALS Base Hospital will be responsible for: (1) Managing skills retention through continuing education and Quality Assurance monitoring; and (2) Reporting to the Department performance issues or withdrawal of medical control. The ALS Base Hospital may delegate the responsibility of managing skills retention and/or the Quality Control Program through written agreement to a Provider Agency with a current CLIA Certificate of Waiver. The ALS Base Hospital will have the authority and responsibility of reviewing, monitoring and making recommendations regarding the Provider Agency's Program. Reporting performance issues and/or withdrawal of medical control shall be the ALS Base Hospital's responsibility.

This document is the Official minimum standard curriculum for Blood Glucose Testing training.

Prerequisites:

The student must be a student enrolled in a course offered by a certified Basic EMT training program; or be a certified Basic EMT, EMT-Paramedic or EMT-Intermediate; and be under the Medical Direction of an approved ALS Base Hospital willing to conduct training and continuing education related to this skill.

Methodology:

Description - The course is designed to be a minimum of 1½ hours in length and combine lecture with hands-on practice.

Lead Instruction - The lead instructor must be certified in the State of Arizona as a Paramedic, Certified Laboratory Technician, Registered Nurse, Pharmacist or Licensed Physician. The lead instructor should have previous teaching experience and must have expertise in the process and the equipment.

Minimum Time Requirements -

Breakdown of minimum hours of instruction:

Module One:	Lecture with equipment display	½ hour
Module Two:	Lab with hands-on practice	1 hour
Module Three:	Formal testing stations	As required

Equipment - The following minimum equipment must be available for the course:

- Policies for infection control, quality control and guidelines for use of blood glucose monitoring supplies (strips and/or monitor same as will be used in the field)
- Blood Glucose Strips and/or Monitor (same as will be used in the field)
- Lancets
- Cotton balls
- Alcohol swabs
- Disposable latex gloves
- Sharps Container
- Glucose Control Solutions
- Knowledge Test & Skills Checklist
- Operator Certification Roster
- Certificate of training
- Copies of QC Maintenance logs
- A-V equipment (overhead projector, blackboard, etc...)

Course Competencies:

Upon successful completion of this course, the student will be able to:

1. Describe the purpose of Blood Glucose Monitoring.

2. Describe and demonstrate methods necessary to prevent cross contamination through the use of equipment by adherence of Universal Blood and Body Fluid Precautions.

3. Demonstrate the correct technique for individual strip and/or instrumentation operation to include:
   - Specimen collection and infection control
   - Instrumentation calibration (if instrumentation is used)
   - Test performance
   - Individual instrumentation display codes and troubleshooting procedures (if instrumentation used)
   - Documentation of results and proper follow-up of abnormal test results in a timely fashion

4. Demonstrate proper quality control testing and documentation of results and corrective actions.

5. Discuss preventative maintenance of strips and/or instrumentation to include documentation and follow-up.

6. List and describe the indications for Blood Glucose Testing to include:
   - Those who display signs/symptoms of hypo/hyperglycemia
   - Patients currently on antidiabetic therapy
   - Special situations (children, pregnancy, certain drugs, etc.)

7. Describe the contraindication for Blood Glucose Testing.

8. Demonstrate the correct technique for Blood Glucose Testing in a simulated situation.

9. Discuss the role of Medical Control for Blood Glucose Testing.

10. Discuss the role of compliance with CLIA '88 Regulations.

Course Content:

Module One - Lecture

I. **Description:**

A. Blood Glucose Testing is an invasive diagnostic aid to assist in the management of ALS patients with specific signs and symptoms. Patient care, treatment and outcome may be improved with its use.

B. Blood Glucose Testing may be performed **only** with the support of local Medical Control.

C. Normal supportive therapy, airway management, peripheral I.V. access should not be affected by Blood Glucose Testing.

II. **Indications:**

A. Known diabetic patient with any of the following signs/symptoms:
- Cold and clammy skin or hot dry skin/mucus membranes
- Pale or flushed color
- Diaphoresis
- Headache, dizziness
- Palpitations and/or dysrhthymias on monitor
- Visual disturbances
- Shakiness or states "feels funny"
- Any altered LOC (Lethargy, confusion, change in usual behavior)
- Slurred speech
- Excessive urination/thirst
- Acetone (fruity) breath
- Unconscious patient
- Kussmaul respiration
- Seizures

B. Unconscious patients, etiology unknown (any age group, including trauma)

C. Patients with altered LOC, etiology unknown (including trauma), especially if displaying signs/symptoms as in II-A.

D. Special situations:

Pediatric patients having any of the following:
- Seizures
- Altered LOC (especially after high stress illnesses or injury - trauma)

Pregnancy
- Signs/Symptoms of hypo/hyperglycemia as above
- Signs/Symptoms of toxemia of pregnancy (pre-eclampsia, eclampsia)

Elderly, patients with history of alcoholism, overweight and/or malnourished patients

E. Patients on long term drug therapies such as:

- Steroids (Prednisone, Cortisone, Decadron, etc.)
- Hormonal therapy

III. **Contraindications:**

A. Use of strips or instrumentation that has failed QC Testing and with no corrective action taken.

IV. **Special Considerations:**

A. Infection Control

1. Adherence to Universal Blood and Body Fluid Precautions during use.

2. Disposal of lancets, disposable equipment and contaminated strips in proper containers at point of use.

3. Proper disinfection procedure for instrumentation.

4. Certification for use of Blood Glucose Testing equipment in accordance with State and Manufacturer's guidelines.

B. Storage and Handling

1. According to manufacturer's recommendations.

2. Do not use after expiration date

3. Store at or near room temperature, avoid **excessive prolonged** exposure to heat, cold and humidity. Take the same precautions that are used with drugs and IV solutions.

C. Requirements for Selection of Blood Glucose Testing Equipment

1. If using instrumentation, back up visual reference

2. If using instrumentation, error codes

3. End point chemistry to enable later reading of strip

4. Ability to avoid cross contamination

5. Durable

6. Uncomplicated cleaning procedure

7. Aqueous controls with at least 6 month dating after opening

8. Exact Strip Lot to Lot calibration

9. Performance at or below a 5% CV in 3 ranges (low, normal, high)

10. Strip and instrument performance are suitable with consideration to heat, cold, light and moisture resistance

11. Strip packaging suitable for resistance to above environmental extremes

12. "Unused" color block on test strip vial

13. Ability to use alcohol wipes to cleanse site and clean the machine.

D. Complications

Following proper technique, infection, and quality control guidelines avoids any complications.

V. **Regulatory Issues**

A. Quality Control / Preventative Maintenance
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

B. External Proficiency Testing
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

C. Competency Checks
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

D. Patient Test Records
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

VI. **Procedure for Blood Glucose Testing:**

A. Identify the need for Blood Glucose Testing (see Indications II-A)

B. Assemble and prepare equipment (adaptations acceptable according to manufacturer's instructions):
- Instrument (if used)
- Blood Glucose Test Strips
- Lancets
- Cotton balls
- Alcohol swabs
- Disposable latex gloves
- Sharps Container

C. Prepare patient for the procedure

D. Obtain specimen according to manufacturer's instructions

E. Perform test according to manufacturer's instructions

F. Report the results to medical control

G. These guidelines are not intended to alter current protocols, but to enhance them. The use of this diagnostic aid could improve patient outcome.

H. Document: Medic number, time of test, test result and whether test was a capillary (fingerstick) or venous blood sample.

VII. **Quality Control Procedure:**

A. Quality control records shall be retained for a minimum of 2 years.

B. Quality control testing shall be performed with a high and low quality control solution weekly.

C. Special situations, QC should be performed additionally when:
- A new vial of strips is opened and monitor reprogrammed and/or battery replaced
- When a vial of strips is left open
- If the instrument has been dropped
- If the unused test strip pad looks darker than the "Unused" color block on the vial
- When the vial is thought to have been exposed to environmental extremes for long periods or otherwise contaminated
- When test results contradict clinical symptoms
- After cleaning strip guide

D. If QC falls within acceptable control range, proceed with patient testing.

E. If QC falls outside of acceptable control range, see Trouble Shooting in User's Manual and correct problem before using for patient testing.

F. Control solutions should be stored and used according to manufacturer's directions.

G. QC information shall be recorded according to individual hospital policy.

H. Prehospital instruments may be involved in periodic testing of unknown glucose samples provided by an outside third party. Refer to individual hospitals' external proficiency program.

I. For actual Quality Control Test follow manufacturer's instructions.

VIII. **Medical Control:**

A. Many prehospital providers work for multiple agencies. Therefore, the provider is responsible for knowing the local policies and protocols.

B. The performance of Blood Glucose Testing must be appropriately documented.

C. The Medical Director has the authority to withdraw medical direction for Blood Glucose Testing. Medical Control is required to report such action to the Office Of EMS.

D. Review Base Station policies.

Module Two - LAB

I. Given control solutions and the equipment to be used, the student will practice the proper technique for performing Blood Glucose Testing and QC procedures.

II. Given the equipment to be used, in a one on one situation, the instructor will guide the student to perform the skill to proficiency.

III. In a one on one situation, the instructor will create a minimum of three scenarios which meet one or more of the following criteria:

(a) There is an indication for Blood Glucose Testing (ie: altered LOC) and the test results fall within normal range values.

(b) There is an indication for Blood Glucose Testing (ie: known diabetic with altered LOC) and the test results are abnormal on the high side.

(c) There is an indication for Blood Glucose Testing (ie: known diabetic with altered LOC) and the test results are abnormal on the extreme low side.

(d) The equipment used for Blood Glucose Testing failed QC test.

The student must identify each situation correctly and perform the indicated tasks appropriately.

Module Three - Practical Testing

I. Practical Testing

Given control solutions and the equipment to be used, in a one on one testing situation, and using the attached skills checksheet, the student will correctly perform a Blood Glucose Test with 100% proficiency.

Note: When conducting the practical examination the following conditions must be maintained:

1. The practical test must be conducted in a testing environment. Students must understand that they are being evaluated. Corrective guidance during the evaluation is not permitted.

2. The evaluator must not reveal the specific criteria for failure.

3. The Medical Director may review the skills checksheet prior to a generalized counselling session with the student.

4. The student will be allowed three attempts to perform the skill with 100% competency.

STATE OF ARIZONA • OFFICE OF EMS

Blood Glucose Monitoring Practical Examination

Student's name:_____ SS#:_____

Date:_____ Attempt#:_____

Evaluator:_____

Criteria	Pts Poss	Pts Attain
Assesses patient and correctly identifies the need for blood glucose test. (PMHx, Signs/Symptoms, etc.).	2	
Prepares the patient for test.	1	
Assembles materials and prepares environment.	1	
calibrates instrument (if using instrument or checks unused strip against "unused" block on vial.	1	
Using UBBFP obtains blood sample (simulated).	1	
Correctly performs procedure according to manufacturer instructions.	1	
Reports value, correct treatment suggestion.	1	
Indicates proper documentation of the procedure on the first care form.	1	

TOTAL 9 __

Critical Criteria:
(Meeting any of the critical criteria constitutes automatic failure. The student must be counselled by the Medical Director prior to retesting)

___ Fails to properly perform Blood Glucose Testing.
___ Performs any technique resulting in potential harm to the patient.

I attest to the accuracy and validity of the above information. I certify that the above named student has met the applicable conditions put forth by the Arizona Department of Health Services for utilization of Blood Glucose Testing.

_____ _____
Medical Director's signature Date

OFFICE OF EMS

FACT SHEET

SUDDEN INFANT DEATH SYNDROME

OVERVIEW:

The Sudden Infant Death Syndrome Training legislation, Senate Bill 1295, was enacted by the Arizona State Legislature in 1992. This law required that the Arizona Department of Health Services (ADHS) certify training on the nature of sudden infant death syndrome for use by professional fire fighters and emergency medical technicians as part of their basic and continuing training requirement.

The ADHS must also certify training on the nature of sudden infant death syndrome which shall include information on the investigation and handling of cases involving sudden and unexplained infant death for use by law enforcement officers as part of their basic training requirement.

The legislation established the Sudden Infant Death Advisory Council to assist the ADHS, Office of Women's and Children's Health in developing sudden infant death syndrome training and educational programs. The Council consists of ten members appointed to three year terms by the Director of the ADHS.

The Advisory Board is also charged with informing the governor and the legislature of the need for specific programs regarding sudden infant death syndrome.

The legislation also mandates that county medical examiners or the licensed physician performing the duties of a county medical examiner, perform an autopsy in cases of sudden and unexplained infant death in accordance with protocols adopted by the Director of the ADHS. If the examiner determines that the infant died of sudden infant death syndrome, the examiner must notify the ADHS.

The legislation also established the Committee on Sudden Infant Death Autopsy Protocols to make recommendation to the Director of the ADHS relating to protocols that should govern the autopsy of infants who die suddenly and inexplicably. The Committee consists of six members appointed by the Director of the ADHS.

BASIC INFORMATION:

Sudden Infant Death Syndrome (SIDS), the sudden, unexpected and unexplained death of apparently healthy babies, is the major cause of death of infants between the ages of one month and one year. In the United States, SIDS, sometimes referred to as crib or cot death, is responsible for the death of approximately 7,000 infants each year. It has been estimated that, annually, up to two deaths per 1,000 live births will be the direct result of SIDS.

SIDS deaths produce intense and traumatic reactions among surviving family members, as well as health care providers. Lifelong feelings of guilt, sibling emotional problems, divorce, and even suicide are all too often the results of this tragic event. It is clear that there are multiple victims of this disease - the deceased infant and the surviving family members.

SOME BASIC FACTS ABOUT SIDS:

SIDS is a definite medical entity and is the major cause of death in infants during the first year of life.

The cause or causes for SIDS are not known.

Approximately 90% of all SIDS deaths will occur between 2 and 6 months of age.

Approximately 6,000 to 7,000 SIDS deaths occur annually in the United States.

SIDS occurs in all socio-economic levels.

SIDS victims appear to be healthy prior to death.

At this time SIDS cannot be predicted or prevented, even by a physician.

There appears to be no suffering; death occurs very rapidly, usually during periods of sleep.

Cases of SIDS have been reported throughout history, as far back as the time of the Old Testament.

WHAT SIDS IS NOT:

SIDS is not caused by external suffocation.

SIDS is not caused by the type of feeding method used.

SIDS is not caused by immunizations.

SIDS is not caused by child abuse or neglect.

SIDS is not caused by overheating.

SIDS is not caused by vomiting and choking.

SIDS is not contagious, it is not a infectious disease process.

SIDS does not cause pain or suffering to the infant.

SIDS is not caused by a lack of love.

SIDS is not caused by a sleeping parent rolling over onto the baby.

SIDS cannot by predicted.

SIDS cannot be prevented.

SIDS AND THE ROLE OF THE EMERGENCY MEDICAL TECHNICIAN:

The Emergency Medical Technician (EMT) is often the first official person on the scene following the discovery of the infant. The parents or other caretakers of the infant - e.g. grandparents, baby sitter - cling to the hope that the EMT can do something to save the infant, even though the child may be obviously dead. The role of the EMT in this situation is difficult. He should begin immediate emergency resuscitation efforts followed by prompt transport to the hospital. He should also comfort the parents whose reactions may range from numb silence to violent hysteria. By offering sensitive support to the family and gathering accurate information in a non-threatening manner, the EMT helps to alleviate the future emotional burden of the surviving family members.

HOW THE EMT CAN TELL IF THE INFANT IS A SIDS VICTIM

Only an autopsy can conclusively determine if an infant's death is due to SIDS. The EMT should make no assumptions about the cause of death. The death of an apparently healthy infant and the general appearance of the infant in his crib may be misleading.
There have been cases where SIDS has been mistaken for child abuse. Therefore, it is necessary that the EMT, as the first responder, know some of the identifying features characteristic of the SIDS victim as opposed to the abused child. With SIDS, the child will show a normal state of nutrition and hydration. The child's skin may be mottled and often there is a frothy, sometimes blood-tinged fluid in and around the mouth and nostrils. Vomitus may be present. Sometimes the infant will be in an unusual position due to muscle spasms at time of death.

ARIZONA SIDS FACTS

The 1989 SIDS rate per 100,00 live births was 165.4 in Arizona compared to 126.4 nationally. SIDS is the third leading cause of death in infants in Arizona, claiming 111 lives in 1989.

SUPPORT FOR EMERGENCY RESPONSE PERSONNEL

If you find that you are experiencing any of the reactions described in the training video, please contact your local agency to see what type of support is available for employees confronted with traumatic situations such as SIDS deaths. Your agency chaplin or local community mental health center are good resources to consider.

Critical Incident Stress Debriefing: Emergency # 1-800-523-9391
Training and Other Information 420-1860
Contact Person: Tom McSherry 267-4109, pager 280-4802

SUPPORT ORGANIZATIONS IN ARIZONA

Statewide Arizona Affiliate of SIDS Alliance
1-800-597-SIDS

Phoenix Arizona Affiliate of SIDS Alliance
C/O Phoenix Children's Hospital
Phoenix, Arizona 85006
239-4215
Support Meetings on 2nd Tuesday of each month.

Tucson Public Health Nurse - Marie Sutton 298-3888
1-800-597-SIDS (After Hours)
Support Meetings on 3rd Tuesday of each month at Tucson Medical Center.

How to Distinguish Between SIDS and Child Abuse and Neglect	
Sudden Infant Death Syndrome Versus	Child Abuse and Neglect
Incidence: Deaths: 7,000/Year Highest: 2 to 4 months of age When: More frequent in winter months	Incidence: Deaths: 1,000 to 4,000/year Deaths in infants: 300/year When: No seasonal difference
Physical Appearance: • Exhibits no external signs of injury. • Exhibits "natural" appearance of deceased baby: – Lividity – settling of blood; frothy drainage from nose/mouth – Small marks (e.g., diaper rash) look more severe – Cooling/rigor mortis – takes place quickly in infants (about 3 hours) • Purple mottled markings on head and facial area. • Appears to be well-developed baby, though may be small for age. • Other siblings appear to be normal and healthy.	Physical Appearance: • Distinguishable and visible signs of injury: – Broken bone(s) – Bruises – Burns – Cuts – Head trauma (e.g., black eye) – Scars – Welts – Wounds • May be obviously malnourished. • Other siblings may show patterns of injuries commonly seen in child abuse and neglect.
May Initially Suspect SIDS When: • All of the above characteristics appear to be accurate PLUS • Parents say that infant was well and healthy when put to sleep (last time seen alive).	May Initially Suspect Child Abuse/Neglect When: • All of the above characteristics appear to be accurate PLUS • Parent's story does not "sound right" or cannot account for all injuries on infant.
NOTE: The determination of whether the child is or is not a SIDS victim is the responsibility of the medical examiner or medical coroner. It is NOT the responsibility of the Emergency Medical Technician.	

SOURCE: Bureau of Community Health Services (HSA/PHS). Training Emergency Responders: Sudden Infant Death Syndrome. An Instructor's Manual. 1979. P. C-3

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Health Resources and Services Administration
Bureau of Health Care Delivery and Assistance
Sudden Infant Death Syndrome Program

NATIONAL SIDS CLEARINGHOUSE
8201 Greensboro Drive
Suite 600
McLean, VA 22102
(703) 821-8955

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EXHIBIT G

MODULE: TRAUMA PATIENT MANAGEMENT

TRAUMA PATIENT MANAGEMENT

OVERALL COURSE OBJECTIVES

This course is largely scenario based instruction. Given didactic information and culminating in given scenarios of increasing complexity, at the end of this course the trauma care provider will be able to:

1. Identify and apply basic and advanced emergency medical scene management skills to include size-up, multi-victim situations, hazardous materials, and integration of local EMS standard operating procedures and/or the ICS to selected victim scenarios.

2. Demonstrate advanced assessment and care management of the trauma victim to include the initial assessment, detailed physical exam, vital signs, ongoing assessment, stabilization, transportation, and documentation.

3. Identify and discuss the roles and responsibility of trauma care providers in emergency departments.

4. Identify and discuss the disaster schema as it affects emergency department care providers.

5. Identify the levels of categorization for trauma.

AFFECTIVE OBJECTIVES

1. Identify advanced kinematics of trauma relative to vehicular mechanisms of injury and other types of trauma.

2. State the steps in the emergency medical care of the victim of a traumatic incident.

PSYCHOMOTOR OBJECTIVES

1. Demonstrate advanced airway management for the trauma victim to include adjuncts, endotracheal/nasotracheal intubation, esophageal obturator airway (optional), esophageal gastric obturator airway (optional), cricothyrotomy, digital intubation, needle thoracostomy, and oxygen administration.

2. Identify principles of fluid resuscitation and demonstrate peripheral IV therapy, central IV therapy, and intraosseous fluid therapy according to DOT paramedic curricula.

MODULE: TRAUMA PATIENT MANAGEMENT

3. Identify pharmacologic and electrical interventions relative to care management of the trauma victim.

4. Identify the classification and depths of burn injuries, and demonstrate advanced resuscitative management of the burn victim to include advanced airway techniques, invasive procedures, and pharmacologic and electrical interventions.

5. Identify and demonstrate advanced resuscitative care management of the pediatric, pregnant, geriatric, diabetic, altered level of consciousness (ALOC), and crisis trauma victim to include advanced airway techniques, invasive procedures, EKG monitoring, and

6. Identify and demonstrate vehicular extrication in order to provide access to an advanced care management of the trauma victim.

7. Demonstrate emergency transportation criteria, communications, and operation of the emergency vehicle relative to advanced care management of the trauma victim.

8. Demonstrate trauma victim assessment, basic and advanced airway management, invasive procedures, EKG monitoring, pharmacologic interventions, basic immobilization skills, Pneumatic Anti-Shock Garment (PASG) application, and control of hemorrhage/hypovolemia according

9. Demonstrate the ICS emergency scene management, extrication, assessment, basic and advanced care management, transportation, and documentation of the trauma victim in selected EMS scenarios.

10. Demonstrate 86 percent proficiency on a written examination and 95 percent accuracy of all practice skills in selected EMS scenarios.

Preparation

Motivation: Trauma is the leading cause of death among young adults and the primary reason for the inception of an organized out-of-hospital response system. Gaining insight into the mechanism of injury, relevant signs and symptoms of airway compromise, bleeding and shock (hypoperfusion) is vital when functioning within a traumatic incident. Using airway skills, control of bleeding and immobilization techniques are critical in providing safe care of trauma victims.

Prerequisite skills:

Registered Nurse with emergency background.

MODULE: TRAUMA PATIENT MANAGEMENT

MATERIALS

AV Equipment: 35mm slide projector; overhead transparency projector, overhead transparencies of airway anatomy, anatomy of peripheral and central circulation; slides of patients with traumatic injuries.

EMS Equipment: Basic and advanced airway adjuncts, intubation equipment to include laryngoscope handles, curved and straight laryngoscope blades sized 0-4; 'C' batteries, light bulbs for blades, Magill forceps; silicone spray, adult throat models that visualize trachea and chords. Suction units, oxygen cylinders, regulators, tubing and carrying devices.

Moulage materials to include injuries, hypo allergenic makeup and solutions, assorted sizes clothing for all ages and sizes.

Other: Running water under pressure to cleanse the staging areas after moulage incidents.

Separate rooms or space to stage incidents in and out of doors safely for students and victims.

Course should be done during daylight and night hours.

PERSONNEL

Primary Instructor: Advanced level EMS care provider; trauma surgeon validated in ATLS© and/or emergency department physician with validated in ATLS© and extensive trauma experience.

Assistant Instructors: Advanced level EMS care providers proficient in care of single and multi casualty incidents sufficient to maintain the instructor/student ratio of 1:6 and to supervise in moulage experiences.

Time to Complete: Minimum 16 clock hours

MODULE: TRAUMA PATIENT MANAGEMENT

Presentation

Declarative (What)

I. Advanced Kinematics of Trauma

II. Advance Emergency Medical Scene Management
- A. Size-up
- B. Multi-victim situations
- C. Triage
- D. Hazardous materials incidents
- E. Local EMS standard operating procedures
- F. The ICS

III. Advanced Assessment and Care Management of the Trauma Victim
- A. Initial assessment
- B. Ongoing assessment
- C. Detailed patient history
- D. Stabilization
- E. Transportation
- F. Documentation

IV. Airway Management
- A. Oxygen therapy
- B. Airway adjuncts
- C. Endotracheal intubation
- D. Nasotracheal intubation
- E. Esophageal Obturator Airway (EOA) [optional]
- F. Esophageal Gastric Obturator Airway (EGTA) [optional]
- G. Digital intubation
- H. Needle thoracostomy
- I. Cricothyrotomy

V. Fluid Resuscitation
- A. Principles of fluid resuscitation
- B. Peripheral IV therapy
- C. Central IV therapy
- D. Intraosseous fluid therapy

MODULE: TRAUMA PATIENT MANAGEMENT

VI. Advanced Pharmacologic and Electrical Interventions
- A. Resuscitative medications and fluids
- B. Defibrillation and cardioversion

VII. Burn Injuries
- A. Classifications of burns
- B. Depths of burns
- C. Thermal burn injuries and advanced management
- D. Chemical burn injuries and advanced management
- E. Electrical burn injuries and advanced management
- F. Radiologic burn injuries and advanced management

VIII. Advanced Trauma Management for Special Victims
- A. Pediatric trauma victim
- B. Pregnant trauma victim
- C. Geriatric trauma victim
- D. ALOC trauma victim
- E Diabetic trauma victim
- F. Crisis intervention

IX. Advanced Extrication (optional to the audience)
- A. Disentanglement and/or access
- B. Management
- C. Extrication and stabilization
- D. Transportation and documentation

X. Advanced Considerations for the Trauma Victim
- A. Emergency transportation criteria
- B. Communications
- C. Operation of the emergency vehicle

XI. Trauma Victim Scenarios

XII. Evaluation
- A. Written examination
- B. Skills performance

MODULE: TRAUMA PATIENT MANAGEMENT

APPLICATION

Procedural (How)

1. Review the safety aspects of scene safety and BSI
2. Review the role of trauma team in emergency department setting.
3. Review Disaster plans in hospital facilities; roles of pre hospital and emergency care providers
4. Review methods of treating victims of trauma incidents out of hospital and on admission to the emergency department
5. Review methods of activating transportation to trauma centers.
6. Review Level categorization

Contextual (When, Where and Why)

Care of the victim of traumatic incidents requires organized response in the out of hospital as setting as well as on arrival in an emergency department. Management of airway, treatment of bleeding and shock are identified during initial patient assessment after securing the scene and ensuring personal safety. Control of bleeding will be done immediately after control of airway and breathing. An unmanaged or improperly managed airway will contribute to death.

Treatment of shock (hypoperfusion) and internal bleeding will be performed immediately following the initial assessment and prior to the transportation of the patient. Bleeding that is uncontrolled or excessive will lead to shock (hypoperfusion). Shock (hypoperfusion) will lead to inadequate tissue perfusion and eventual cell and organ death. Uncontrolled bleeding will lead to shock and death.

MODULE: TRAUMA PATIENT MANAGEMENT

STUDENT ACTIVITIES

Auditory (Hear)

The students should hear realistic descriptions of a simulated trauma situations to identify signs and symptoms of airway compromise, external bleeding, internal bleeding, and shock (hypoperfusion). The students should hear normal breathing, or recognize absence of breathing. The students should hear systolic and diastolic sounds associated with taking a blood pressure.

Visual (See)

The students should see audio-visual aids or materials of the various scenes of trauma. These should include examples of levels of trauma, airway compromise, types of external bleeding and various signs of internal bleeding and shock (hypoperfusion). The student should see audio-visual aids or materials supporting the discussion of airway management and the proper methods to control bleeding, and treat for internal bleeding and shock (hypoperfusion).

The student should see a patient to identify major bleeding and signs of internal bleeding and shock (hypoperfusion). The students should see, in simulated situations, the application of direct pressure, elevation, splints, counterpressure devices, cryotherapy, and tourniquets in the treatment of external bleeding. The students should see, in simulated situations, the treatment of the internal bleeding and shock (hypoperfusion). The students should see audio-visual aids or materials with known amounts of blood on gauze pads, vaginal pads, clothing, floors, and humans.

Kinesthetic (Do)

The students should practice techniques for assessment of airway, breathing and circulation; emergency airway maneuvers, application of direct pressure, elevation, splints, and tourniquets. The students should practice the treatment of internal bleeding and shock (hypoperfusion). Prehospital students should practice completing a prehospital care report for all scenarios.

MODULE: TRAUMA PATIENT MANAGEMENT

INSTRUCTOR ACTIVITIES

1. Supervise student practice.

2. Reinforce student progress in cognitive, affective, and psychomotor domains. Redirect students having difficulty with content.

Written:

Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical:

1. Prepare realistic scenarios depicting trauma.

2. Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

3. Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

1. What is unique about the protocols in the local area concerning this topic?

tpmii.dhs

EXHIBIT H

OFFICE OF EMERGENCY MEDICAL SERVICES
BASIC LIFE SUPPORT TRAINING PROGRAM APPLICATION
FOR CERTIFICATION / RECERTIFICATION / COURSE APPROVAL

(Mark one)

_____ New Certificate

_____ Recertification (certificate number) _____

_____ Approval of a course to be conducted under certificate number _____

Indicate the level of the course:

____**First Responder**
____**First Responder Refresher**
____**Basic EMT**
_____**Basic EMT Refresher**
_____**Basic EMT Special Skills**

Name of Applicant (Training Institution):	Location of Classroom:
List the names of all owners, corporate officers (attach additional sheet(s) if needed):	List all BLS training program certificates currently or previously held by the training program or its owners/corporate officers:
Mailing address:	Course Dates: Start: End: Day(s) of week: Times:
Medical Director:	Medical Director's phone number:
Program Director:	Program Director's phone number:
Course Manager:	Course Manager's phone number:

I hereby certify that the information provided in this application is correct. I verify that I have the authority to act on behalf of, and legally bind, the named agency as applicant.

Signature _____ Title _____ Date_____

EXHIBIT I

BLS EMS TRAINING PROGRAM EQUIPMENT/SUPPLIES LIST

Quantity	Equipment
1	Moulage Kits or Casualty Simulator Kits
2	Pair of old pants and shirts
2	Blankets (cotton or cotton/blend)
10 rolls each size	Adhesive cloth/silk type tape - 1/2 inch, 1 inch, 2 inch, 3 inch.
10 rolls each size	Adhesive paper/plastic type tape - 1/2 inch, 1 inch, 2 inch, 3 inch.
24	Trauma Dressings
1 per student	Pen Lights
1 per student	Scissors
10	Stethoscopes
2	Dual head training stethoscopes
10	Blood pressure cuffs - adult sizes
10	Blood pressure cuffs - child size
2	Bag-valve-mask devices - adult size
2	Bag-valve-mask devices - pediatric size
2	Oxygen tank with regulator and key. (must be operational and maintain a minimum of 500psi)
50	Oxygen masks non-rebrether - adult
50	Oxygen masks non-rebrether - child
50	Nasal cannulas
2 boxes	Alcohol preps
1 case of each size	Gloves - (small, medium, large, and extra large)
1 case	2x2 sponges
1 case	4x4 sponges
1 case	5x9 sponges
2 cases	Roller gauze
1 box	Vaseline gauze or occlusive dressings

2	Traction splint devices
2	Vest type immobilization devices
2	Long spine boards with three (3) 9 foot straps per board
2 of each size	Cervical collars (small, regular, medium, large, and extra large) **NOTE:** (soft collars and foam types are not acceptable)
2	Head immobilization materials/devices
2	Pneumatic Anti-Shock Garments - Adult
2	Pneumatic Anti-Shock Garments - Child
2 sets	Mobile or portable transmitter/receivers or hand held walkie talkies with full charged batteries.
1	Ambulance stretcher
1	Poison kit
1	Oral glucose tube
2	Electric (battery operated) portable suction device
20	Rigid suction catheters
20	Flexible suction catheters
2 of each size	Oropharyngeal airways
2 of each size	Nasopharyngeal airways

2 of each size	Rigid splints (6 inch, 12 inch, 18 inch 24 inch, and 36 inch)
2	Burn sheets
2	OB kits
8 bottles	Sterile water
2	CPR Mannikins - adult
2	CPR Mannikins - child
2	CPR Mannikins - infant
4 per manikin	Replacement lungs
1 case	CPR face shields
1	Semi-Automatic Defibrillator

NOTE: A box, roll or case must be unused to be counted toward the minimum requirements. Sets and units must be complete to be counted toward the minimum requirement.

EXHIBIT K

ARIZONA DEPARTMENT OF HEALTH SERVICES

OFFICE OF EMERGENCY MEDICAL SERVICES

SPECIAL SKILLS CURRICULUM, 1994

Module: Advanced Airway for EMT-Basics

OBJECTIVES

At the end of this course the EMT-B student will be able to:

1. Identify and describe the airway anatomy in neonate, infant, pediatric and adult victims.
2. Identify and describe pathophysiology of airway compromise
3. Identify and demonstrate the use of appropriate airway adjunct and oxygen therapy
4. Identify the need for invasive airway techniques
5. State the complications of advanced airway techniques

AFFECTIVE OBJECTIVE

1. Explain the rationale for employing invasive airway techniques based on patient assessment.

PSYCHOMOTOR OBJECTIVES

1. Manage the pediatric and adult patients victims with partial and complete airway obstruction
2. Perform endotracheal intubation, orotracheal and deep tracheal suctioning
3. Demonstrate 100% accuracy in airway management in selected scenarios
4. Demonstrate 85% proficiency on a written examination

Preparation

Motivation: Accurate assessment and management of the airway is critical to survival of illness and/or injury and is the first assessment and treatment in basic life support. Often the victim of airway compromise requires advanced management and the first responder to such crises is a EMT-B. In the rural communities and is some metropolitan areas of the critical 5-6 minutes of patient management is the sole responsibility of the EMT-B.

Prerequisite Skills: Certified EMT-B

Module: Advanced Airway for EMT-Basics

MATERIALS

AV Equipment:	35mm slide projector; overhead transparency projector; overhead transparencies of airway anatomy, sites of obstruction. Slides of patients with various airway problems.
EMS Equipment:	Basic airway adjuncts; intubation equipment to include laryngoscope handles, curved and straight laryngoscope blades sized 0-4; 'C' batteries, light bulbs for the blades, Magill forceps; silicone spray. Adult and infant intubation models; adult throat models that visualize the trachea and chords. Suction units, oxygen cylinders, regulators, tubing and carrying devices.

PERSONNEL

Primary Instructor:	One advanced level EMS care provider proficient in advanced airway techniques in the field.
Assistant Instructors:	Advanced level EMS care providers proficient in advanced airway techniques in the field to maintain instructor/student ratio of 1:6 and to supervise in lab and field experience.
Time to complete:	Sixteen clock hours (4 didactic, 4 lab and 8 hours in the field)

Module: Advanced Airway for EMT-Basics

Presentation

Declarative (What)

I. Airway anatomy and physiology review
(see Module 2: Airway)

II. Advanced adjuncts
1. Nasogastric tube (NGT)
2. In-line small volume nebulizer (SVN)
3. Nasotracheal intubation (NTI)
4. Endotracheal intubation (ETI)

III. Invasive airway procedures
A. Orotracheal suctioning
B. Deep tracheal suctioning
C. Endotracheal intubation

IV. Complications of invasive airway procedures
A. Hemorrhage
B. Perforation of the trachea
C. Perforation of the esophagus
D. Cardiac Dysrhythmia

V. Evaluations
A. Practical exams
B. Final Exams

I. Tracheal intubation
A. Purpose
The most effective but not the initial means of controlling ventilation.
1. Use in apneic patients
2. Tracheal intubation provides
a. complete control over the airway
b. protection from aspiration
c. allows for better oxygen delivery system
d. allows for deeper suctioning into the trachea

3. Hazards:
a. esophageal and/or bronchial intubation
b. anoxia during the procedure

Module: Advanced Airway for EMT-Basics

B. Equipment
1. Tracheal tubes are soft plastic of various sizes. The 7.5 or 8.0 is considered common.
2. For pediatrics, do not use cuffed tubes up to about age 8 years.
3. The ET tube is open at both ends, and has an adapter at the proximal end, and a cuff at the distal end, attached to the pilot tube which is also cuffed. The distal cuff is designed so that when it is inflated the patient is protected from aspiration.
4. Stylets
5. Suction device
6. Tape or other device to secure the tube once inserted

C. Operating Procedure
1. Assemble all the equipment prior to insertion, preferably to the right of the patient's head.

a. hyperventilate the patient; suction as necessary
b. check the cuff prior to insertion; deflate
c. check the laryngoscope to be sure the light works, tighten the bulb. The bulb should be 'white, bright and tight'.
d. note that the laryngoscope will not light unless the blade is in the locked position. Use a curved (MacIntosh) or straight (Miller) blade.
e. align the patient's head/neck as demonstrated for best visualization of the trachea (chords)
f. open the mouth, holding the laryngoscope in your left hand, insert the blade following the natural contour of the pharynx. Sweep the tongue gently and carefully to the left.
(1) A straight blade picks up the epiglottis; a curved blade lifts the epiglottis after insertion into the vallecula
g. application of pressure on the cricoid may help
h. the procedure should take only 15-20 seconds
i. once ventilation is assessed bilaterally, inflate the cuff (some medical directors prefer that the cuff inflation is done ASAP after insertion)
j. attach the bag-valve device to the tube and ventilate

Module: Advanced Airway for EMT-Basics

C. Operating Procedure (continued)
   k. assess breath sounds bilaterally and confirm there is no air sounds over the epigastrium.
   l. replace oral airway
   m. secure the airway with tape or commercial stabilizing device approved by medical control
   n. attach the bag-valve device to the tube and ventilate 12-20 per minute
   o. suction as necessary
   p. document and transport
   q. reassess breath sounds after any major movement of the patient, ie from the scene to the ambulance; ambulance to the facility.

2. Complications
   a. trauma to lips, teeth, tongue, gums.
   b. prolonged delay prolongs the apneic episode

Application

Procedural (How)

1. Review diagrams of airway of adults and children
2. Review head tilt-chin lift and jaw thrust methods of opening the airway in adults and children
3. Demonstrate intubation technique in adults and infants
4. Demonstrate patient assessment techniques post intubation
5. Demonstrate securing the endotracheal tube (ET)
6. Demonstrate ventilating the patient with ET tube in place
7. Demonstrate suctioning prior to and after ET insertion.
8. Supervise cadaver lab performance
9. Supervise vehicular and clinical patient performance

Contextual (When, Where, Why)

Any patient with chest pain consistent with signs and symptoms of respiratory distress should receive supplemental oxygen therapy. If the patient is unresponsive and cannot breath unassisted, the airway must be established and maintained. If a patient has been defibrillated, spontaneous breathing has not recurred, and bag-valve-mask ventilation is not efficient for ventilation, the EMT must consider endotracheal intubation. Otherwise, all other efforts of life support may be in vain.

Module: Advanced Airway for EMT-Basics

Instructor Activities

Observe and supervise student practice

Reinforce student progress in cognitive, affective and psychomotor domains

Redirect students having difficulty in content (completes remediation forms)

Evaluation	
Written:	Develop evaluation instruments, eg quiz, oral reviews, handouts and study guides to determine student achievement of objectives for this module.
Practical:	Evaluate EMT-B performance during skills practice, lab and vehicular patient care to determine mastery of psychomotor objectives of this module.

EXHIBIT L

ARIZONA DEPARTMENT OF HEALTH SERVICES
OFFICE OF EMERGENCY MEDICAL SERVICES

BASIC LIFE SUPPORT TRAINING PROGRAM
COURSE COMPLETION REPORT

This report must be submitted with an Official Class Roster (form OEMS-005).

Program name _____ Certificate number _____

Program Director's name (print) _____

Medical Director's name (print) _____

Date of completion _____ Course type _____

I, as Medical Director of this training program verify that I understand and have complied with all requirements of the Arizona Administrative Code R9-13-303.

I, as Program Director of this training program verify that I understand and have complied with all requirements of the Arizona Administrative Code R9-13-304.

We verify that each student on the attached official class roster has:

1. *Achieved competency of every stated objective for didactic, clinical, and vehicular (for Basic EMT special skills) components of the curriculum.*

2. *Met the minimum contact hour requirements for didactic, clinical, and vehicular (for Basic EMT special skills) components as stated in the curriculum.*

3. *Demonstrated proficiency in all skills encompassed in the curriculum by successfully performing the procedure on live patients, cadavers, manikins or a combination of these.*

By affixing our signatures to this form we verify that each student listed on the Official Class Roster has successfully completed all requirements of the Arizona Basic Life Support Curriculum. We verify that records required by Arizona Administrative Code, Title 9, Chapter 13, Article 3, are available for inspection on request.

_____ _____
Medical Director Date

_____ _____
Program Director Date

EXHIBIT M

ARIZONA DEPARTMENT OF HEALTH SERVICES
OFFICE OF EMERGENCY MEDICAL SERVICES

CLASS ROSTER

(Check one) ___Prospective ___Active ____Official ____Addendum

TOTAL NUMBER OF STUDENTS ON ROSTER:_____

PROGRAM CERTIFICATION OR ID NUMBER:_____

TYPE OF COURSE:_____ LOCATION OF COURSE:_____

DATE OF COURSE:_____ _____
START DATE END DATE

TOTAL HOURS:_____ DIDACTIC:_____ CLINICAL:_____ VEHICULAR:_____

PROGRAM DIRECTOR:_____ COURSE MANAGER:_____

MEDICAL DIRECTOR:_____

NAME	HOME ADDRESS	SOCIAL SECURITY #
	EMPLOYER	CERT # & EXP DATE
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

USE OTHER SIDE FOR ADDITIONAL NAMES PAGE 1 OF 2

ADHS OEMS-005
REV: August 2, 1995

NAME	HOME ADDRESS	SOCIAL SECURITY #
	EMPLOYER	CERT # & EXP DATE
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
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23.		
24.		
25.		

PAGE 2 OF 2

EXHIBIT N

Arizona

Basic Life Support Curriculum

1994

The Arizona Basic Life Support Curriculum consists of four sections:

1. Emergency Medical Technician: Basic National Standard Curriculum, 1994.

   Copies are available from the U.S. Printing Office.
   Superintendent of Documents
   P.O. Box 371954
   Pittsburgh, Pennsylvania 15250-7954.
   Fax orders:(202) 512-2259 Phone orders:(202) 512-1800

2. Blood Glucose Monitoring Curriculum.

3. Intravenous Monitoring Curriculum.

4. Sudden Infant Death Syndrome Training Fact Sheet and Video. Copies of the video are available from the Office of Emergency Medical Services

The following items should be noted:

A. Throughout the DOT curriculum the reference to the "recommended minimum time to complete" must be understood to mean that this is the minimum time required. The Arizona Department of Health Services recommends, based on information from pilot studies conducted by the Florida Department of Health Services, that programs consider adding time to the curriculum. With the emphasis of this curriculum being on skills, a normal class load of 16-20 students will need additional time to gain the practice necessary to achieve competency in the psychomotor objectives.

B. Module 8 of the DOT is not permitted to be taught as part of the Arizona Basic EMT course. Programs wishing to teach this module must comply with Article 3 of the Arizona Administrative Code relating to "Special Skills Courses".

C. Pages 1 through 24 of the DOT curriculum are included as informational only. The remainder of the curriculum, along with Article 3 of the Arizona Administrative Code, are minimum standards that must be met.

This is an outline of the Arizona Basic Life Support Curriculum. It **must** be used in conjunction with the instructional methodology and learning objectives of the actual curriculum.

1.5 Hrs **Lesson 1-1 Introduction to Emergency Medical Care**

Familiarizes the EMT-Basic candidate with the introductory aspects of emergency medical care. Topics covered include the Emergency Medical Services system, roles and responsibilities of the EMT-Basic, quality improvement, and medical direction.

1.5 Hrs **Lesson 1-2 Well-Being of the EMT-Basic**

Covers the emotional aspects of emergency care, stress management, introduction to Critical Incident Stress Debriefing (CISD), scene safety, body substance isolation (BSI), personal protection equipment (PPE), and safety precautions that can be taken prior to performing the role of an EMT-Basic.

1.5 Hrs **Lesson 1-3 Medical/Legal and Ethical Issues**

Explores the scope of practice, ethical responsibilities, advance directives, consent, refusals, abandonment, negligence, duty to act, confidentiality, and special situations such as organ donors and crime scenes. Medical/legal and ethical issues are vital elements of the EMT-Basic's daily life.

2.5 Hrs **Lesson 1-4 The Human Body**

Enhances the EMT-Basic's knowledge of the human body. A brief overview of body systems, anatomy, physiology and topographic anatomy will be given in this session.

2 Hrs **Lesson 1-5 Baseline Vital Signs and SAMPLE History**

Teaches assessing and recording of a patient's vital signs and a SAMPLE history.

3 Hrs **Lesson 1-6 Lifting and Moving Patients**

Provides students with knowledge of body mechanics, lifting and carrying techniques, principles of moving patients, and an overview of equipment. Practical skills of lifting and moving will also be developed during this lesson.

1 Hr **Lesson 1-7 Evaluation: Preparatory Module**

Conduct a written and skills evaluation to determine the student's level of achievement of the cognitive, psychomotor and affective objectives from this module of instruction.

4 Hrs **Lesson 2-1 Airway**

Teaches airway anatomy and physiology, how to maintain an open airway, pulmonary resuscitation, variations for infants and children and patients with laryngectomies. The use of airways, suction equipment, oxygen equipment and delivery systems, and resuscitation devices will be discussed in this lesson.

2 Hrs **Lesson 2-2 Practical Skills Lab: Airway**

Provides supervised practice for students to develop the psychomotor skills of airway care. The use of airways, suction equipment, oxygen equipment and delivery systems, and resuscitation devices will be included in this lesson.

1 Hr **Lesson 2-3 Evaluation: Airway Module**

Conduct a written and skills evaluation to determine the student's level of achievement of the cognitive, psychomotor and affective objectives from this module of instruction.

0.5 Hrs **Lesson 3-1 Scene Size-Up**

Enhance the EMT-Basic's ability to evaluate a scene for potential hazards, determine by the number of patients if additional help is necessary, and evaluate mechanism of injury or nature of illness. This lesson draws on the knowledge of Lesson 1-2.

1 Hr **Lesson 3-2 Initial Assessment**

Provides the knowledge and skills to properly perform the initial assessment. In this session, the student will learn about forming a general impression, determining responsiveness, assessment of the airway, breathing and circulation. Students will also discuss how to determine priorities of patient care.

4 Hrs **Lesson 3-3 Focused History and Physical Exam - Trauma Patients**

Describes and demonstrates the method of assessing patients' traumatic injuries. A rapid approach to the trauma patient will be the focus of this lesson.

2 Hrs **Lesson 3-4 Focused History and Physical Exam - Medical Patients**

Describes and demonstrates the method of assessing patients with medical complaints or signs and symptoms. This lesson will also serve as an introduction to the care of the medical patient.

1 Hr **Lesson 3-5 Detailed Physical Exam**

Teaches the knowledge and skills required to continue the assessment and treatment of the patient.

1 Hr **Lesson 3-6 On-Going Assessment**

Stresses the importance of trending, recording changes in the patient's condition, and reassessment of interventions to assure appropriate care.

1 Hr **Lesson 3-7 Communications**

Discusses the components of a communication system, radio communications, communication with medical direction, verbal communication, interpersonal communication, and quality improvement.

1.5 Hrs **Lesson 3-8 Documentation**

Assists the EMT-Basic in understanding the components of the written report, special considerations regarding patient refusal, the legal implications of the report, and special reporting situations. Reports are an important aspect of prehospital care. This skill will be integrated into all student practices.

8 Hrs **Lesson 3-9 Practical Skills Lab: Patient Assessment**

Integrates the knowledge and skills learned thus far to assure that the student has the knowledge and skills of assessment necessary to continue with the management of patients with medical complaints and traumatic injuries.

1 Hr **Lesson 3-10 Evaluation: Patient Assessment Module**

Conduct written and skills evaluation to determine the student's level of achievement of the cognitive, psychomotor and affective objectives from this module of instruction.

1 Hr **Lesson 4-1 General Pharmacology**

Provides the student with a basic knowledge of pharmacology, providing a foundation for the administration of medications given by the EMT-Basic and those used to assist a patient with self-administration.

2.5 Hrs **Lesson 4-2 Respiratory Emergencies**

Reviews components of the lesson on respiratory anatomy and physiology. It will also provide instruction on assessment of respiratory difficulty and emergency medical care of respiratory problems, and the administration of prescribed inhalers.

7 Hrs **Lesson 4-3 Cardiovascular Emergencies**

Reviews of the cardiovascular system, an introduction to the signs and symptoms of cardiovascular disease, administration of a patient's prescribed nitroglycerin, and use of the automated external defibrillator.

2 Hrs **Lesson 4-4 Diabetes/Altered Mental Status**

Reviews of the signs and symptoms of altered level of consciousness, the emergency medical care of a patient with signs and symptoms of altered mental status and a history of diabetes and the administration of oral glucose.

2 Hrs **Lesson 4-5 Allergies**

Teaches the student to recognize the signs and symptoms of an allergic reaction, and to assist the patient with a prescribed epinephrine auto-injector.

2 Hrs **Lesson 4-6 Poisoning/Overdose**

Teaches the student to recognize the signs and symptoms of poisoning and overdose. Information on the administration of activated charcoal is also included in this section.

2 Hrs **Lesson 4-7 Environmental Emergencies**

Covers recognizing the signs and symptoms of heat and cold exposure, as well as the emergency medical care of these conditions. Information on aquatic emergencies and bites and stings will also be included in this lesson.

1.5 Hrs **Lesson 4-8 Behavioral Emergencies**

Develops the student's awareness of behavioral emergencies and the management of the disturbed patient. Restraining the combative patient will also be taught in this lesson.

2 Hrs **Lesson 4-9 Obstetrics/Gynecology**

Reviews the anatomical and physiological changes that occur during pregnancy, demonstrate normal and abnormal deliveries, summarize signs and symptoms of common gynecological emergencies, and neonatal resuscitation.

8 Hrs **Lesson 4-10 Practical Skills Lab: Medical/Behavioral Emergencies and Obstetrics/Gynecology**

Draws on the knowledge and skills learned thus far in this practical lab. Students will be given the opportunity to assess and treat a variety of patients with various medical complaints.

1 Hr **Lesson 4-11 Evaluation: Medical/Behavioral Emergencies and Obstetrics/Gynecology**

Conducts a written and skills evaluation to determine the student's level of achievement of the cognitive, psychomotor and affective objectives from this module of instruction.

2 Hrs **Lesson 5-1 Bleeding and Shock**

Reviews the cardiovascular system, describes the care of the patient with internal and external bleeding, signs and symptoms of shock (hypoperfusion) and the emergency medical care of shock (hypoperfusion).

2 Hrs **Lesson 5-2 Soft Tissue Injuries**

Continues with the information taught in Bleeding and Shock, discussing the anatomy of the skin and the management of soft tissue injuries and the management of burns. Techniques of dressing and bandaging wounds will also be taught in this lesson.

4 Hrs **Lesson 5-3 Musculoskeletal Care**

Reviews of the musculoskeletal system before recognition of signs and symptoms of a painful, swollen, deformed extremity and splinting are taught in this section.

4 Hrs **Lesson 5-4 Injuries to the Head and Spine**

Reviews the anatomy of the nervous system and the skeletal system. Injuries to the spine and head, including mechanism of injury, signs and symptoms of injury, and assessment. Emergency medical care, including the use of cervical immobilization devices and short and long back boards will also be discussed and demonstrated by the instructor and students. Other topics include helmet removal and infant and child considerations.

6 Hrs **Lesson 5-5 Practical Skills Lab: Trauma**

Provides practice of the assessment and management of patients with traumatic injuries.

1 Hr **Lesson 5-6 Evaluation: Trauma Module**

Conducts a written and skills evaluation to determine the student's level of achievement of the cognitive, psychomotor and affective objectives from this module of instruction.

3 Hrs **Lesson 6-1 Infants and Children**

Presents information concerning the developmental and anatomical differences in infants and children, discusses common medical and trauma situations, and also covers infants/children dependent on special technology as a challenge for EMS providers.

3 Hrs **Lesson 6-2 Practical Skills Lab: Infants and Children**

Provides the EMT-Basic student with the opportunity to interact with infants and children, and to practice the knowledge and skills learned thus far concerning this special population.

1 Hr **Lesson 6-3 Evaluation: Infants and Children**

Conduct a written and skills evaluation to determine the student's level of achievement of the cognitive, psychomotor and affective objectives from this module of instruction.

1 Hr **Lesson 7-1 Ambulance Operations**

Presents an overview of the knowledge needed to function in the prehospital environment. Topics covered include responding to a call, emergency vehicle operations, transferring patients, and the phases of an ambulance call.

1 Hr **Lesson 7-2 Gaining Access**

Provides the EMT-Basic student with an overview of rescue operations. Topics covered include roles and responsibilities at a crash scene, equipment, gaining access, and removing the patient.

2 Hrs **Lesson 7-3 Overviews**

Provides the EMT-Basic student with information on hazardous materials, incident management systems, mass casualty situations, and basic triage.

1 Hr **Lesson 7-4 Evaluation: Operations**

Conduct a written and skills evaluation will be done to determine the student's level of achievement of the cognitive, psychomotor and affective objectives from this module of instruction.

1.5 Hrs **Blood Glucose Monitoring**

Provides information and hands-on training to EMT-Basic students on the equipment and procedures necessary to evaluate blood sugar levels.

3 Hrs **Intravenous (IV) Monitoring**

Provides information and hands-on training to EMT-Basic Students necessary to transport patients with an established IV or patient controlled analgesic pump (PCA).

0.5 Hrs **Sudden Infant Death Syndrome (SIDS)**

Provides the EMT-Basic student with information on SIDS as required by Arizona Statute.

2 Hrs **Final Written Examination**

The training program shall administer a 150 question, multiple choice, examination that comprehensively covers the entire curriculum.

5 Hrs **Final Practical Examination**

The training program shall administer a final practical examination that adheres to the standards set forth by the National Registry of Emergency Medical Technicians.

IV MONITORING MODULE - OBJECTIVES

1. Describe the purpose of Intravenous (IV) lines.
2. Describe the purpose for monitoring IV Lines by EMT-Basics.
3. Identify the various types of IV catheters.
4. Identify the various sizes of IV catheters.
5. Identify the different types of IV fluids.
6. Identify the various types of IV tubing.
7. Define infiltration of an IV solution.
8. Discuss the importance of body substance isolation and techniques related to IV monitoring procedures.
9. Describe signs and symptoms of infiltration.
10. Discuss the procedure for assessment for proper placement of IV lines.
11. Demonstrate the ability to calculate IV infusion flow rates.
12. Discuss the role of Medical Control for IV Monitoring.
13. Identify the purpose of a Hep-Lock® catheter.
14. Identify and discuss various types of permanent indwelling catheters.
15. Identify and discuss analgesic pumps, types, operations, drugs used with the pumps and EMT-Basic interventions.
16. Discuss signs and symptoms and BLS treatment of narcotic overdose.
17. Explain the importance of prehospital Advanced Life Support (ALS) intervention for drug overdose.
18. Discuss the differences between peripheral lines and central lines.
19. Define the types of IVs approved to be transported by EMT-Basics.
20. List the IVs that shall not be transported by the EMT-Basics.

AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-B will be able to:

1. Defend the reason for obtaining initial training and continuing education in IV monitoring.

2. Defend the reason for medical control for IV monitoring.

3. Defend the reason for obtaining initial training in monitoring analgesic pumps.

4. Defend the reason for medical control for monitoring analgesic pumps.

PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-B will be able to:

1. Demonstrate the assessment of the patient with an IV infusion.

2. Demonstrate the assessment of the IV insertion site.

3. Demonstrate the ability to calculate IV infusion rates.

4. Demonstrate the procedure for irrigation of the IV line.

5. Demonstrate the procedure for discontinuing the IV line.

6. Demonstrate the assessment of the patient with an analgesic pump.

7. Demonstrate body substance isolation techniques related to any IV monitoring procedure.

PREPARATION

Motivation: Intravenous (IV) monitoring is a routine function performed by EMT-Basics during the course of general transport from home to facility, between facilities and from facility to home. Often the patient will have an intravenous infusion in place. It is imperative that the EMT-Basic know which types of (patient) IVs they may transport and how to safely transport that patient.

While Medical Control is not required, when the EMT-Basic is under medical control of a base hospital, the EMT-Basic must function under that ALS Base Hospital's policies.

As with any additional skill, the ALS Base Hospital will be responsible for: (1) Managing skills retention through continuing education and Quality Assurance monitoring. (2) Reporting to the Department performance issues or withdrawal of medical control.

Prerequisites: Enrolled in a course conducted by a certified EMT Basic training program or be certified as an EMT Basic.

MATERIALS

A-V equipment: Utilize various audio-visual materials relating to IV monitoring.Handout Materials and related study guides should be edited to assure meeting the objectives of this curriculum.

EMS Equipment: Intravenous (IV) training arm, IV tubing (regular, blood, pediatric), IV catheters (14g, 16g, 18g, 20g, 22g, 24g, butterfly) IV fluids (D_5W) Lactated Ringers, Normal Saline); Tape, 2x2's, tourniquets.
Latex gloves, disposable bags, SHARPS container

Analgesic pump or training film

PERSONNEL

Primary Instructor: The lead instructor must be certified in the State of Arizona as an I-EMT, Paramedic, Registered Nurse, Physician's Assistant or Physician.The lead instructor should have previous teaching experience.

Recommended Minimum
Time to Complete: Three hours

PRESENTATION

Declarative (What)

I. Purpose of IV lines:

A. Route for replacement of fluids

B. Route for administration of drugs

II. Purpose for EMT-Basics to monitor IV infusion:

A. This procedure is designed only for inter-facility transports and non-emergency transports (between hospitals, home, nursing home, doctor's office, clinic) of patients with IVs.

B. Comfort of patient by not having to discontinue their IV at one facility only to have it restarted upon arrival at the receiving facility.

C. EMT-Basics shall not be monitoring the IV of a patient who is in a critical or unstable condition or who requires ALS treatment/monitoring.

D. Monitoring of IVs inserted in a prehospital emergency is specifically excluded.

III. Types of Intravenous Cannulas:

A. Hollow needle (butterfly)

B. Plastic catheter inserted over a hollow needle

C. Buff caps® (Hep-Locks®, saline locks)

D. Surgically placed indwelling catheters (Portacath®, Hickman®, etc...)

IV. Sizes of Intravenous Cannulas:

A. 14 gauge - 20 gauge used on adults

B. 20 gauge - 25 gauge used on children

C. Length of cannulas vary from 1/2" - 3" depending on gauge size of cannula

V. Types of Intravenous tubing:

A. Pediatric (aka mini-drip) tubing

B. Regular tubing

C. Blood tubing

D. Flow rate calculations for each

E. Filters

VI. Approved IV fluids the EMT-Basic may monitor:

A. 5% Dextrose and water

B. Normal Saline (0.9 % & 0.45%)

C. Lactated Ringers

D. Combinations of above listed fluids

VII. EMT-Basics shall not transport patients with:

A. IV fluid additives defined as:

1. Medications

2. Minerals

3. Vitamins

B. IVs started in a prehospital setting

C. Unstable patients with an IV in place.

VIII. Intravenous infiltration:

A. Signs/Symptoms of infiltration

1. Swelling and pain at the IV site

2. Edema - Compare extremities for questionable swelling

3. Pain at IV site - differentiate causes of pain other than infiltration

4. Discontinue the IV infusion

IX. Assessment of the Intravenous Cannula:

1. Light touch over approximate end of cannula to check effect on flow in drip chamber

2. Lower IV fluid below IV site to check for blood return into IV tubing

3. Look for signs/symptoms of intravenous infiltration

X. Trouble-shooting IVs not infusing:

1. Assess for an object constricting circulation above IV site

2. Assess IV tubing attachments

3. Assess air venting into bottled fluids

4. Assess for a flooded drip chamber

5. Check height of IV fluid. Cramped quarters in transport vehicles often inhibits gravity required for proper flow of intravenous fluid

6. As last resort, use sterile technique to irrigate IV tubing with 3cc of IV fluid being infused.

7. If unable to trouble-shoot intravenous infusion leave IV alone unless infiltration is apparent

8. Discontinue IV only if infiltration has occurred

XI. IV flow calculations:
Various standard drip rates for orders such as to-keep-open (TKO) and discuss calculation for each type of tubing.

1. Pediatric tubing

2. Regular tubing (10 and 15 gtts)

3. Blood tubing

XII. Types of IVs approved for transport by EMT-Basics with IV monitoring status:

1. Any peripheral IV as described in Section VI, in a stable patient.

2. Any permanent indwelling catheter with or without an analgesic pump, in a stable patient.

3. Any central line that is capped and not infusing in a stable patient.
Note: EMT-Basics are shall not monitor IVs started in a prehospital setting.

XIII. Overview of Analgesic Pumps:

1. Purpose of pumps and the types of patients who might be on these pumps.

2. Pump operations

3. Differentiate between locked (preset) and open pumps.

4. Discuss the purpose of the "demand button" on pump and precalculation mechanism for analgesic medication.

5. Drugs commonly used with these pumps.

6. Signs and symptoms of narcotic overdose.

7. Discuss BLS treatment of narcotic overdose.(ABCs and initiating ALS response)

8. Responsibility and operations of all analgesic pumps belongs to the patient or home care-giver. The EMT will only intervene in emergency situations and must initiate ALS response in these situations.

APPLICATION

Procedural (How)

1. Demonstrate the assessment and care of the patient with an IV infusion.
2. Demonstrate the calculation of IV infusion flow rates.
3. Demonstrate the assessment of signs of infiltration.
4. Demonstrate IV irrigation technique.
5. Demonstrate lifting and moving a patient with an IV infusion.
6. Demonstrate lifting and moving a patient with an analgesic pump.
5. Demonstrate lifting and moving a patient with an analgesic pump.

Contextual (When, Where, Why)

The EMT-Basic must prepare to assess and manage patients during inter-facility transport with IV infusions and analgesic pumps. The training lab must provide simulated situations for the student to practice demonstrated skills. The student must be able to integrate skills into simulated scenarios in order to perform safe and effective practice.

STUDENT ACTIVITIES

Auditory (Hear)

1. The student should hear the instructor simulate instructions on protocols for assessment of IV infusion status.
2. The student should hear of actual cases where infiltration was identified.
3. The student should hear of cases when irrigation of the IV was successful in reestablishing the infusion.

Visual (See)

1. The student should see an instructor appropriately assess an IV infusion site.
2. The student should see an instructor appropriately irrigate an IV infusion site.
3. The student should see an analgesic pump in action.

Kinesthetic (Do)

1. The student should practice the assessment of an IV infusion site.
2. The student should practice calculations of drip rates with various sizes of tubing and drip chambers.
3. The student should practice maintenance checks of IV site for infiltration.
4. The student should practice irrigation techniques.
5. The student should practice discontinuing the IV.
6. The student should practice completing a prehospital care report for a patient with IV infusion.

INSTRUCTOR ACTIVITIES

I. Supervise student practice.

II. Reinforce student progress in cognitive, affective, and psychomotor domains.

III. Redirect students having difficulty in content (complete remediation forms).

EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-B students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor/course guide.

ENRICHMENT

What is unique in the local area concerning this topic?

Complete enrichment sheets from the instructor/course guide and attach with lesson plan.

Prehospital Blood Glucose Testing
CURRICULUM

Course description:

Blood Glucose Testing is a procedure approved by the Medical Direction Commission of the Arizona Department of Health Services, Office of EMS, for use by certified Basic EMT's, Intermediate EMT's and EMT-Paramedics, only when under the Direction of an ALS Base Hospital that supports this procedure.

Successful completion of this course will constitute eligibility for certified Basic EMT's, EMT-Intermediates and EMT-Paramedics to utilize Blood Glucose Testing only when under the Medical Direction of an ALS Base Hospital.

NOTE: As with any advanced skill, the ALS Base Hospital will be responsible for: (1) Managing skills retention through continuing education and Quality Assurance monitoring; and (2) Reporting to the Department performance issues or withdrawal of medical control. The ALS Base Hospital may delegate the responsibility of managing skills retention and/or the Quality Control Program through written agreement to a Provider Agency with a current CLIA Certificate of Waiver. The ALS Base Hospital will have the authority and responsibility of reviewing, monitoring and making recommendations regarding the Provider Agency's Program. Reporting performance issues and/or withdrawal of medical control shall be the ALS Base Hospital's responsibility.

This document is the Official minimum standard curriculum for Blood Glucose Testing training.

Prerequisites:

The student must be a student enrolled in a course offered by a certified Basic EMT training program; or be a certified Basic EMT, EMT-Paramedic or EMT-Intermediate; and be under the Medical Direction of an approved ALS Base Hospital willing to conduct training and continuing education related to this skill.

Methodology:

Description - The course is designed to be a minimum of 1 ½ hours in length and combine lecture with hands-on practice.

Lead Instruction - The lead instructor must be certified in the State of Arizona as a Paramedic, Certified Laboratory Technician, Registered Nurse, Pharmacist or Licensed Physician. The lead instructor should have previous teaching experience and must have expertise in the process and the equipment.

Minimum Time Requirements -

Breakdown of minimum hours of instruction:

Module One:	Lecture with equipment display	½ hour
Module Two:	Lab with hands-on practice	1 hour
Module Three:	Formal testing stations	As required

Equipment - The following minimum equipment must be available for the course:

- Policies for infection control, quality control and guidelines for use of blood glucose monitoring supplies (strips and/or monitor same as will be used in the field)
- Blood Glucose Strips and/or Monitor (same as will be used in the field)
- Lancets
- Cotton balls
- Alcohol swabs
- Disposable latex gloves
- Sharps Container
- Glucose Control Solutions
- Knowledge Test & Skills Checklist
- Operator Certification Roster
- Certificate of training
- Copies of QC Maintenance logs
- A-V equipment (overhead projector, blackboard, etc...)

Course Competencies:

Upon successful completion of this course, the student will be able to:

1. Describe the purpose of Blood Glucose Monitoring.

2. Describe and demonstrate methods necessary to prevent cross contamination through the use of equipment by adherence of Universal Blood and Body Fluid Precautions.

3. Demonstrate the correct technique for individual strip and/or instrumentation operation to include:
   - Specimen collection and infection control
   - Instrumentation calibration (if instrumentation is used)
   - Test performance
   - Individual instrumentation display codes and troubleshooting procedures (if instrumentation used)
   - Documentation of results and proper follow-up of abnormal test results in a timely fashion

4. Demonstrate proper quality control testing and documentation of results and corrective actions.

5. Discuss preventative maintenance of strips and/or instrumentation to include documentation and follow-up.

6. List and describe the indications for Blood Glucose Testing to include:
   - Those who display signs/symptoms of hypo/hyperglycemia
   - Patients currently on antidiabetic therapy
   - Special situations (children, pregnancy, certain drugs, etc.)

7. Describe the contraindication for Blood Glucose Testing.

8. Demonstrate the correct technique for Blood Glucose Testing in a simulated situation.

9. Discuss the role of Medical Control for Blood Glucose Testing.

10. Discuss the role of compliance with CLIA '88 Regulations.

Course Content:

Module One - Lecture

I. **Description:**

A. Blood Glucose Testing is an invasive diagnostic aid to assist in the management of ALS patients with specific signs and symptoms. Patient care, treatment and outcome may be improved with its use.

B. Blood Glucose Testing may be performed **only** with the support of local Medical Control.

C. Normal supportive therapy, airway management, peripheral I.V. access should not be affected by Blood Glucose Testing.

II. **Indications:**

A. Known diabetic patient with any of the following signs/symptoms:
- Cold and clammy skin or hot dry skin/mucus membranes
- Pale or flushed color
- Diaphoresis
- Headache, dizziness
- Palpitations and/or dysrhthymias on monitor
- Visual disturbances
- Shakiness or states "feels funny"
- Any altered LOC (Lethargy, confusion, change in usual behavior)
- Slurred speech
- Excessive urination/thirst

- Acetone (fruity) breath
- Unconscious patient
- Kussmaul respiration
- Seizures

B. Unconscious patients, etiology unknown (any age group, including trauma)

C. Patients with altered LOC, etiology unknown (including trauma), especially if displaying signs/symptoms as in II-A.

D. Special situations:

Pediatric patients having any of the following:
- Seizures
- Altered LOC (especially after high stress illnesses or injury - trauma)

Pregnancy
- Signs/Symptoms of hypo/hyperglycemia as above
- Signs/Symptoms of toxemia of pregnancy (pre-eclampsia, eclampsia)

Elderly, patients with history of alcoholism, overweight and/or malnourished patients

E. Patients on long term drug therapies such as:

- Steroids (Prednisone, Cortisone, Decadron, etc.)
- Hormonal therapy

III. Contraindications:

A. Use of strips or instrumentation that has failed QC Testing and with no corrective action taken.

IV. Special Considerations:

A. Infection Control

1. Adherence to Universal Blood and Body Fluid Precautions during use.

2. Disposal of lancets, disposable equipment and contaminated strips in proper containers at point of use.

3. Proper disinfection procedure for instrumentation.

4. Certification for use of Blood Glucose Testing equipment in accordance with State and Manufacturer's guidelines.

B. Storage and Handling

1. According to manufacturer's recommendations.

2. Do not use after expiration date

3. Store at or near room temperature, avoid excessive prolonged exposure to heat, cold and humidity. Take the same precautions that are used with drugs and IV solutions.

C. **Requirements for Selection of Blood Glucose Testing Equipment**

1. If using instrumentation, back up visual reference
2. If using instrumentation, error codes
3. End point chemistry to enable later reading of strip
4. Ability to avoid cross contamination
5. Durable
6. Uncomplicated cleaning procedure
7. Aqueous controls with at least 6 month dating after opening
8. Exact Strip Lot to Lot calibration
9. Performance at or below a 5% CV in 3 ranges (low, normal, high)
10. Strip and instrument performance are suitable with consideration to heat, cold, light and moisture resistance
11. Strip packaging suitable for resistance to above environmental extremes
12. "Unused" color block on test strip vial
13. Ability to use alcohol wipes to cleanse site and clean the machine.

D. Complications

Following proper technique, infection, and quality control guidelines avoids any complications.

V. **Regulatory Issues**

A. Quality Control / Preventative Maintenance
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

B. External Proficiency Testing
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

C. Competency Checks
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

D. Patient Test Records
According to individual Hospital's regulations or Provider Agency's CLIA certificate of Waiver.

VI. **Procedure for Blood Glucose Testing:**

A. Identify the need for Blood Glucose Testing (see Indications II-A)

B. Assemble and prepare equipment (adaptations acceptable according to manufacturer's instructions):
- Instrument (if used)
- Blood Glucose Test Strips
- Lancets
- Cotton balls
- Alcohol swabs
- Disposable latex gloves
- Sharps Container

C. Prepare patient for the procedure

D. Obtain specimen according to manufacturer's instructions

E. Perform test according to manufacturer's instructions

F. Report the results to medical control

G. These guidelines are not intended to alter current protocols, but to enhance them. The use of this diagnostic aid could improve patient outcome.

H. Document: Medic number, time of test, test result and whether test was a capillary (fingerstick) or venous blood sample.

VII. **Quality Control Procedure:**

A. Quality control records shall be retained for a minimum of 2 years.

B. Quality control testing shall be performed with a high and low quality control solution weekly.

C. Special situations, QC should be performed additionally when:
- A new vial of strips is opened and monitor reprogrammed and/or battery replaced
- When a vial of strips is left open
- If the instrument has been dropped
- If the unused test strip pad looks darker than the "Unused" color block on the vial
- When the vial is thought to have been exposed to environmental extremes for long periods or otherwise contaminated
- When test results contradict clinical symptoms
- After cleaning strip guide

D. If QC falls within acceptable control range, proceed with patient testing.

E. If QC falls outside of acceptable control range, see Trouble Shooting in User's Manual and correct problem before using for patient testing.

F. Control solutions should be stored and used according to manufacturer's directions.

G. QC information shall be recorded according to individual hospital policy.

H. Prehospital instruments may be involved in periodic testing of unknown glucose samples provided by an outside third party. Refer to individual hospitals' external proficiency program.

I. For actual Quality Control Test follow manufacturer's instructions.

VIII. **Medical Control:**

A. Many prehospital providers work for multiple agencies. Therefore, the provider is responsible for knowing the local policies and protocols.

B. The performance of Blood Glucose Testing must be appropriately documented.

C. The Medical Director has the authority to withdraw medical direction for Blood Glucose Testing. Medical Control is required to report such action to the Office Of EMS.

D. Review Base Station policies.

Module Two - LAB

I. Given control solutions and the equipment to be used, the student will practice the proper technique for performing Blood Glucose Testing and QC procedures.

II. Given the equipment to be used, in a one on one situation, the instructor will guide the student to perform the skill to proficiency.

III. In a one on one situation, the instructor will create a minimum of three scenarios which meet one or more of the following criteria:

(a) There is an indication for Blood Glucose Testing (ie: altered LOC) and the test results fall within normal range values.

(b) There is an indication for Blood Glucose Testing (ie: known diabetic with altered LOC) and the test results are abnormal on the high side.

(c) There is an indication for Blood Glucose Testing (ie: known diabetic with altered LOC) and the test results are abnormal on the extreme low side.

(d) The equipment used for Blood Glucose Testing failed QC test.

The student must identify each situation correctly and perform the indicated tasks appropriately.

Module Three - Practical Testing

I. Practical Testing

Given control solutions and the equipment to be used, in a one on one testing situation, and using the attached skills checksheet, the student will correctly perform a Blood Glucose Test with 100% proficiency.

Note: When conducting the practical examination the following conditions must be maintained:

1. The practical test must be conducted in a testing environment. Students must understand that they are being evaluated. Corrective guidance during the evaluation is not permitted.

2. The evaluator must not reveal the specific criteria for failure.

3. The Medical Director may review the skills checksheet prior to a generalized counselling session with the student.

4. The student will be allowed three attempts to perform the skill with 100% competency.

STATE OF ARIZONA • OFFICE OF EMS

Blood Glucose Monitoring Practical Examination

Student's name:_____ SS#:_____

Date:_____ Attempt#:_____

Evaluator:_____

Criteria	Pts Poss	Pts Attain
Assesses patient and correctly identifies the need for blood glucose test. (PMHx, Signs/Symptoms, etc.).	2	
Prepares the patient for test.	1	
Assembles materials and prepares environment.	1	
calibrates instrument (if using instrument or checks unused strip against "unused" block on vial.	1	
Using UBBFP obtains blood sample (simulated).	1	
Correctly performs procedure according to manufacturer instructions.	1	
Reports value, correct treatment suggestion.	1	
Indicates proper documentation of the procedure on the first care form.	1	

TOTAL 9 __

Critical Criteria:
(Meeting any of the critical criteria constitutes automatic failure. The student must be counselled by the Medical Director prior to retesting)

___ Fails to properly perform Blood Glucose Testing.
___ Performs any technique resulting in potential harm to the patient.

I attest to the accuracy and validity of the above information. I certify that the above named student has met the applicable conditions put forth by the Arizona Department of Health Services for utilization of Blood Glucose Testing.

_____ _____
Medical Director's signature Date

OFFICE OF EMS

FACT SHEET

SUDDEN INFANT DEATH SYNDROME

OVERVIEW:

The Sudden Infant Death Syndrome Training legislation, Senate Bill 1295, was enacted by the Arizona State Legislature in 1992. This law required that the Arizona Department of Health Services (ADHS) certify training on the nature of sudden infant death syndrome for use by professional fire fighters and emergency medical technicians as part of their basic and continuing training requirement.

The ADHS must also certify training on the nature of sudden infant death syndrome which shall include information on the investigation and handling of cases involving sudden and unexplained infant death for use by law enforcement officers as part of their basic training requirement.

The legislation established the Sudden Infant Death Advisory Council to assist the ADHS, Office of Women's and Children's Health in developing sudden infant death syndrome training and educational programs. The Council consists of ten members appointed to three year terms by the Director of the ADHS.

The Advisory Board is also charged with informing the governor and the legislature of the need for specific programs regarding sudden infant death syndrome.

The legislation also mandates that county medical examiners or the licensed physician performing the duties of a county medical examiner, perform an autopsy in cases of sudden and unexplained infant death in accordance with protocols adopted by the Director of the ADHS. If the examiner determines that the infant died of sudden infant death syndrome, the examiner must notify the ADHS.

The legislation also established the Committee on Sudden Infant Death Autopsy Protocols to make recommendation to the Director of the ADHS relating to protocols that should govern the autopsy of infants who die suddenly and inexplicably. The Committee consists of six members appointed by the Director of the ADHS.

BASIC INFORMATION:

Sudden Infant Death Syndrome (SIDS), the sudden, unexpected and unexplained death of apparently healthy babies, is the major cause of death of infants between the ages of one month and one year. In the United States, SIDS, sometimes referred to as crib or cot death, is responsible for the death of approximately 7,000 infants each year. It has been estimated that, annually, up to two deaths per 1,000 live births will be the direct result of SIDS.

SIDS deaths produce intense and traumatic reactions among surviving family members, as well as health care providers. Lifelong feelings of guilt, sibling emotional problems, divorce, and even suicide are all too often the results of this tragic event. It is clear that there are multiple victims of this disease - the deceased infant and the surviving family members.

SOME BASIC FACTS ABOUT SIDS:

SIDS is a definite medical entity and is the major cause of death in infants during the first year of life.

The cause or causes for SIDS are not known.

Approximately 90% of all SIDS deaths will occur between 2 and 6 months of age.

Approximately 6,000 to 7,000 SIDS deaths occur annually in the United States.

SIDS occurs in all socio-economic levels.

SIDS victims appear to be healthy prior to death.

At this time SIDS cannot be predicted or prevented, even by a physician.

There appears to be no suffering; death occurs very rapidly, usually during periods of sleep.

Cases of SIDS have been reported throughout history, as far back as the time of the Old Testament.

WHAT SIDS IS NOT:

SIDS is not caused by external suffocation.

SIDS is not caused by the type of feeding method used.

SIDS is not caused by immunizations.

SIDS is not caused by child abuse or neglect.

SIDS is not caused by overheating.

SIDS is not caused by vomiting and choking.

SIDS is not contagious, it is not a infectious disease process.

SIDS does not cause pain or suffering to the infant.

SIDS is not caused by a lack of love.

SIDS is not caused by a sleeping parent rolling over onto the baby.

SIDS cannot by predicted.

SIDS cannot be prevented.

SIDS AND THE ROLE OF THE EMERGENCY MEDICAL TECHNICIAN:

The Emergency Medical Technician (EMT) is often the first official person on the scene following the discovery of the infant. The parents or other caretakers of the infant - e.g. grandparents, baby sitter - cling to the hope that the EMT can do something to save the infant, even though the child may be obviously dead. The role of the EMT in this situation is difficult. He should begin immediate emergency resuscitation efforts followed by prompt transport to the hospital. He should also comfort the parents whose reactions may range from numb silence to violent hysteria. By offering sensitive support to the family and gathering accurate information in a non-threatening manner, the EMT helps to alleviate the future emotional burden of the surviving family members.

HOW THE EMT CAN TELL IF THE INFANT IS A SIDS VICTIM

Only an autopsy can conclusively determine if an infant's death is due to SIDS. The EMT should make no assumptions about the cause of death. The death of an apparently healthy infant and the general appearance of the infant in his crib may be misleading.
There have been cases where SIDS has been mistaken for child abuse. Therefore, it is necessary that the EMT, as the first responder, know some of the identifying features characteristic of the SIDS victim as opposed to the abused child. With SIDS, the child will show a normal state of nutrition and hydration. The child's skin may be mottled and often there is a frothy, sometimes blood-tinged fluid in and around the mouth and nostrils. Vomitus may be present. Sometimes the infant will be in an unusual position due to muscle spasms at time of death.

ARIZONA SIDS FACTS

The 1989 SIDS rate per 100,00 live births was 165.4 in Arizona compared to 126.4 nationally. SIDS is the third leading cause of death in infants in Arizona, claiming 111 lives in 1989.

SUPPORT FOR EMERGENCY RESPONSE PERSONNEL

If you find that you are experiencing any of the reactions described in the training video, please contact your local agency to see what type of support is available for employees confronted with traumatic situations such as SIDS deaths. Your agency chaplin or local community mental health center are good resources to consider.

Critical Incident Stress Debriefing: Emergency # 1-800-523-9391
Training and Other Information 420-1860
Contact Person: Tom McSherry 267-4109, pager 280-4802

SUPPORT ORGANIZATIONS IN ARIZONA

Statewide Arizona Affiliate of SIDS Alliance
1-800-597-SIDS

Phoenix Arizona Affiliate of SIDS Alliance
C/O Phoenix Children's Hospital
Phoenix, Arizona 85006
239-4215
Support Meetings on 2nd Tuesday of each month.

Tucson Public Health Nurse - Marie Sutton 298-3888
1-800-597-SIDS (After Hours)
Support Meetings on 3rd Tuesday of each month at Tucson Medical Center.

How to Distinguish Between SIDS and Child Abuse and Neglect	
Sudden Infant Death Syndrome Versus	Child Abuse and Neglect
Incidence: Deaths: 7,000/Year Highest: 2 to 4 months of age When: More frequent in winter months	Incidence: Deaths: 1,000 to 4,000/year Deaths in infants: 300/year When: No seasonal difference
Physical Appearance: • Exhibits no external signs of injury. • Exhibits "natural" appearance of deceased baby: – Lividity – settling of blood; frothy drainage from nose/mouth – Small marks (e.g., diaper rash) look more severe – Cooling/rigor mortis – takes place quickly in infants (about 3 hours) • Purple mottled markings on head and facial area. • Appears to be well-developed baby, though may be small for age. • Other siblings appear to be normal and healthy.	Physical Appearance: • Distinguishable and visible signs of injury: – Broken bone(s) – Bruises – Burns – Cuts – Head trauma (e.g., black eye) – Scars – Welts – Wounds • May be obviously malnourished. • Other siblings may show patterns of injuries commonly seen in child abuse and neglect.
May Initially Suspect SIDS When: • All of the above characteristics appear to be accurate PLUS • Parents say that infant was well and healthy when put to sleep (last time seen alive).	May Initially Suspect Child Abuse/Neglect When: • All of the above characteristics appear to be accurate PLUS • Parent's story does not "sound right" or cannot account for all injuries on infant.
NOTE: The determination of whether the child is or is not a SIDS victim is the responsibility of the medical examiner or medical coroner. It is NOT the responsibility of the Emergency Medical Technician.	

SOURCE: Bureau of Community Health Services (HSA/PHS). Training Emergency Responders: Sudden Infant Death Syndrome. An Instructor's Manual. 1979. P. C-3

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Health Resources and Services Administration
Bureau of Health Care Delivery and Assistance
Sudden Infant Death Syndrome Program

NATIONAL SIDS CLEARINGHOUSE
8201 Greensboro Drive
Suite 600
McLean, VA 22102
(703) 821-8955

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ARIZONA DEPARTMENT OF HEALTH SERVICES

OFFICE OF EMERGENCY MEDICAL SERVICES

Instructional Strategies for EMS Instructors

Course Description:

This course is designed to prepare and make eligible the participant to gain approval from the Office of EMS as a Basic EMT instructor.

This course will provide detailed information on requirements by the Office of EMS for conducting a Basic EMT course, instructing in a Basic EMT course, submission of paperwork, and certification of students. Also, This course offers a general overview of educational theories and principles. It is not possible, in a short course like this, to provide all the information one needs to be an instructor. Therefore, it is important that the participants have some requisite experience in conducting training and that they realize that this orientation program is the start of the journey, they will be responsible for expanding their knowledge and applying that knowledge in the classroom.

Methodology:

Description -

The course duration shall be a minimum of 124 hours.

It is designed to consist of 24 hour of didactic presentation, in which the participants will be provided with information via lectures, small group activities, individual activities and scenarios.

Additionally, each participant must complete a 100 hour internship in which they will assist an Approved Basic EMT instructor in an actual Basic EMT class, and under supervision prepare lesson plans, teach both a lecture session and skills session and perform the administrative functions associated with an EMT course.

Coordination/Instruction

Coordination: This course shall be coordinated by, or in conjunction with, a certified Basic EMT training program.

Instruction: The instructors for the course must currently be or have been within the last 3 years, Basic EMT instructors approved by the Office of EMS and should have considerable knowledge and experience in the field of education.

Competencies:

1. List the components required in Basic Emergency Medical Technology (EMT) courses according to standards set by the United States Department of Transportation (US DOT) and the Arizona Department of Health Services Office of Emergency Medical Services (ADHS - OEMS).

2. Define and describe the concepts of adult learning as they relate to students in EMT.

3. Apply teaching principles in the design of course syllabi, and lesson plans.

4. Design a lecture outline to include identification of time, AV aides, and any student study guides.

5. Use effectively all AV and EMT equipment.

6. Design teaching methods for skills to include airway management, administrating oxygen, immobilization techniques, and application of pneumatic antishock garment (PASG).

7. Develop a student evaluation.

8. Prepare appropriate documentation for the American Heart Association (AHA), the ADHS - OEMS, and NREMT.

9. Successfully complete a multiple-choice examination on EMT-Basic knowledge and skills with 80% accuracy.

10. Successfully demonstrate application of all EMT-Basic skills according to the NREMT skills evaluation guidelines.

11. Complete 100 hours supervised classroom experience with a satisfactory evaluation.

Course Content:

I. Orientation to US DOT, ADHS - OEMS, and NREMT Standards and Guidelines

A. Course content

B. Required skills

II. Principles of Adult Learning

A. General learning theory

B. Characteristics of learners

C. The Domains

III. Teaching Principles

A. Objectives for lectures and skills

B. Syllabus and lesson plans

C. Course calendar

D. Student study guides

IV. Classroom Skills

A. Components of successful lecture

B. Components for effective teaching of skills

C. Classroom control

D. Discipline and counseling

E. Discrimination

F. Selection of text

G. Protection of self and others

V. Audiovisual Aides

A. Preparation and development

B. Resources for purchase

C. Safe use of AV equipment

D. Safe use of monitoring and defibrillation equipment

VI. Evaluation

A. Test Construction

1. Multiple choice

2. Matching

3. Essay

4. Completion

B. Grading

1. Distribution

2. Evaluation of the course

VII. Preparation for Certification Examinations

VIII. Multiple-choice examination on EMT-Basic knowledge and skills

IX. EMT-Basic skills testing according to the NREMT skills evaluation guidelines.

X. 100 hours of supervised classroom experience which shall be the duration of one entire EMT class, shall be completed within 12 months, and shall include preparing lesson plans, teaching both didactic and practical skills, as well as performing all administrative functions associated with an EMT course. The participant of the instructional strategies course shall obtain a satisfactory written evaluation signed by an approved instructor and co-signed by the BLS training program director.

Arizona Department of Health Services

Office of EMS

Basic EMT - Special Skills
Vehicular Rotation Requirements

Each student must meet each objective contained on this sheet. It should be understood that to accomplish this a student may have to remain in the vehicular rotation for a period of time **beyond** the 8 hour minimum requirement.

Note: Preceptors must meet the minimum qualification as described in the Arizona Administrative Code R9-13-306(B).

Minimum Objectives

Upon completion of the vehicular rotation, with documentation supported by a skills check-off sheet (signed by the preceptor) and an EMS encounter form (which must be signed by the student and co-signed by the preceptor), each student will have:

1. Demonstrated the ability to perform a patient assessment on 3 patients in respiratory distress.
2. Demonstrated the ability to provide basic airway care and intervention on 3 patients.
3. Attempted a minimum of three endotracheal intubations in the prehospital setting.
4. Performed a minimum of one successful endotracheal intubation in the prehospital setting.

EXHIBIT S

OFFICE OF EMERGENCY MEDICAL SERVICES
ADVANCED LIFE SUPPORT TRAINING PROGRAM APPLICATION
FOR CERTIFICATION / RECERTIFICATION / COURSE APPROVAL

(Mark one)

_____ New Certificate

_____ Recertification (certificate number) _____

_____ Approval of a course to be conducted under certificate number _____

Indicate the level of the course:

____I-EMT
____I-EMT Refresher
____I-EMT Challenge
____I-EMT to Paramedic
_____Paramedic
_____Paramedic Refresher
_____Paramedic Challenge

Name of Applicant (Training Institution):	Location of Classroom:
List the names of all owners, corporate officers (attach additional sheet(s) if needed):	List all ALS training program certificates currently or previously held by the training program or its owners/corporate officers:
Mailing address:	Course Dates: Start: End: Day(s) of week: Times:
Medical Director:	Medical Director's phone number:
Program Director:	Program Director's phone number:
Course Manager:	Course Manager's phone number:

I hereby certify that the information provided in this application is correct. I verify that I have the authority to act on behalf of, and legally bind, the named agency as applicant.

Signature _____ Title _____ Date_____

EXHIBIT T

ALS EMS TRAINING PROGRAM EQUIPMENT/SUPPLIES LIST

Quantity	Equipment
1	Moulage Kits or Casualty Simulator Kits
2	Pair of old pants and shirts
2	Blankets (cotton or cotton/blend)
10 rolls each size	Adhesive cloth/silk type tape - 1/2 inch, 1 inch, 2 inch, 3 inch.
10 rolls each size	Adhesive paper/plastic type tape - 1/2 inch, 1 inch, 2 inch, 3 inch.
24	Trauma Dressings
1 per student	Pen Lights
1 per student	Scissors
10	Stethoscopes
2	Dual head training stethoscopes
10	Blood pressure cuffs - adult sizes
10	Blood pressure cuffs - child size
2	Bag-valve-mask devices - adult size
2	Bag-valve-mask devices - pediatric size
2	Oxygen tank with regulator and key. (must be operational and maintain a minimum of 500psi)
50	Oxygen masks non-rebrether - adult
50	Oxygen masks non-rebrether - child
50	Nasal cannulas
2 boxes	Alcohol preps
1 case of each size	Gloves - (small, medium, large, and extra large)
1 case	2x2 sponges
1 case	4x4 sponges
1 case	5x9 sponges
2 cases	Roller gauze
1 box	Vaseline gauze or occlusive dressings
2	Traction splint devices

2	Vest type immobilization devices
2	Long spine boards with three (3) 9 foot straps per board
2 of each size	Cervical collars (small, regular, medium, large, and extra large) **NOTE:** (soft collars and foam types are not acceptable)
2	Head immobilization materials/devices
2	Pneumatic Anti-Shock Garments - Adult
2	Pneumatic Anti-Shock Garments - Child
2 sets	Mobile or portable transmitter/receivers or hand held walkie talkies with full charged batteries.
1	Ambulance stretcher
1	Poison kit
1	Oral glucose tube
2	Electric (battery operated) portable suction device
20	Rigid suction catheters
20	Flexible suction catheters
2 of each size	Oropharyngeal airways
2 of each size	Nasopharyngeal airways
2 of each size	Rigid splints (6 inch, 12 inch, 18 inch 24 inch, and 36 inch)
2	Burn sheets
2	OB kits
8 Bottles	Sterile water
2	CPR Mannikins - adult
2	CPR Mannikins - child
2	CPR Mannikins - infant
4 per manikin	Replacement lungs
1 case	CPR face shields
1 box	IV Catheter - Butterfly
1 box	IV Catheter - 24 Gauge

1 box	IV Catheter - 22 Gauge
1 box	IV Catheter - 20 Gauge
1 box	IV Catheter - 18 Gauge
1 box	IV Catheter - 16 Gauge
1 box	IV Catheter - 14 Gauge
1 box	IV Catheters central line catheter or intra-cath
1 unit	Monitor/Defibrillator
1 unit	Arrhythmia Simulator
1 box	Electrodes
1 unit	Arrhythmia Annie
1 unit	Intubation Mannikins - adult
1 unit	Intubation Mannikins - pediatrics
1 set	Laryngoscope Handle and Blades - 1 complete set MAC or Miller
1 set	Endotracheal Tubes - 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5
1	Stylet
1 box	1 cc Syringes
1 box	3 cc Syringes
1 box	5 cc Syringes
1 box	10 cc Syringes
1 box	30 cc Syringes
1 unit	IV Infusion Arm With Flashback
10 Bags	IV Fluids - D5W
10 Bags	IV Fluids - Normal Saline
10 Bags	IV Fluids - Lactated Ringers
10 Sets	IV Tubing - Mini
10 Sets	IV Tubing - Standard
10 Sets	IV Tubing - Blood
1	Box for Sharps
1	IV Stand
1	Invasive Skills Mannikin - Crico, Central Lines

1	Magill Forceps
1	Hemostat
10	IV Tourniquets
10	Scalpels
1	Simulated Drug Boxes

NOTE: A box, roll or case must be unused to be counted toward the minimum requirements. Sets and units must be complete to be counted toward the minimum requirement.

EXHIBIT U

Arizona Advanced Life Support Curricula
1994

This text contains the Arizona minimum standard curriculum for: Intermediate, Intermediate to Paramedic, and Paramedic courses.

There is a statutory mandate for standardized training by EMS training programs. This text is comprehensive and is intended to be used in its entirety. A training program may not excerpt any portion of this document when conducting EMS training.

Please Note: There are separate curricula for refresher and challenge courses (all levels).

The curricula contained in this text are based on modifications to, and meet the all requirements of, the U.S. Department of Transportation, Emergency Medical Technician--Paramedic National Standard Curriculum, 1985 (DOT).

Each course shall consist of three (3) components:

1. Didactic instruction - Instructors for lectures and labs must cover the objectives described in the curriculum.

2. Clinical instruction - Preceptors must supervise, provide remedial instruction to students, and document students **performance** of the objectives described in the curriculum.

3. Vehicular internship - Students must function as an active member of a prehospital team. Preceptors must supervise and document students **performance** of the objectives described in the curriculum.

Each course outline is divided into Divisions; each division is divided into Sections.

Each Division shall have a minimum contact hour requirement that must be met. However, because the emphasis of training is on the development of student competency, the instructional content of each course shall be focused on competency of stated objectives. A student shall have successfully completed the course only after he has demonstrated mastery of all stated objectives.

Because this is a competency based curriculum, the training program must be able to demonstrate, upon request, at what point in the schedule any specific objective will be met.

Course outlines submitted to the Office of EMS for review shall utilize the following format for each lecture presented:

Date	Time	Division/Section	Topic	Lecturer

Course Description:

Intermediate Course -

The EMT Intermediate (EMT-I) is a highly skilled health care professional who is educated and trained to function in a prehospital emergency setting. The EMT-I shall be competent in all aspects of basic emergency medical technology as well as advanced patient assessments, advanced airway skills, intravenous fluid therapy, and parenteral drug therapy. It is important to remember that the EMT-I will be trained to the same level as the paramedic in all areas except the cardiology section and central lines.

The EMT-I course is specifically designed to prepare a student for certification and employment in the prehospital setting. It must be expressly understood that students who successfully complete training requirements are eligible for certification and therefore, will be providing direct and in many cases unsupervised (not independent of medical control) patient care. **It is the training program's prime responsibility to prepare the student to provide patient care.**

The EMT-I curriculum is a competency driven curriculum. There are stated objectives for the Didactic, Clinical, and Vehicular components of the course Each and every objective **must** be met by each student. The training program is responsible for assuring that students who are absent receive special instruction in order to meet each objective of the missed lecture.

In addition to the stated objectives, there are minimum contact hours for each Division in the curriculum. A program should consider the word "minimum" carefully. It is very possible that a program may need additional contact hours to assure that each and every objective is met by each student.

The Intermediate course outline is as follows:

Didactic

Division 1	Prehospital Environment	Minimum Hours 30
Section 1	Roles and Responsibilities	
Section 2	EMS Systems	
Section 3	Medical/Legal Considerations	
Section 4	EMS Communications	
Section 5	Rescue/Vehicular Extrication	
Section 6	Major Incident Response	
Section 7	Stress Management	
Division 2	Preparatory	Minimum Hours 50
Section 1	Medical Terminology	
Section 2	General Patient Assessment	
Section 3	Airway and Ventilation	
Section 4	Pathophysiology of Shock	
Section 5	General Pharmacology	
Section 6	Advanced Pharmacology	
Division 3	Trauma	Minimum Hours 40
Section 1	Trauma	
Section 2	Burns	
Division 4:	Medical	Minimum Hours 60
Section 1	Respiratory Section	
Section 2	Cardiovascular Section	
Section 3	Endocrine Emergencies	
Section 4	Nervous System	
Section 5	Acute Abdomen	
Section 6	Anaphylaxis	
Section 7	Toxicology, Alcoholism, Drug Abuse	
Section 8	Infectious Diseases	
Section 9	Environmental Injuries	
Section 10	Geriatrics/Gerontology	
Section 11	Pediatrics	

Division 5:	OB/GYN/Neonatal	Minimum Hours 8
Section 1	GYN	
Section 2	OB	
Section 3	Neonatal	
Division 6:	Behavioral	Minimum Hours 4
Section 1	Behavioral Emergencies	

Clinical

Emergency Department	Minimum Hours 24
Labor and Delivery	Minimum Hours 8
Pediatrics	Minimum Hours 8
Psychiatric	Minimum Hours 8
Neonatal/Nursery	Minimum Hours 8

Vehicular

56 Hours to include 7 ALS calls

ALS CALL: A vehicular call in which an invasive technique is indicated and attempted by the student, a patch is made for medical control by the student or preceptor and the patient is transported by the student and preceptor to the emergency department or patient care is appropriately transferred to the crew of a transporting ground of air ambulance.

Intermediate to Paramedic course -

(Please read the Intermediate Course description as a majority of the narrative applies.)

The Intermediate to Paramedic (I-P) course is designed to upgrade certified EMT-Is to the paramedic level. This course will provide review instruction in each Division and Section, as well as primary instruction in the cardiology section and central lines.

When providing review instruction it is important that the training program understand that there may be a mix of EMT-Is who just finished class and were certified and EMT-Is who have been certified for nine years. Continual assessment of the student's requisite knowledge and comprehension of presented materials is important.

As in the intermediate and paramedic classes, a focus on skills is paramount.

In addition to the stated objectives, there are minimum contact hours for each Division in the curriculum. A program should consider the word "minimum" carefully. It is very possible that a program may need additional contact hours to assure that each and every objective is met by each student.

The Intermediate to Paramedic course outline is as follows:

Didactic

Division 1	Prehospital Environment	Minimum Hours 10
Section 1	Roles and Responsibilities	
Section 2	EMS Systems	
Section 3	Medical/Legal Considerations	
Section 4	EMS Communications	
Section 5	Rescue/Vehicular Extrication	
Section 6	Major Incident Response	
Section 7	Stress Management	
Division 2	Preparatory	Minimum Hours 10
Section 1	Medical Terminology	
Section 2	General Patient Assessment	
Section 3	Airway and Ventilation	
Section 4	Pathophysiology of Shock	
Section 5	General Pharmacology	
Section 6	Advanced Pharmacology	
Division 3	Trauma	Minimum Hours 16
Section 1	Trauma	
Section 2	Burns	
Division 4:	Medical	Minimum Hours 100
Section 1	Respiratory Section	
Section 2	Cardiovascular Section	
Section 3	Endocrine Emergencies	
Section 4	Nervous System	
Section 5	Acute Abdomen	
Section 6	Anaphylaxis	
Section 7	Toxicology, Alcoholism, Drug Abuse	
Section 8	Infectious Diseases	
Section 9	Environmental Injuries	
Section 10	Geriatrics/Gerontology	
Section 11	Pediatrics	

Division 5:	OB/GYN/Neonatal	Minimum Hours 5
Section 1	GYN	
Section 2	OB	
Section 3	Neonatal	
Division 6:	Behavioral	Minimum Hours 4
Section 1	Behavioral Emergencies	

Clinical

Critical Care	Minimum Hours 40
Emergency Department	Minimum Hours 56
Labor and Delivery	Minimum Hours 0
Pediatrics	Minimum Hours 8
Psychiatric	Minimum Hours 0
Neonatal/Nursery	Minimum Hours 0

Vehicular

110 Hours to include 5 ALS calls

ALS CALL: A vehicular call in which an invasive technique is indicated and attempted by the student, a patch is made for medical control by the student or preceptor and the patient is transported by the student and preceptor or patient care is appropriately transferred to either ground of air ambulance.

Paramedic course -

(Please read the Intermediate and the Intermediate to Paramedic Course descriptions as a majority of the narratives apply.)

The Paramedic course is designed to prepare and make eligible certified EMTs for certification as paramedics. The Course will provide primary instruction in advanced emergency medical technology. Additionally, the course will prepare the student to a mastery level in each skill associated with the curriculum.

In addition to the stated objectives, there are minimum contact hours for each Division in the curriculum. A program should consider the word "minimum" carefully. It is very possible that a program may need additional contact hours to assure that each and every objective is met by each student.

The Paramedic course outline is as follows:

Didactic

Division 1	Prehospital Environment	Minimum Hours 30
Section 1	Roles and Responsibilities	
Section 2	EMS Systems	
Section 3	Medical/Legal Considerations	
Section 4	EMS Communications	
Section 5	Rescue/Vehicular Extrication	
Section 6	Major Incident Response	
Section 7	Stress Management	

Division 2	Preparatory	Minimum Hours 50
Section 1	Medical Terminology	
Section 2	General Patient Assessment	
Section 3	Airway and Ventilation	
Section 4	Pathophysiology of Shock	
Section 5	General Pharmacology	
Section 6	Advanced Pharmacology	

Division 3	Trauma	Minimum Hours 40
Section 1	Trauma	
Section 2	Burns	

Division 4:	Medical	Minimum Hours 160
Section 1	Respiratory Section	
Section 2	Cardiovascular Section	
Section 3	Endocrine Emergencies	
Section 4	Nervous System	
Section 5	Acute Abdomen	
Section 6	Anaphylaxis	
Section 7	Toxicology, Alcoholism, Drug Abuse	
Section 8	Infectious Diseases	
Section 9	Environmental Injuries	
Section 10	Geriatrics/Gerontology	
Section 11	Pediatrics	

Division 5:	OB/GYN/Neonatal	Minimum Hours 16
Section 1	GYN	
Section 2	OB	
Section 3	Neonatal	

Division 6:	Behavioral	Minimum Hours 4
Section 1	Behavioral Emergencies	

Clinical

Critical Care	Minimum Hours 40
Emergency Department	Minimum Hours 80
Labor and Delivery	Minimum Hours 8
Pediatrics	Minimum Hours 16
Psychiatric	Minimum Hours 8
Neonatal/Nursery	Minimum Hours 8

Vehicular

150 Hours to include 15 ALS calls

ALS CALL: A vehicular call in which an invasive technique is indicated and attempted by the student, a patch is made for medical control by the student or preceptor and the patient is transported by the student and preceptor or patient care is appropriately transferred to either ground of air ambulance.

Class size:

The development of Advanced Life Support skills and knowledge to an acceptable level in each student requires an ample opportunity for each student to practice and gain knowledge and experience by maximizing the student/instructor interaction. The maximum number of students enrolled in a class is 24.

When the program has arranged for a special guest lecturer the program director may elect to combine two classes for the lecture, to a maximum of 48 students. In order to assure that students enrolled in a course receive interactive instruction and appropriate course management no more then 15 hours of the curriculum may involve combined classes. **NOTE:** Notification must be made to the ALS Program Manager, Office of EMS at least 24 hours in advance of combining classes for any lecture.

The following are the maximum allowable student/instructor ratios:

Didactic presentation	-	24 students to 1 instructor. No more then 15 hours of special lectures at 48 students to 1 one lecturer.
Clinical instruction	-	One (1) preceptor to one (1) student in each clinical site.
Vehicular internship	-	One (1) preceptor to one (1) student for each vehicular rotation.

Examinations:

Each program is responsible for evaluating the progress of the students. The number and value of quizzes, assigned projects, and modular examinations is left to the programs discretion.

Each Program is required to administer comprehensive written and practical final examinations that conform with the requirements of Arizona Administrative Code R9-13-307.

Division 1
Prehospital Environment

Section 1
Roles and Responsibilities

Division 1 — Prehospital Environment

Section 1 — Roles and Responsibilities

Lecturer qualifications: The lecturer for this section shall be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.1.1	Identify and describe those activities preformed by an advanced level EMT in the field.
P	R	P	1.1.2	Define the role of an advanced level EMT
P	R	P	1.1.3	Describe and contrast the difference between an EMT-Ambulance, EMT-Intermediate, and EMT-Paramedic training program.
P	R	P	1.1.4	Define the terms "ethics" and "professionalism".
P	R	P	1.1.5	Describe the differences between ethical behavior and legal requirements.
P	R	P	1.1.6	State specific activities that are most appropriate to ethical behavior.
P	R	P	1.1.7	Identify whether a particular activity is unethical and/or illegal, given certain patient care situations.
P	R	P	1.1.8	Identify whether a particular activity is ethical or unethical given certain patient care situations.
P	R	P	1.1.9	Define the term "professional."

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.1.10	Define the term "health care professional."
P	R	P	1.1.11	Identify whether a particular activity is professional or unprofessional given certain patient care situations.
P	R	P	1.1.12	State certain activities that are most appropriate to professional behavior.
P	R	P	1.1.13	List current state requirements for Advanced level EMT continuing education.
P	R	P	1.1.14	Define and discuss at least three reasons why continuing education is important for the Advanced level EMT.
P	R	P	1.1.15	Define the terms "certification, licensure, and registration."
P	R	P	1.1.16	Name and describe current state legislation outlining the scope of pre-hospital Advanced Life Support.
	R	P	1.1.17	State the reason that it is important to keep one's advanced level EMT certification current.
P	R	P	1.1.18	State the major purposes of a national association.
P	R	P	1.1.19	State the major purposes of a national registration agency.
P	R	P	1.1.20	State the major benefits of subscribing to professional journals.
P	R	P	1.1.21	State the benefits of advanced level EMT teaching in their community.

Division 1

Prehospital Environment

Section 2

EMS Systems

Division 1 — Prehospital Environment

Section 2 — EMS Systems

Lecturer qualifications: The lecturer for this section shall be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.2.1	Discuss citizen access and the various mechanisms of obtaining it.
P	R	P	1.2.2	Discuss prehospital care as an extension of hospital care.
P	R	P	1.2.3	Define stabilization of patients.
P	R	P	1.2.4	Define and describe medical control.
P	R	P	1.2.5	Describe physician responsibility for Medical Control.
P	R	P	1.2.6	Describe the relationship between the physician on the scene, the advanced level EMT and the physician on the radio. a. The physician who is with the patient when the advanced level EMT arrives. b. The physician who arrives on the scene after the advanced level EMT's have started evaluating and treating the patient.
P	R	P	1.2.7	Describe the benefits of advanced level EMT follow-up on patient condition, diagnosis, and retrospective review of prehospital care.
P	R	P	1.2.8	Describe KKK 1822 Ambulance standards.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.2.9	Define the American College of Surgeons Essential Equipment List and how it relates to local state laws.
P	R	P	1.2.10	Define the national standard levels of prehospital provider as defined by curriculum, respectively.
P	R	P	1.2.11	Discuss ambulance placement and the parameters that should be utilized in its development, include the differences in urban, suburban and rural settings.
P	R	P	1.2.12	Discuss the medical community role in overseeing prehospital care.
P	R	P	1.2.13	Define protocols and standing orders.
P	R	P	1.2.14	Describe the development of protocols.
P	R	P	1.2.15	Define local training standards.
P	R	P	1.2.16	Describe the legislative and regulatory process as regards prehospital care.
P	R	P	1.2.17	Describe integration of prehospital care into the continuum of total patient care with the Emergency Department phase of hospital care.
P	R	P	1.2.18	Discuss replacement of equipment and supplies.
P	R	P	1.2.19	Discuss the advanced level EMT's initial responsibilities when arriving on the scene.
P	R	P	1.2.20	Describe the relationship between the physician on the radio and the advanced level EMT at the scene.
P	R	P	1.2.21	Discuss the varying philosophies between the management of medical patients and trauma patients, prehospital.
P	R	P	1.2.22	Describe the transition of patient care from the advanced level EMT, including: a. Transfer of responsibility (legal and medical). b. Reporting of patient status to physician or nurse.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.2.23	Describe the ability of physician run critique based on documentation.
P	R	P	1.2.24	Describe retrospective evaluation of patient care including run report review, continuing education, skill practice and skill deterioration.

Division 1
Prehospital Environment

Section 3
Medical/Legal Considerations

Division 1 — Prehospital Environment

Section 3 — Medical/Legal Considerations

Lecturer qualifications: The lecturer for this section shall be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director; or an Attorney or Risk Manager with specific knowlege of Advanced Life Support Prehospital Care.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.3.1	Discuss the significance and scope of the following in relationship to EMT practice: a. State Medical Practice Act b. Good Samaritan Act/Civil Immunity c. State EMS Statutes d. State Motor Vehicle Codes e. State and local guidelines for "Do Not Resuscitate"

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.3.2	Define the following: a. Negligence b. Medical Liability c. Tort d. Duty to Act e. Battery f. Slander g. Informed Consent h. Expressed Consent i. Implied Consent j. Abandonment k. Liable l. Assault m. False Imprisonment
P	R	P	1.3.3	Describe the significance of accurate documentation and record keeping in substantiating incidents.
P	R	P	1.3.4	Identify those situations that require the advanced level EMT to report those incidents to appropriate authorities.
P	R	P	1.3.5	Describe the four elements required to prove medical liability.
P	R	P	1.3.6	Describe the significance of obtaining expressed consent.
P	R	P	1.3.7	Describe the extent to which force and restraint may be used to protect the EMT, the patient and the third party.

Division 1
Prehospital Environment

Section 4
EMS Communication

Division 1 — Prehospital Environment

Section 4 — EMS Communications

Lecturer qualifications: The lecturer for this section shall be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director; or a telecommunications expert with specific knowlege of Advanced Life Support Prehospital Care.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.4.1	Describe the phases of communications necessary to complete a typical EMS event.
P	R	P	1.4.2	Name the possible components of an EMS communications system and explain the function of each.
P	R	P	1.4.3	Define ALS Base Hospital.
P	R	P	1.4.4	Name factors that affect the coverage of mobile transmitter/receivers.
P	R	P	1.4.5	Describe the position of the antenna on a portable transmitter/receiver that will deliver maximum coverage.
P	R	P	1.4.6	Describe an advantage of a repeater system over a non-repeater system.
P	R	P	1.4.7	Describe the vehicular repeater system.
P	R	P	1.4.8	Describe the purpose of a remote console.
P	R	P	1.4.9	Describe the function of a satellite receiver.
P	R	P	1.4.10	Describe the functions of an encoder and a decoder.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.4.11	Define hertz, kilohertz, and megahertz.
P	R	P	1.4.12	Define the terms UHF and VHF and distinguish between the two.
P	R	P	1.4.13	Describe the most common causes of interference in biotelemetry communications.
P	R	P	1.4.14	Describe simplex, duplex, and multiplex radio systems.
P	R	P	1.4.15	Describe functions and responsibilities of the FCC.
P	R	P	1.4.16	Describe the responsibilities of an EMS dispatcher.
P	R	P	1.4.17	Name information items that must be gathered from a caller by the dispatcher.
P	R	P	1.4.18	Describe the ten-code used in the local community.
P	R	P	1.4.19	Describe three communications techniques that influence the clarity of radio transmissions.
P	R	P	1.4.20	Describe three communications techniques that influence the content of radio transmissions.
P	R	P	1.4.21	Describe the importance of written medical protocols.
P	R	P	1.4.22	Describe two purposes of verbal communication of patient information to the hospital.
P	R	P	1.4.23	Describe information that should be included in patient assessment information verbally reported to the physician.
P	R	P	1.4.24	Organize a list of patient assessment information in the correct order for radio transmission to the physician according to the format used locally.
P	R	P	1.4.25	Name five uses of the written EMS run form.
P	R	P	1.4.26	Demonstrate the proper use of a mobile transmitter/receiver to receive and transmit information.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.4.27	Demonstrate the proper use of a portable transmitter/receiver to receive and transmit information.
P	R	P	1.4.28	Demonstrate the proper use of a digital encoder.
P	R	P	1.4.29	Demonstrate the proper use of a mobile or portable transmitter in a real or simulated patient situation to: a. Organize and transmit patient assessment information, using a standardized format; and; b. Transmit an ECG.
P	R	P	1.4.30	Properly complete a written EMS form based on a real or simulated patient situation.

Division 1
Prehospital Environment

Section 5
Rescue/Vehicular Extrication

Division 1 — Prehospital Environment

Section 5 — Rescue/Vehicular Extrication

Lecturer qualifications: The lecturer for this section shall be a Paramedic or Basic EMT employed by a Fire Department, Ambulance Service, or Rescue Service with at least 20 documented extrications as the lead rescuer.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.5.1	List the equipment utilized for personal and patient safety during a rescue.
P	R	P	1.5.2	Identify safety hazards that may be encountered in a rescue operation.
P	R	P	1.5.3	Describe the pre-planning phase of a safe rescue.
P	R	P	1.5.4	Describe the elements and resources involved in the assessment phase of a rescue operation.
P	R	P	1.5.5	Define safe patient access.
P	R	P	1.5.6	List the types of equipment available to access an entrapped patient.
P	R	P	1.5.7	Describe the advanced level EMT's patient assessment and management responsibilities during a rescue operation.
P	R	P	1.5.8	Identify the special expertise for special rescue resources available in the advanced level EMT's response area.
P	R	P	1.5.9	Identify the difficulties that may be encountered in the patient removal phase of a rescue operation.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.5.10	Explain the need for a coordinated effort during the removal phase of a rescue operation.
P	R	P	1.5.11	Discuss removal of the patient from the rescue scene.

Division 1

Prehospital Environment

Section 6

Major Incident Response

Division 1 — Prehospital Environment

Section 6 — Major Incident Response

Lecturer qualifications: The lecturer for this section must be a Paramedic or Basic EMT employed by a Fire Department, Ambulance Service, or Rescue Service and have at least of 2 documented Major Incident Responses in which the lecturer function as a member of the "command" structure.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.6.1	Define the term "major incident."
P	R	P	1.6.2	Identify the local "communication" system.
P	R	P	1.6.3	Describe when a major "incident" should be declared.
P	R	P	1.6.4	Describe the "pre-planning phase" function.
P	R	P	1.6.5	Describe area "response planning".
P	R	P	1.6.6	Describe the components of special resources.
P	R	P	1.6.7	Describe the function of "command."
P	R	P	1.6.8	Describe the function of "scene triage."
P	R	P	1.6.9	Describe the "transferring command function."
P	R	P	1.6.10	Describe section and staging management.
P	R	P	1.6.11	Describe a system for patient identification.
P	R	P	1.6.12	Describe scene medical control.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.6.13	Identify "who's in charge."

Division 1
Prehospital Environment

Section 7
Stress Management

Division 1 — Prehospital Environment

Section 7 — Stress Management

Lecturer qualifications: The lecturer for this section must be a a member of an organized Critical Incident Stress Debrifing (CISD) team and have recieved a minimum of 16 hours of CISD training. Additionally, the lecturer shall have clinical expirence in prehospital or emergency medicine.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.7.1	Define the term "stress".
P	R	P	1.7.2	Name the causes of stress.
P	R	P	1.7.3	Describe the three phases of the stress response.
P	R	P	1.7.4	Name and describe at least five defense mechanisms commonly used to deal with stress.
P	R	P	1.7.5	Describe factors that determine whether anxiety is a positive or negative response.
P	R	P	1.7.6	Describe the common physiologic effects of stress.
P	R	P	1.7.7	Describe behavior that is a manifestation of stress in: a. patients b. patients' families, and c. the advanced level EMT
P	R	P	1.7.8	Name common causes of job stress for the advanced level EMT.
P	R	P	1.7.9	Describe various techniques the advanced level EMT may use to manage stress.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	1.7.10	Describe the stages of the grief process.
P	R	P	1.7.11	Describe common needs of a) the patient, b) the family, and c) the advanced level EMT in dealing with death and dying.
P	R	P	1.7.12	Describe common management techniques used by the advanced level EMT when a patient is dead or dying.
P	R	P	1.7.13	Identify issues of controversy in pre-hospital care involving death and dying.

Division 2
Preparatory

Section 1
Medical Terminology

Division 2 — Preparatory

Section 1 — Medical Terminology

Lecturer qualifications: The lecturer for this section be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.1.1	Define and contrast medical terms.
P	R	P	2.1.2	Identify various medical terms given one or more anatomical parts of the body.
P	R	P	2.1.3	Identify common medical abbreviations.
P	R	P	2.1.4	Identify common root words and determine their meaning.
P	R	P	2.1.5	Identify and define common prefixes and suffixes.
P	R	P	2.1.6	Locate 25 EMS related medical terms in a medical dictionary, read them and produce a set of flash cards using these terms.

Division 2

Preparatory

Section 2

General Patient Assessment

Division 2 — Preparatory

Section 2 — General Patient Assessment

Lecturer qualifications: The lecturer for this section be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.2.1	Establish priorities of care based on threat to life conditions.
P	R	P	2.2.2	Describe the four phases of patient assessment.
P	R	P	2.2.3	Discuss the possible environmental hazards that the EMT may encounter and the means of protecting him in this environment.
P	R	P	2.2.4	Describe the environmental hazards which a patient might encounter.
P	R	P	2.2.5	Describe the mechanisms of stabilizing an automobile to prevent injury while extricating the patient.
P	R	P	2.2.6	Describe the problems an advanced level EMT might encounter in a hostile situation and describe mechanisms of management.
P	R	P	2.2.7	Discuss the importance of Body Substance Isolation techniques
P	R	P	2.2.8	Discuss OSHA regulations and CDC guidelines relating to Blood borne pathogen and Body Substance Isolation.
P	R	P	2.2.9	Describe the various types of protective equipment available to the advanced level EMT for self protection and patient protection.
P	R	P	2.2.10	Discuss the appropriate methods of patient protection in each situation.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.2.11	Describe the emergency situations the EMT may encounter and describe the management of each.
P	R	P	2.2.12	Discuss backup personnel, transportation and equipment.
P	R	P	2.2.13	Define and describe the various classifications of emergencies which an EMT will encounter. Base this on medical needs.
P	R	P	2.2.14	Discuss how the assessment and management differs.
P	R	P	2.2.15	Describe the primary survey and what areas are critical to evaluate.
P	R	P	2.2.16	Describe the anatomy of the following: upper airway, tongue, hypopharynx, nasopharynx oropharynx, larynx, vocal cords.
P	R	P	2.2.17	Describe the function of the vocal cords.
P	R	P	2.2.18	Describe the flow of air from outside the body into the trachea.
P	R	P	2.2.19	Describe the reasons for and mechanism of humidification and warming of the air as it passes through the naso and oral pharynx.
P	R	P	2.2.20	Describe the pathological conditions that can occur in the nose, pharynx and larynx to obstruct or retard air flow and identify the complications of laryngeal fracture.
P	R	P	2.2.21	Describe the methods of airway management.
P	R	P	2.2.22	Describe the methods and management of an obstructed airway.
P	R	P	2.2.23	Describe the mechanical methods of airway management including the benefits and limitations of Oral, nasal and EOA.
P	R	P	2.2.24	Describe the trans-tracheal mechanisms of airway ventilation, including the benefits and limitations (needle & surgical).
P	R	P	2.2.25	Describe how the cervical spine is protected throughout these maneuvers.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.2.26	Describe the anatomy of the following: a. Lungs b. Trachea c. Alveolus d. Diaphragm e. Thoracic wall f. Pleural space.
P	R	P	2.2.27	Describe how pulmonary ventilation (inhalation and exhalation) is accomplished.
P	R	P	2.2.28	Describe the gaseous exchange across the alveoli-capillary membrane (02, and CO2).
P	R	P	2.2.29	Describe the pulmonary problems that can complicate exhalation and inhalation and the mechanisms by which they reduce ventilation and management of each problem, including: a. Open pneumothorax b. Diaphragmatic injury c. Closed pneumothorax (Simple and Tension) d. Flail chest.
P	R	P	2.2.30	Describe the problems of ventilation.
P	R	P	2.2.31	Define mouth to mask ventilation, its benefits and limitations.
P	R	P	2.2.32	Discuss the bag-valve mask, its benefits and limitations.
P	R	P	2.2.33	Discuss the techniques for evaluating the effectiveness of ventilation.
P	R	P	2.2.34	Describe the anatomy of the heart and the cardiovascular system.
P	R	P	2.2.35	Describe the problems that occur with decreased perfusion.
P	R	P	2.2.36	Describe the pathophysiology of cardiac arrest.
P	R	P	2.2.37	Describe the mechanisms of evaluating the effectiveness of perfusion, including pulse, skin color, capillary refill.
P	R	P	2.2.38	Discuss ventilation with an E.O.A. (benefits and limitations).

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.2.39	Discuss ventilation with an endotracheal tube (benefits and limitations).
P	R	P	2.2.40	Describe the equipment and method of suctioning the airway, pharynx and endotracheal tube.
P	R	P	2.2.41	Describe the anatomy of the skin, bones, vessels and subcutaneous tissue as they relate to hemorrhage control.
P	R	P	2.2.42	Discuss the benefits and complications of hemorrhage control by the following means: a. Direct pressure b. Tourniquets c. Hemostats.
P	R	P	2.2.43	Define a mini-neurological examination (level of consciousness).
P	R	P	2.2.44	Describe exposing the patient's body for total evaluation.
P	R	P	2.2.45	Discuss when this should and should not be carried out.
P	R	P	2.2.46	Define shock.
P	R	P	2.2.47	Describe the reasons for and mechanisms of patient reassessment in the resuscitation phase.
P	R	P	2.2.48	Define the components of secondary survey and its benefits for patient evaluation.
P	R	P	2.2.49	Describe the assessment of the head, neck, thorax, abdomen, extremities and nervous system.
P	R	P	2.2.50	Describe the trauma score, define its usefulness and how it is accomplished.
P	R	P	2.2.51	Discuss the important components which must be identified in taking an appropriate history from a patient.
P	R	P	2.2.52	Describe which laboratory studies drawn in the field when the IV is started and their usefulness.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.2.53	Define the definitive care phase.
P	R	P	2.2.54	Describe how a patient is packaged and stabilized for transportation to the hospital, including airway ventilation, IV fluids, pneumatic anti--shock garment, fracture stabilization, bandaging.
P	R	P	2.2.55	Describe how the patient is immobilized to the backboard.
P	R	P	2.2.56	Describe how the patient is immobilized to the stretcher, and to the ambulance.
P	R	P	2.2.57	Describe patient extrication.
P	R	P	2.2.58	Describe how the patient is monitored enroute to the hospital.
P	R	P	2.2.59	Describe how the hospitals are selected for receipt of patients based on patient need and hospital capability.
P	R	P	2.2.60	Describe the benefits and complications of lights and sirens and when this should be used.
P	R	P	2.2.62	Describe the interaction between the EMT and Medical Command Authority in regard to: receiving hospital, family physician on the scene, bystander physician on the scene, orders for patient care, needs of the family and needs of the patient.
P	R	P	2.2.62	Describe the usefulness of a run report.
P	R	P	2.2.63	Describe the mechanisms of continued evaluation of the patient enroute to the hospital.
P	R	P	2.2.64	Perform a rapid assessment of the patient to identity priorities for care.
P	R	P	2.2.65	Demonstrate the assessment of the head, neck, thorax, abdomen. extremities and neurological system.

Division 2

Preparatory

Section 3

Airway and Ventilation

Division 2 — Preparatory

Section 3 — Airway and Ventilation

Lecturer qualifications: It is recommended that the lecturer for this section be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director, currently certified as an advanced cardiac life support instructor, BTLS-A, ATLS, and/or PHTLS instructor.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.3.1	Describe anatomy of the nasopharynx, or pharynx, hypopharynx, larynx, cricoid cartilage, and trachea.
P	R	P	2.3.2	Describe the relationship between: a. Cords and larynx b. Esophagus and larynx c. Epiglottis and larynx d. Tongue and larynx e. True cords and false cords f. Pharynx and larynx
P	R	P	2.3.3	Describe anatomy of the right and left mainstem bronchi, carina, bronchioles, alveoli and lungs.
P	R	P	2.3.4	Discuss the mechanics of respiration/ventilation.
P	R	P	2.3.5	Discuss normal respiratory rates of the following patients: Adult Child Infant Newborn

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.3.6	Discuss the importance of Hyperventilation
P	R	P	2.3.7	Describe laryngoscope, suction, endotracheal tube and bag-valve mask.
P	R	P	2.3.8	Discuss indications and contraindications of endotracheal intubation.
P	R	P	2.3.9	Discuss alternatives to endotracheal intubation.
P	R	P	2.3.10	Discuss skill deterioration and methods of prevention.
P	R	P	2.3.11	Discuss need for rapid placement of ET tube.
P	R	P	2.3.12	Discuss methods of assuring and maintaining correct placement of ET tube.
P	R	P	2.3.13	Discuss indications and contraindications for the use of a mechanical cardiopulmonary resuscitation device (Thumper). And an automatic transport ventilator.
P	R	P	2.3.14	Demonstrate effective cardiopulmonary resuscitation.
P	R	P	2.3.15	Demonstrate effective mouth-to-mask ventilation.
P	R	P	2.3.16	Demonstrate effective ventilation with bag valve and: a. Mask b. EOA c. ET
P	R	P	2.3.17	Demonstrate the manual methods of airway management.
P	R	P	2.3.18	Demonstrate the mechanical methods of airway management. a. Nasal ET b. Oral ET c. Digital ET d. EOA/EGTA e. Cricothyrotomy (surgical & needle) f. Needle Thoracostomy g. Nasopharyngeal airway h. Oropharyngeal airway i. Gastric decompression j. Sellick's maneuver
P	R	P	2.3.19	Demonstrate placement (within 30 seconds) of ET tube.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.3.20	Demonstrate method by assuring and maintaining correct placement of ET tube.
P	R	P	2.3.21	Demonstrate reventilation for missed intubation.
P	R	P	2.3.22	Demonstrate the methods of management of an obstructed airway.
P	R	P	2.3.23	Demonstrate the use of various types of portable and fixed suction devices.
P	R	P	2.3.24	Demonstrate Skills described above both on mannikin and a live patient or cadaver.
P	R	P	2.3.25	Demonstrate the use of automatic transport ventilators and mechanical cardiopulmonary device (thumpers).
P	R	P	2.3.26	Demonstrate the placement of an oral gastric lavage tube and state indications, contraindications, and complications as it pertains to airway management.

Division 2

Preparatory

Section 4

Pathophysiology of Shock

Division 2 Preparatory

Section 4 Pathophysiology of Shock

Lecturer qualifications: The lecturer for this section shall be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director, currently certified as a, BTLS-A, ATLS, and/or PHTLS instructor.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.4.1	Define shock based on aerobic and anaerobic metabolism.
P	R	P	2.4.2	Define management based on the Fick Principle.
P	R	P	2.4.3	Discuss the prevention of anaerobic metabolism.
P	R	P	2.4.5	Discuss red blood cell oxygenation in the lungs based on alveolar 2° levels and transportation across the alveolar capillary wall.
P	R	P	2.4.6	Discuss tissue oxygenation based on tissue profusion and off-loading of oxygen.
P	R	P	2.4.7	Discuss the role played by respiration and inadequate ventilation in the management of shock.
P	R	P	2.4.8	Describe perfusion and the mechanisms of improvement of cardiac output based on the strength and rate of contractions.
P	R	P	2.4.9	Discuss the role of preload in improving cardiac output.
P	R	P	2.4.10	Discuss the fluid component of the cardiovascular system and the relationship between the volume of the fluid and the size of the container.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.4.11	Discuss afterload (systemic vascular resistance), the relationship of diastolic pressure to the SVR and the effect of diastolic pressure on coronary circulation.
P	R	P	2.4.12	Discuss the container size in its relationship to the fluid volume and the effect on pre-load.
P	R	P	2.4.13	Discuss body fluids based on total body water, intracellular fluid, and extracellular fluid.
P	R	P	2.4.14	Identify the significant anions and cations in the body.
P	R	P	2.4.15	Describe the role of protein.
P	R	P	2.4.16	Discuss osmosis. Define semi-permeable membranes, and discuss their function.
P	R	P	2.4.17	Define isotonic fluids, hypotonic fluids, and hypertonic fluids.
P	R	P	2.4.18	Define and discuss diffusion.
P	R	P	2.4.19	Define active transport.
P	R	P	2.4.20	Describe the mechanisms of concentration of electrolytes.
P	R	P	2.4.21	Define Acid-Base balance.
P	R	P	2.4.22	Discuss Acid-Base balance based on hydrogen ion concentration, pH and buffer systems.
P	R	P	2.4.23	Define and discuss the following: a. Respiratory acidosis. b. Respiratory alkalosis. c. Metabolic acidosis. d. Metabolic alkalosis.
P	R	P	2.4.24	Describe the mechanism of the body response to perfusion change.
P	R	P	2.4.25	Identify the role of the baro-receptor.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.4.26	Describe how the actions of the baro-receptor affect blood pressure and perfusion.
P	R	P	2.4.27	Describe compensated shock.
P	R	P	2.4.28	Describe uncompensated shock, both cardiac and peripheral effects.
P	R	P	2.4.29	Describe how anaerobic metabolism at the cellular level can lead to death several days later.
P	R	P	2.4.30	Discuss the effects of decreased perfusion at the capillary level, both on the capillary lining as well as the cell; include a discussion of increased interstitial fluid.
P	R	P	2.4.31	Describe the three phases in the capillary cellular relationship (ischemia, stagnant, and washout).
P	R	P	2.4.32	Discuss the evaluation of the patient's perfusion status, based on physical observations within the primary survey, including pulse, skin, temperature, capillary refill.
P	R	P	2.4.33	Discuss the relationship of the neurological exam to evaluation of hypoperfusion and oxygenation.
P	R	P	2.4.34	Describe the information provided by the following in a physical examination: pulse, blood pressure, diastolic pressure, systolic pressure, skin color, appearance, temperature, and respiration.
P	R	P	2.4.35	Discuss resuscitation of a shocky patient. Include red cell oxygenation, tissue ischemic sensitivity, IV fluids and the Pneumatic Anti-Shock Garment.
P	R	P	2.4.36	Describe the beneficial and detrimental effects of the Pneumatic Anti-Shock Garment.
P	R	P	2.4.37	Describe the indications and contraindications for the Pneumatic Anti-Shock Garment and how it affects the patient in each.
P	R	P	2.4.38	Discuss fluid replacement, the types of fluid that are available, the benefits and detrimental effects of each.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.4.39	Discuss how fluid replacement is monitored and controlled.
P	R	P	2.4.40	Discuss the routes of fluid replacement and the advantages and disadvantages of each.
P	R	P	2.4.41	Demonstrate in order of priority the steps of shock resuscitation.
P	R	P	2.4.42	Demonstrate the use of the Pneumatic AntiShock Garment.

Division 2

Preparatory

Section 5

General Pharmacology

Division 2 — Preparatory

Section 5 — General Pharmacology

Lecturer qualifications: The lecturer for this section shall be a physician, nurse, Paramedic, or Pharm.D.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.5.1	**Name four drug sources and give an example of a drug derived from each source.**
P	R	P	2.5.2	Name and contrast the various names of a drug (i.e., generic vs. trade name vs. official vs. chemical).
P	R	P	2.5.3	State why drug standards are necessary.
P	R	P	2.5.4	Identify those agencies that are responsible for regulating drugs and provide examples.
P	R	P	2.5.5	Name three legislative acts that regulate drugs.
P	R	P	2.5.6	List the five schedules of controlled substances and give an example of a medication from each.

I	I-P	P	Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.5.7	Define the following terms: • capsules • vials • fluid extracts • powders • suppositories • tinctures • pills • ointments • spirits • tablets • lozenges • suspensions • ampules • solutions
P	R	P	2.5.8	Identify those pharmaceutical preparations used internally.
P	R	P	2.5.9	Identify and state the given dosage of prepackaged pharmaceutical preparations.
P	R	P	2.5.10	State the purpose and use(s) of the *Physician's Desk Reference* (PDR).
P	R	P	2.5.11	Identify local and general or systemic effects of drugs.
P	R	P	2.5.12	Describe the factors that influence the actions of a drug on an individual patient, including: • age of patient • body mass • physical condition • drug dosage • drug interactions
P	R	P	2.5.13	Compare the relative speed of absorption of the following routes of drug administration: oral, intravenous, topical, rectal, intramuscular, sublingual, subcutaneous, endotracheal and intradermal.
P	R	P	2.5.14	Name the five routes by which drugs are absorbed.

I	I-P	P	Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.5.15	Define the following terms: • depression • physiological • therapeutic • untoward • initiation • antagonism • idiosyncrasy • indication • side effect • cumulative effect • tolerance • synergism • potentiation • additive • habituation • hypersensitivity • contraindication
P	R	P	2.5.16	From the terms above, select the term that best describes any specific drug.
P	R	P	2.5.17	Identify and discuss the following nine items as they relate to the administration of any drug: • dose • dilution • action • contraindications • antidotes • indications and use • precautions • incompatibility • side effects
P	R	P	2.5.18	List the two systems of weights and measures being used today.
P	R	P	2.5.19	Determine which weights and measures belong to the apothecary system or to the metric system.
P	R	P	2.5.20	State three advantages of the metric system.
P	R	P	2.5.21	Demonstrate the conversion of various measures between milligrams to grams.
P	R	P	2.5.22	Given a drug dose in milligrams and its specific concentration in tablet form, calculate how many tablets should be given to a patient.
P	R	P	2.5.23	Demonstrate the conversion of various measures between milliliters to liters.

I	I-P	P	Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.5.24	Given a desired dose and concentration of a drug, calculate the volume of a drug to be administered.
P	R	P	2.5.25	Demonstrate the conversion of various measures between pounds to kilograms.
P	R	P	2.5.26	Given the weight of a patient in pounds and a drug dose in milligrams per kilogram, calculate the appropriate drug dosage for the patient.
P	R	P	2.5.27	State the number of macro and micro drops/cc.
P	R	P	2.5.28	State the formula used to determine the flow rate.
P	R	P	2.5.29	Given a rate of infusion for an IV fluid, determine the number of micro and/or macro drips per minute.
P	R	P	2.5.30	State four routes of drug administration.
P	R	P	2.5.31	Name at least eight safety considerations to remember when administering drugs.
P	R	P	2.5.32	Identify and describe local guidelines for drug administration.
P	R	P	2.5.33	Describe the safe handling and disposal of sharps in the prehospital setting.
P	R	P	2.5.34	Describe the different types and sizes of syringes and needles and the advantages and disadvantages of each.
P	R	P	2.5.35	Define "parenteral drugs."

I	I-P	P	Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.5.36	Identify, describe and demonstrate proficency utilizing the following routes of drug administration: ● Intradermal ● Subcutaneous ● Intramuscular ● Intravenous ● Intraosseous ● Small Volume Nebulizer ● Rectal (valium only)
P	R	P	2.5.37	Describe the proper approach and explanation that should be given to a patient prior to the administration of a medication.
P	R	P	2.5.38	State what information should be elicited from a patient prior to administration of a medication.
P	R	P	2.5.39	State why ampule tops should be tapped before they are used.
P	R	P	2.5.40	State why air must be taken into the syringe when drawing a solution from a vial.
P	R	P	2.5.41	State why the IV tube is pinched off above the injection site when performing an IV push.
P	R	P	2.5.42	State the advantages and/or disadvantages of: ● IV injections ● Subcutaneous injections ● Intramuscular injections
P	R	P	2.5.43	Explain why the skin is pinched when administering a subcutaneous injection.
P	R	P	2.5.44	Explain why the skin is stretched when administering an intramuscular injection.
P	R	P	2.5.45	Withdraw a given amount of solution, given the dose, from an ampule or vial.

I	I-P	P	Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.5.46	Assemble a prepackaged syringe.
P	R	P	2.5.47	Perform an IV push and inject a specified dose of medication into an already established IV line.
P	R	P	2.5.48	Perform subcutaneous and intramuscular injections at any one of several locations.
P	R	P	2.5.49	Explain the five rights of drug administration.
P	R	P	2.5.50	Describe the technique for administering drugs via an endotracheal tube.

Division 2

Preparatory

Section 6

Advanced Pharmacology

Division 2 — Preparatory

Section 6 — Advanced Pharmacology

Lecturer qualifications: The lecturer for this section shall be a physician, nurse, paramedic, or Pharm.D.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.6.1	Define the following terms: ● Pharmacology ● Pharmacokinetics ● Pharmacodynamics
P	R	P	2.6.2	List factors that slow drug absorption and factors that enhance it.
P	R	P	2.6.3	Define "blood brain barrier."
P	R	P	2.6.4	Explain how cardiovascular function affects the distribution of a drug.
P	R	P	2.6.5	Identify factors that influence the rate and efficiency of drug metabolism
P	R	P	2.6.6	List the primary organs for drug excretion.
P	R	P	2.6.7	Identify factors that determine where and how a drug will act in the body.

I	I-P	P	Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	2.6.8	Describe characteristics of pediatric and geriatric patients that influence drug distribution, metabolism and excretion.
P	R	P	2.6.9	Describe the functions of the sympathetic and parasympathetic divisions of the autonomic nervous system.
P	R	P	2.6.10	Explain how autonomic nerve impulses are transmitted.
P	R	P	2.6.11	Define cholinergic and adrenergic receptors.
P	R	P	2.6.12	Discuss the effects of alpha adrenergic and beta adrenergic stimulation on vital organs.
P	R	P	2.6.13	Describe the mechanism by which autonomic drugs exert their actions.
P	R	P	2.6.14	Describe the action, prehospital indications, side effects, adult and pediatric dosages, contraindications, special considerations and precautions for each drug carried in the Paramedic (IEMT) drug box.

Division 3

Trauma

Section 1

Trauma

Division 3 — Trauma

Section 1 — Trauma

Lecturer qualifications: The lecturer for this section shall be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director, currently certified as a, BTLS-A, ATLS, and/or PHTLS instructor.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	3.1.1	Describe the general needs of the trauma patient and the steps within each area of need which must be addressed.
P	R	P	3.1.2	Describe the areas in which trauma care is rendered and a general overview of care in each of those areas.
P	R	P	3.1.3	Define the priorities of trauma management.
P	R	P	3.1.4	Describe triage with multiple patients.
P	R	P	3.1.5	Describe the steps in the general assessment of patient care.
P	R	P	3.1.6	Describe the steps in the primary survey of patient care.
P	R	P	3.1.7	Describe the anatomy of the airway.
P	R	P	3.1.8	Describe the anatomy of the cervical spine.
P	R	P	3.1.9	Describe the physiology of the airway.
P	R	P	3.1.10	Describe pathophysiological problems that occur in the airway.
P	R	P	3.1.11	Describe the management of the airway in relationship to the individual pathophysiological problems that occur.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	3.1.12	Describe the relationship of the cervical spine to airway management.
P	R	P	3.1.13	Describe how the airway is managed protecting the cervical spine.
P	R	P	3.1.14	Describe the construction of the various devices used in airway management.
P	R	P	3.1.15	Describe the advantages and disadvantages of each.
P	R	P	3.1.16	Identify those steps in airway management that are hospital techniques and not prehospital techniques and why.
P	R	P	3.1.17	Describe the anatomy of the chest.
P	R	P	3.1.18	Describe the physiology of pulmonary expansion.
P	R	P	3.1.19	Describe those pathophysiological conditions that limit ventilation and pulmonary expansion.
P	R	P	3.1.20	Describe the assessment of ventilation and the various pathological conditions that can compromise this ventilation.
P	R	P	3.1.21	Describe the management of compromised ventilation.
P	R	P	3.1.22	Describe the management of conditions that compromise pulmonary expansion.
P	R	P	3.1.23	Describe the advantages and disadvantages of the various ventilation techniques and devices.
P	R	P	3.1.24	Describe a pneumothorax and its three variations.
P	R	P	3.1.25	Describe the management of circulatory and hemorrhage problems.
P	R	P	3.1.26	Describe the anatomy of the heart and cardiovascular system.
P	R	P	3.1.27	Describe the physiology and pathophysiology of shock.
P	R	P	3.1.28	Describe the assessment of circulatory sufficiency.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	3.1.29	Describe those components of assessment which are most easily obtained in the primary survey and their individual significance.
P	R	P	3.1.30	Describe the management of perfusion problems.
P	R	P	3.1.31	Describe the pathophysiology of shock and its management in relationship to the Fick Principle.
P	R	P	3.1.32	Identify the methods of hemorrhage control that should be used in the prehospital setting and those that should not and why.
P	R	P	3.1.33	Describe the mini-neurological exam.
P	R	P	3.1.34	Describe the mini-neurological exam in relationship to perfusion and cerebral injury and the management steps that must be taken to solve these problems.
P	R	P	3.1.35	Describe how a patient is exposed for examination.
P	R	P	3.1.36	Describe when a patient should and should not be exposed for such assessment.
P	R	P	3.1.37	Describe how assessment can be completed with only a partially exposed patient.
P	R	P	3.1.38	Describe resuscitation of the trauma patient based upon the Fick Principle.
P	R	P	3.1.39	Describe the various steps in the assessment of the effectiveness of resuscitation techniques.
P	R	P	3.1.40	Describe the components of a complete prehospital history and the significance of each.
P	R	P	3.1.41	Describe the components of the history that are important for prehospital and those that are not.
P	R	P	3.1.42	Describe the general overview of a physical examination.
P	R	P	3.1.43	Describe the physical examination as it relates to the head.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	3.1.44	Describe the anatomy of the head and face.
P	R	P	3.1.45	Describe those pathophysiologic conditions that require prehospital assessment and management.
P	R	P	3.1.46	Describe the assessment of the head.
P	R	P	3.1.47	Describe the management of the pathophysiologic conditions of the head.
P	R	P	3.1.48	Describe the specific head injuries that compromise the airway and why.
P	R	P	3.1.49	Describe specific head injuries that produce hemorrhage and how they are managed.
P	R	P	3.1.50	Describe the physical examination of the neck.
P	R	P	3.1.52	Describe the anatomy of the neck.
P	R	P	3.1.53	Describe the pathophysiology of neck injuries.
P	R	P	3.1.54	Describe the assessment of the neck.
P	R	P	3.1.55	Describe the management of neck injuries.
P	R	P	3.1.56	Describe the general examination of the thoracic cavity.
P	R	P	3.1.57	Describe the anatomy of the thoracic cavity.
P	R	P	3.1.58	Describe the physiology of the thoracic cavity including ventilation, respiration, and Acid-Base Balance.
P	R	P	3.1.59	Describe the assessment of the thoracic cavity.
P	R	P	3.1.60	Describe the stethoscope, how it works and its uses in the physical examination.
P	R	P	3.1.61	Describe how the physical examination of the thoracic cavity is conducted in steps, and the various pathophysiologic processes that each step can identify.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	3.1.62	Describe the prehospital management of a pneumothorax, a tension pneumothorax, and an open pneumothorax.
P	R	P	3.1.63	Describe the pathophysiology of each of the above.
P	R	P	3.1.64	Describe the management of a flail chest.
P	R	P	3.1.65	Describe the pathophysiology of a flail chest.
P	R	P	3.1.66	Describe a hemothorax and the prehospital significance of such a condition.
P	R	P	3.1.67	Describe a pulmonary contusion and its prehospital significance and management.
P	R	P	3.1.68	Describe cardiac tamponade based on anatomy, physiology, pathophysiology, and management.
P	R	P	3.1.69	Describe the need/non-need of prehospital management of a cardiac tamponade.
P	R	P	3.1.70	Describe cardiac contusion, including anatomy, pathophysiology, methods of assessment, significance of dysrythmias that occur, and its management.
P	R	P	3.1.71	Describe the abdominal examination and the significance of the abdominal pathology in the prehospital phase.
P	R	P	3.1.72	Describe the anatomy of the abdomen.
P	R	P	3.1.73	Describe the physiology of the abdomen.
P	R	P	3.1.74	Describe the pathophysiologic processes of the abdomen that affect prehospital care.
P	R	P	3.1.75	Describe the assessment of the abdomen.
P	R	P	3.1.76	Describe the management of these pathological processes.
P	R	P	3.1.77	Describe the management of extremity injuries, both upper and lower.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	3.1.78	Describe the anatomy of the upper and lower extremities.
P	R	P	3.1.79	Describe the pathophysiological processes that affect the upper and lower extremities.
P	R	P	3.1.80	Describe the management of fractures.
P	R	P	3.1.81	Describe the management of dislocations, explaining which should be reduced prehospital, which should not and why.
P	R	P	3.1.82	Describe the management for lacerations.
P	R	P	3.1.83	Describe the various types of splints which can be used for the immobilization of fractures, and list the advantages and disadvantages for each.
P	R	P	3.1.84	Describe in detail the short backboard, the various types on the market, and the principles of immobilization of the cervical spine.
P	R	P	3.1.85	Describe the management of pelvic fractures.
P	R	P	3.1.86	Describe the significant pathophysiology of pelvic fractures.
P	R	P	3.1.87	Describe the anatomy of the spine including the cervical, thoracic, lumbar, and coccygeal regions.
P	R	P	3.1.88	Describe the anatomical differences in the various regions.
P	R	P	3.1.89	Describe the construction of the vertebrae in the various regions.
P	R	P	3.1.90	Describe the pathophysiologic processes that affect the spine including both the bony structures and the neurological structures.
P	R	P	3.1.91	Describe the assessment of the spine including the differences in the bony assessment and neurological assessment.
P	R	P	3.1.92	Describe continued monitoring of a patient.
P	R	P	3.1.93	Describe the various scores for assessing the severity of trauma injuries that have prehospital significance and those that do not.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	3.1.94	Describe how a patient is monitored.
P	R	P	3.1.95	Describe transportation of a patient to a hospital.
P	R	P	3.1.96	Describe communication with a hospital.
P	R	P	3.1.97	Describe the procedure for the advanced level EMT to physician communication, the steps and the important information included in each step and the priority in each of the steps.
P	R	P	3.1.98	Perform all of the following skills in at least five (5) simulated trauma patient scenarios: Mouth-to-mask ventilation. Mouth-to-mouth ventilation. Bag-valve mask ventilation. Demand-valve ventilation. Oral airway insertion. Nasal airway insertion. Endotracheal tube insertion. Esophageal obturator airway insertion. PTL airway insertion. Assessment of adequate ventilation. Management of an open pneumothorax. Decompression of a tension pneumothorax. Insertion of IV lines. Application of PASG. Assessment of reestablishment of perfusion. A mini-neurological examination .

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	3.1.99	Perform the following skills in a simulated trauma patient scenario: Exposure of a patient for physical exam. Physical examination of the head. Physical examination of the neck. Physical examination of the thorax. Physical examination of the abdomen. Physical examination of the upper extremities. Physical examination of the lower extremities. Physical examination of the pelvis. Neurological examination. Application of the short backboard. Application of a long backboard. Splinting techniques for the upper extremities. Splinting techniques for the lower extremities. Immobilization of the cervical spine. Rapid extrication. Application of a cervical collar. Reduction of a knee dislocation. Reduction of a shoulder dislocation. Reduction of a finger dislocation. Reduction of a fracture/dislocation of the ankle.

Division 3

Trauma

Section 2

Burns

Division 3 — Trauma

Section 2 — Burns

Lecturer qualifications: The lecturer for this section shall be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director, currently certified as a, BTLS-A, ATLS, and/or PHTLS instructor.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	3.2.1	Describe the structure of the integumentary system.
P	R	P	3.2.2	Describe the function of the integumentary system.
P	R	P	3.2.3	Define the movement of body fluids between plasma and interstitial compartments.
P	R	P	3.2.4	Define the movement of body fluids between interstitial and intercellular compartments.
P	R	P	3.2.5	Describe the pathophysiology of burn shock.
P	R	P	3.2.6	State the four major sources of burn injury.
P	R	P	3.2.7	Describe the four classifications of burn injury.
P	R	P	3.2.8	Describe the three categories of burn injury by severity.
P	R	P	3.2.9	List the factors altering severity of burn injury.
P	R	P	3.2.10	Given a diagram, calculate the percentages of body surface areas burned.

I	I-P	P	Number	Objective: At the conclusion of this subsection, instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	3.2.11	List and describe one of two fluid resuscitation formulas.
P	R	P	3.2.12	Describe assessment and management of burn injury by source.
P	R	P	3.2.13	Describe management of burn injury when associated with other injuries or when medical conditions are present.
P	R	P	3.2.14	List factors contributing to inhalation injury.
P	R	P	3.2.15	Describe assessment and management of inhalation injury.

Division 4

Medical

Section 1

Respiratory Section

Division 4 Medical

Section 1 Respiratory Section

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.1.1	Identify and describe the function of the structures of the upper respiratory tract.
P	R	P	4.1.2	Identify and describe the function of the structures of the lower respiratory tract.
P	R	P	4.1.3	Define the terms respiration and pulmonary ventilation.
P	R	P	4.1.4	Describe the physiology of the respiratory cycle.
P	R	P	4.1.5	Describe the pulmonary circulation.
P	R	P	4.1.6	Describe the process of gas exchange in the lungs.
P	R	P	4.1.7	Identify the normal partial pressures of oxygen and carbon dioxide in: a. The alveoli b. Venous blood c. Arterial blood
P	R	P	4.1.8	Identify the systems involved in the process of regulation of respiration.
P	R	P	4.1.9	Describe the difference between the normal respiratory drive and the respiratory drive of the patient with chronic obstructive pulmonary disease.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.1.10	Define and describe the following modified forms of respiration. a. Cough b. Sneeze c. Hiccough d. Sigh e. Grunting
P	R	P	4.1.11	List normal respiratory rates for adults, infants and children.
P	R	P	4.1.12	Identify factors that affect respiratory rates.
P	R	P	4.1.13	Define the following terms: a. Dead space b. Tidal volume c. Minute volume d. Vital capacity
P	R	P	4.1.14	Identify factors that alter carbon dioxide levels in the blood.
P	R	P	4.1.15	Identify factors that alter oxygen levels in the blood.
P	R	P	4.1.16	Define the following terms: a. Hypoxia b. Hypoxemia c. Hypercarbia d. Respiratory failure e. Cyanosis f. Dyspnea g. Tachypnea h. Hyperpnea i. Orthopnea j. Apnea k. Hypoventilation l. Hyperventilation m. Tracheal tugging n. Nasal flaring
P	R	P	4.1.17	Identify the historical factors to be elicited when evaluating the respiratory system.
P	R	P	4.1.18	Identify specific observations and physical findings to be evaluated in the patient with a respiratory complaint.
P	R	P	4.1.19	Describe the techniques of inspection, auscultation, and palpation of the chest.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.1.20	Define the following terms: a. Snoring respirations b. Stridor c. Wheezing d. Rhonchi e. Rales f. Friction rub
P	R	P	4.1.21	Identify the basic principles of airway management.
P	R	P	4.1.22	Identify the causes of upper airway obstruction, the pathophysiology, assessment and management of each.
P	R	P	4.1.23	For the following drugs, identify the pharmacology and actions, the indication, precaution, administration and side effects for the adult and pediatric patient: a. Oxygen b. Epinephrine c. Bronkosol d. Racemic epinephrine e. Aminophylline f. Diphenhydramine
P	R	P	4.1.24	Discuss the pathophysiology, assessment and management of the following: a. Emphysema b. Chronic bronchitis c. Asthma i. Adult ii. Pediatric d. Pneumonia e. Toxic inhalation f. Pulmonary embolism g. Hyperventilation syndrome h. Central nervous system dysfunctions
P	R	P	4.1.25	Demonstrate the technique of direct laryngoscopy.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.1.26	Demonstrate the upper airway obstruction protocol according to American Heart Association standards.
P	R	P	4.1.27	Demonstrate the techniques of inspection, auscultation, and palpation in examining the thorax.
P	R	P	4.1.28	Identify the following abnormal lung sounds: a. Stridor b. Wheezes c. Rales d. Rhonchi
P	R	P	4.1.29	Demonstrate the ability to obtain an appropriate history when evaluating patients with respiratory complaints.
P	R	P	4.1.30	Demonstrate the ability to perform an appropriate assessment when evaluating patients with respiratory complaints.
P	R	P	4.1.31	Demonstrate the ability to appropriately administer the following drugs for the adult and pediatric patient: a. Oxygen b. Epinephrine c. Bronkosol d. Racemic epinephrine e. Aminophylline f. Diphenhydramine g. Ventolin

Division 4

Medical

Section 2

Cardiovascular Section

Division 4 — Medical

Section 2 — Cardiovascular

Lecturer qualifications: The lecturer for this section be a Paramedic, ALS Base Hospital Coordinator, or ALS Base Hospital Medical Director, currently certified as an advanced cardiac life support instructor.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.2.1	Describe the size, shape, and location/orientation (in regards to other body structures) of the heart muscle.
P	R	P	4.2.2	Identify the location of the following structures on a diagram of the normal heart. • Pericardium • Myocardium • Epicardium • Right and left atria • Interatrial septum • Right and left ventricles • Intraventricular septum • Superior and inferior vena cava • Aorta • Pulmonary vessels • Coronary arteries • Tricuspid valve • Mitral valve • Aortic valve • Pulmonic valve • Papillary muscles • Chordae tendinea
P	R	P	4.2.3	Describe the function of each structure listed in Objective 4.2.2.
P	R	P	4.2.4	Describe the distribution of the coronary arteries and the parts of the heart supplied by each artery.
P	R	P	4.2.5	Differentiate the structural and functional aspects of arterial and venous blood vessels.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.2.6	Name and describe the location of 5 major arteries and 5 major veins.
P	R	P	4.2.7	Describe the structure and function of capillaries.
P	R	P	4.2.8	Describe the course of blood flow through the normal heart and lungs.
P	R	P	4.2.9	Describe the cardiac cycle in terms of mechanical function and relative position of heart valve.
P	R	P	4.2.10	Describe the effects of increased heart rate on the contraction and relaxation phases of the cardiac cycle.
P	R	P	4.2.11	Describe the functional differences between the right heart and left heart pumps.
P	R	P	4.2.12	Define the following terms that refer to cardiac physiology: ● Stroke volume ● Afterload ● Starling's law ● Cardiac output ● Preload ● Blood pressure
P	R	P	4.2.13	Describe nerve innervation of the heart.
P	R	P	4.2.14	Name the chemical mediator of the parasympathetic nervous system and describe its primary effect on the heart.
P	R	P	4.2.15	Name the chemical mediator of the sympathetic nervous system and describe the mechanical, cardiac, and peripheral effects of: ● Alpha receptor stimulation ● Beta receptor stimulation
P	R	P	4.2.16	Name major electrolytes that affect cardiac function.
P	R	P	4.2.17	Describe the electrical properties of the heart.
P	R	P	4.2.18	Describe the normal sequence of electrical conduction through the heart and state the purpose of this conduction system.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.2.19	Describe the location and function of the following structures of the electrical conduction system: ● SA Node ● Bundle of His ● Internodal and interatrial tracts ● Bundle branches ● AV Node ● Purkinje fibers
P	R	P	4.2.20	Define cardiac depolarization and repolarization and describe the major electrolyte changes that occur in each process.
P	R	P	4.2.21	Name three areas of the heart possessing pacemaking capabilities and state the intrinsic (inherent) rates of each area.
	P	P	4.2.22	Describe an ECG.
	P	P	4.2.23	Define the following terms as they relate to the electrical activity of the heart: ● Isoelectric line ● P wave ● QRS complex ● T wave ● PR interval ● ST segment ● Absolute and relative refractory period
	P	P	4.2.24	Describe how electrical activity of the heart is affected by: ● Sympathetic stimulation ● Alpha receptors ● Beta receptors ● Parasympathetic stimulation
P	R	P	4.2.25	Name the common chief complaints of cardiac patients.
P	R	P	4.2.26	Describe why the following occur in patients with cardiac problems: ● Chest pain or discomfort ● Shoulder, arm, neck, or jaw pain/discomfort ● Dyspnea ● Syncope ● Palpitations/abnormal heart beat

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.2.27	Describe those questions to be asked during history taking for each of the common cardiac chief complaints.
P	R	P	4.2.28	Describe the four most pertinent aspects of the past medical history in a patient with a suspected cardiac problem.
P	R	P	4.2.29	Identify, in a list of common prescription drugs, those that a patient may be taking for cardiovascular problems.
P	R	P	4.2.30	Describe those aspects of the physical examination that should be given special attention in the patient with suspected cardiac problems.
P	R	P	4.2.31	Describe the significance of the following physical exam findings in a cardiac patient: • Altered level of consciousness • Peripheral edema • Cyanosis • Poor capillary refill • Cool, clammy skin • Jugular vein distension • Pulmonary rales/wheezes • Carotid artery bruit • Pulse irregularity
P	R	P	4.2.32	Describe the pathophysiology of atherosclerosis.
P	R	P	4.2.33	List the three major modifiable risk factors for atherosclerosis.
P	R	P	4.2.34	Describe the common characteristics of the pain/discomfort that occurs in angina pectoris and acute myocardial infarction.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.2.35	Describe the pathophysiology, signs and symptoms, and prehospital management of each of the following conditions: • Angina pectoris • Acute myocardial infarction • Right ventricular failure • Left ventricular failure/pulmonary edema • Cardiogenic shock • Cardiac arrest • Abdominal aortic aneurysm • Dissecting aortic aneurysm • Acute arterial occlusion • Acute pulmonary embolism • Venous thrombophlebitis • Ruptured varicose veins • Chronic peripheral arterial insufficiency • Malignant hypertension
P	R	P	4.2.36	Describe 3 causes of cardiac arrest other than ASHD and describe how medical management of these situations differs.
P	R	P	4.2.37	Describe and contrast the etiology of cardiac arrest in infants and children from that of adult patients.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
	P	P	4.2.38	Describe the action, pre-hospital indications, side effects, adult and pediatric dosages, contraindications, special considerations, and precautions for each of the following drugs: 1. Atropine sulfate 2. Lidocaine hydrochloride 3. Bretylim tosylate 4. Verapamil 5. Epinephrine 6. Norepinephrine 7. Isoproterenol 8. Dopamine 9. Sodium bicarbonate 10. Calcium chloride 11. Oxygen 12. Nitrous oxide 13. Nitroglycerin 14. Morphine sulfate 15. Furosemide 16. Aminophylline 17. Diazepam
	P	P	4.2.39	Describe the action, uses, and side effects of the following drugs that are not used in the field but commonly taken by cardiac patients: 1. Digitalis 2. Propranolol
	P	P	4.2.40	Describe the basic concept of ECG monitoring.
	P	P	4.2.41	Define a monitoring lead and describe how it differs from a 12-lead ECG.
	P	P	4.2.42	Describe what type of information can and cannot be obtained from a monitoring lead.
	P	P	4.2.43	Describe information obtained from the vertical and horizontal axes of the ECG graph paper.
	P	P	4.2.44	State the numerical values assigned to each small and each large box on the ECG graph paper for each axis.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
	P	P	4.2.45	Define ECG artifact and name the causes.
	P	P	4.2.46	State the steps in the analysis format of ECG rhythm strips.
	P	P	4.2.47	Describe the normal parameters for the following aspects of an ECG rhythm strip: ● Rate ● Rhythm ● P waves ● PR interval ● QRS complex duration
	P	P	4.2.48	Describe two common methods for calculating heart rate on an ECG rhythm strip and the indications for using each method.
	P	P	4.2.49	Name 8 causes of dysrhythmia.
	P	P	4.2.50	Describe the mechanisms of electrical impulses formation.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
	P	P	4.2.51	Describe the etiology, Lead II ECG characteristics, clinical significance, and emergency treatment of each of the following dysrhythmia: ● Sinus bradycardia ● Sinus tachycardia ● Sinus arrhythmia ● Sinus arrest ● Wandering pacemaker ● Premature atrial complexes ● Atrial tachycardia (PSVT) ● Atrial flutter ● Atrial fibrillation ● Premature junctional complexes ● Junctional escape complexes and rhythm ● Accelerated junctional rhythm ● Paroxysmal junctional tachycardia (PSVT) ● Ventricular escape complexes and rhythm ● Premature ventricular complexes ● Ventricular tachycardia ● Ventricular fibrillation ● Asystole ● Artificial pacemaker rhythm ● First degree AV block ● Second degree AV block, Type I and Type I ● Third degree AV block ● Bundle branch block/aberrant ventricular conduction.
P	R	P	4.2.52	Describe the indications for use of rotating tourniquets.
	P	P	4.2.53	Describe the indications for use of a precordial thump.
	P	P	4.2.54	Describe the indications for use of synchronized cardioversion.
	P	P	4.2.55	Describe energy recommendations for defibrillation of adult and pediatric patients.
	P	P	4.2.56	Describe the indications and complications of intracardiac injections.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.2.57	Demonstrate the correct procedure for obtaining a history and performing a physical exam for cardiac-related problems.
P	R	P	4.2.58	Demonstrate assessment techniques and emergency management of patients with any of the conditions listed in Objective 4.2.35.
	P	P	4.2.59	Demonstrate preparation and proper administration of a prescribed dose of any of the cardiac drugs listed in Objective 4.2.38.
	P	P	4.2.60	Identify the following on any rhythm strip: ● P waves ● PR intervals ● QRS complexes ● ST segments ● P-P intervals ● T waves ● R-R intervals ● Isoelectric line
	P	P	4.2.61	Recognize each of the dysrhythmia listed in Objective 4.2.51 on Lead II rhythm strips or ECG monitor.
	P	P	4.2.62	Demonstrate appropriate clinical assessment and management of a cardiac patient having any of the dysrhythmia listed in Objective 4.2.51.
P	R	P	4.2.63	Demonstrate on an adult mannequin, the techniques for single and two-person CPR according to American Heart Association standards.
P	R	P	4.2.64	Demonstrate on an infant mannequin, the technique for infant CPR according to American Heart Association standards.
	P	P	4.2.65	Demonstrate proper application of ECG chest electrodes and obtain a sample Lead II or MCL1 rhythm strip.
	P	P	4.2.66	Demonstrate the proper use of the defibrillator paddle electrodes to obtain a sample Lead II rhythm strip.
	P	P	4.2.67	Demonstrate how to properly assess the cause of poor ECG tracing.
P	R	P	4.2.68	Demonstrate the proper application of rotating tourniquets.
P	R	P	4.2.69	Demonstrate the proper technique for administering a precordial thump.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
	P	P	4.2.70	Demonstrate correct operation of a monitor-defibrillator to perform defibrillation on an adult and infant.
	R	P	4.2.71	Demonstrate the correct technique for performing synchronized cardioversion.
	P	P	4.2.72	Demonstrate on a mannequin the proper procedure for patient assessment and performance of carotid massage.
	P	P	4.2.73	Demonstrate the correct technique for performing non-invasive (external) cardiac pacing.
P	R	P	4.2.74	Demonstrate proper application and operation of mechanical CPR adjunctive device.
P	R	P	4.2.75	Discuss automatic/semi-automatic defibrillators and how they integrate with ALS.
P				Complete all objectives of the Semi-Automatic Defibrillation Module of the Basic-EMT special skills curricula.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
	R	P	4.2.76	Transthoracic external pacing: Describe the purpose of Transcutaneous External Pacing. List and describe the indications for Transcutaneous External Pacing. List and describe the contraindications for Transcutaneous External Pacing. List and describe the special considerations for Transcutaneous External Pacing. Identify the landmarks for the placement of the pacer pads. Demonstrate the correct technique for Transcutaneous External Pacing in a simulated situation. Discuss the role of Medical Control for Transcutaneous External Pacing

Division 4

Medical

Section 3

Endocrine Emergencies

Division 4 — Medical

Section 3 — Endocrine Emergencies

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.3.1	Define hormone.
P	R	P	4.3.2	Discuss hormone production, including function and the single-most factor influencing production.
P	R	P	4.3.3	Discuss the pituitary gland, including: a. Location b. Function i. Anterior pituitary gland ii. Posterior pituitary gland
P	R	P	4.3.4	Discuss the thyroid gland, including: a. Location b. Function c. Parathyroid gland
P	R	P	4.3.5	Discuss the adrenal glands, including: a. Location b. Function i. Adrenal cortex ii. Adrenal medulla

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.3.6	Discuss the pancreas, including: a. Structure b. Location c. Function
P	R	P	4.3.7	Discuss the ovaries, including: a. Location b. Function i. Estrogen ii. Progesterone
P	R	P	4.3.8	Discuss the testes, including: a. Location b. Function
P	R	P	4.3.9	Discuss the function of insulin, including the cycle: a. Absorption of glucose/insulin secretion to glucose b. Insulin secretion c. Glucose metabolism d. Return to homeostasis
P	R	P	4.3.10	List and briefly discuss the two functions of the islets of Langerhans.
P	R	P	4.3.11	Discuss the function of glucogen, including the cycle: a. Lowering blood glucose concentration b. Secretion of glucogen c. Increase of blood glucose concentration d. Return to homeostasis
P	R	P	4.3.12	Define diabetes mellitus.
P	R	P	4.3.13	Discuss juvenile onset of diabetes mellitus.
PP	R	P	4.3.14	Discuss adult onset of diabetes mellitus.
	R	P	4.3.15	Discuss osmotic diuresis in diabetes.
P	R	P	4.3.16	Discuss the mechanism of ketone body formation and ketoacidosis.
P	R	P	4.3.17	Discuss kidney excretion of ketoacids and potassium.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.3.18	Discuss the pathophysiology of hypoglycemia, including: a. Insulin and the relationship to serum glucose levels b. Epinephrine and glycogen
P	R	P	4.3.19	Discuss the precipitation of hypoglycemia.
P	R	P	4.3.20	As related to hypoglycemia, list 8 resulting signs/symptoms.
P	R	P	4.3.21	Describe the compensating mechanism in a hypoglycemic patient.
P	R	P	4.3.22	Describe the onset of hypoglycemia.
P	R	P	4.3.23	Discuss the effects that low insulin levels have on the body.
P	R	P	4.3.24	Discuss the effects that increased glucose levels have on the body.
P	R	P	4.3.25	Discuss the pathophysiology of diabetic ketoacidosis, including: a. Blood sugar level b. Insulin level
P	R	P	4.3.26	Discuss the precipitation of diabetic ketoacidosis.
P	R	P	4.3.27	As related to diabetic ketoacidosis, list 8 signs/symptoms.
P	R	P	4.3.28	As related to the ketoacidotic patient, discuss the body's compensating mechanism.
P	R	P	4.3.29	Discuss the general management of the hypoglycemic patient or hyperglycemic patient who is conscious, including: a. Airway management b. Intravenous therapy c. Drug therapy d. Circulation

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.3.30	Discuss the general management of the hypoglycemic patient who is unconscious, including: a. Airway management b. Blood Glucose Monitoring c. Intravenous therapy d. Drug therapy e. Circulation
P	R	P	4.3.31	Discuss the general management of the ketoacidotic patient who is unconscious, including: a. Airway management b. Blood Glucose Monitoring c. Intravenous therapy d. Drug therapy e. Circulation

Division 4

Medical

Section 4

Nervous System

Division 4 — Medical

Section 4 — Nervous System

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.4.1	Identify the parts of a neuron and describe their function.
P	R	P	4.4.2	Describe the process of impulse transmission for nerve cells.
P	R	P	4.4.3	Describe the types of nerve cells by function.
P	R	P	4.4.4	Identify and describe the protective mechanisms of the brain.
P	R	P	4.4.5	Describe the arterial and venous circulation to the brain.
P	R	P	4.4.6	Locate the following areas of specialization in the brain for: a. Speech b. Vision c. Personality d. Balance and coordination e. Sensory f. Motor
P	R	P	4.4.7	List the parts of the brain.
P	R	P	4.4.8	Identify the functions of the spinal cord.
P	R	P	4.4.9	Describe the protective mechanisms for the spinal cord.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.4.10	Identify the divisions of the spinal column.
P	R	P	4.4.11	Identify the divisions of the spinal cord.
P	R	P	4.4.12	Identify the location of the brachial plexus and the lumbar-sacral plexus.
P	R	P	4.4.13	Identify the divisions of the autonomic nervous system and describe the functions and effects of each.
P	R	P	4.4.14	Identify the historical factors to be elicited when evaluating the nervous system including trauma-related and nontrauma-related problems.
P	R	P	4.4.15	Identify specific observations and physical findings to be evaluated in the patient with a nervous system disorder including: a. Primary survey b. Vital signs c. Neurologic evaluation d. Head to toe survey i. Pupils ii. Extraocular movements iii. Spinal evaluation
P	R	P	4.4.16	Describe the rating system for the Glasgow Coma Scale.
P	R	P	4.4.17	Describe the pathophysiology, assessment and management of the following: a. Coma b. Seizures c. Status epilepticus d. Stroke e. Transient ischemic attacks
P	R	P	4.4.18	For the following drugs, identify the pharmacology and actions, the indications, precautions, administration and side effects, for the adult and pediatric patient. a. Glucose 50% b. Naloxone c. Diazepam

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.4.19	List possible causes of coma.
P	R	P	4.4.20	Differentiate between syncope and seizures.
P	R	P	4.4.21	Describe and differentiate the major types of seizures.
P	R	P	4.4.22	Describe the phases of a generalized seizure.
P	R	P	4.4.23	Demonstrate the ability to obtain an appropriate history when evaluating patients with nervous system disorders.
P	R	P	4.4.24	Demonstrate the ability to perform an appropriate assessment when evaluating patients with nervous system disorders.
P	R	P	4.4.25	Demonstrate a complete neurologic examination.
P	R	P	4.4.26	Demonstrate the ability to appropriately evaluate a patient utilizing the Glasgow Coma Scale.
P	R	P	4.4.27	Demonstrate the ability to appropriately administer the following drugs for the adult and pediatric patient. a. Dextrose 50% b. Naloxone c. Diazepam
P	R	P	4.4.28	Demonstrate the ability to appropriately manage a patient with a nervous system disorder.

Division 4

Medical

Section 5

Acute Abdomen

Division 4 — Medical

Section 5 — Acute Abdomen

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.5.1	Describe and discuss the function of the primary gastrointestinal organs, including: a. Mouth b. Pharynx c. Esophagus d. Stomach e. Intestines (large/small) f. Rectum g. Peritoneum.
P	R	P	4.5.2	Describe and discuss the function of the gastrointestinal accessory organs, including: a. Salivary glands b. Teeth c. Liver d. Gallbladder e. Pancreas f. Veriform appendix.
P	R	P	4.5.3	Name the organs located: a. Right upper quadrant b. Left upper quadrant c. Right lower quadrant d. Left lower quadrant.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.5.4	Describe the borders of the abdominal cavity.
P	R	P	4.5.5	Name the two major blood vessels in the abdomen.
P	R	P	4.5.6	List solid organs in the abdominal cavity and retroperitoneal space.
P	R	P	4.5.7	List hollow organs in the abdominal cavity and retroperitoneal space.
P	R	P	4.5.8	Discuss the following non-hemorrhagic causes of acute abdominal pain. a. Local inflammation: edema, local obstruction. b. Peritoneal inflammation: edema, pain secondary to edema. c. General inflammation: edema, significant fluid loss.
P	R	P	4.5.9	List disease processes as related to nonhemorrhagic abdominal pain.
P	R	P	4.5.10	Define: a. Hematemesis b. Melena.
P	R	P	4.5.11	List hemorrhagic causes of acute abdominal pain.
P	R	P	4.5.12	Discuss the specific questions you would ask to obtain a history in a patient with abdominal pain.
P	R	P	4.5.13	Discuss signs and symptoms of: a. Local inflammation b. Peritoneal inflammation c. General inflammation.
P	R	P	4.5.14	Describe signs and symptoms of: a. Upper gastrointestinal bleed b. Lower gastrointestinal bleed.
P	R	P	4.5.15	Discuss management of the patient with acute abdominal pain.
P	R	P	4.5.16	Discuss general causes of genitourinary disorders.

T	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.5.17	Discuss pathophysiology, including causes and complications of: a. Acute renal failure b. Chronic renal failure c. Kidney stones d. Urinary tract infection.
P	R	P	4.5.18	Discuss pathophysiology of urinary assessment, including signs and symptoms of renal failure.
P	R	P	4.5.19	Describe management of renal failure.
P	R	P	4.5.20	Discuss assessment, including signs and symptoms of a kidney stone.
P	R	P	4.5.21	Describe management of the patient with a kidney stone.
P	R	P	4.5.22	Discuss assessment, including signs and symptoms related to a urinary tract infection.
P	R	P	4.5.23	Describe management of the patient with urinary tract infection.
P	R	P	4.5.24	Discuss types of dialysis.
P	R	P	4.5.25	Discuss complications related to dialysis.
P	R	P	4.5.26	Discuss the assessment and management of the dialysis patient.
P	R	P	4.5.27	Define: a. Testes b. Prostate c. Penile urethra d. Epididymis e. Vas deferens
P	R	P	4.5.28	Discuss signs and symptoms of: a. Epididymitis b. Torsion of testes
P	R	P	4.5.29	Discuss the assessment and management of the male patient.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.5.30	Demonstrate the ability to take a relevant history from the patient with: a. Acute abdomen b. Genitourinary disorder c. Dialysis related disorders d. Reproductive system disorders
P	R	P	4.5.31	Demonstrate the ability to perform a complete physical assessment on the patient with: a. Acute abdomen b. Genitourinary disorder c. Dialysis related disorders d. Reproductive system disorders
P	R	P	4.5.32	Demonstrate competency in effectively treating the patient with: (including drug therapy) a. Specific acute abdominal emergency b. Specific genitourinary disorders c. Specific dialysis related disorders d. Specific reproductive system disorders.

Division 4

Medical

Section 6

Anaphylaxis

Division 4 — Medical

Section 6 — Anaphylaxis

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.6.1	Discuss antigens, including: a. Definition b. Examples c. Four ways antigens are introduced.
P	R	P	4.6.2	Define antibody and discuss production.
P	R	P	4.6.3	Define anaphylaxis.
P	R	P	4.6.4	Describe the pathophysiology of anaphylaxis.
P	R	P	4.6.5	Discuss effects that anaphylaxis may have on the following body systems: a. Respiratory b. Cardiovascular c. Gastrointestinal tract d. Central nervous e. Skin

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.6.6	In a patient with anaphylaxis, identify signs and symptoms as related to: a. Respiratory system b. Cardiovascular system c. Gastrointestinal system d. Nervous system e. Skin
P	R	P	4.6.7	Describe the assessment and management of anaphylaxis.
P	R	P	4.6.8	Describe the pharmacology/actions; indications; precautions; administration (adult and pediatric); side effects/special notes for the following drugs: a. Oxygen b. Epinephrine: 1:1000; 1:10,000 c. Diphenhydramine (Benadryl) d. Aminophylline.
P	R	P	4.6.9	Demonstrate the ability to take a relevant history from the patient with anaphylaxis.
P	R	P	4.6.10	Demonstrate competency in effective assessment and management of the patient with anaphylaxis, including drug therapy.

Division 4

Medical

Section 7

Toxicology, Alcoholism, and Drug Abuse

Division 4 — Medical

Section 7 — Toxicology, Alcoholism, Drug Abuse

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.7.1	Discuss the relative importance of toxicologic emergencies in pre-hospital care.
P	R	P	4.7.2	Describe the routes of entry of toxic substances into the body.
P	R	P	4.7.3	Discuss the role of Poison Control Centers in the EMS system and in the management of patients with toxicological emergencies.
P	R	P	4.7.4	Describe the aspects of the patient's history that are relevant in the management of a patient with ingested poison.
P	R	P	4.7.5	Describe the general principles of management of a patient with ingested poison.
P	R	P	4.7.6	Discuss the factors affecting the decision to induce vomiting in a patient with ingested poison.
P	R	P	4.7.7	Describe the signs, symptoms and management of the following specific cases of ingested poisons: a. Strong acids or alkalies b. Hydrocarbon products c. Methyl alcohol or ethylene glycol d. Cyanide e. Food poisoning f. Poisonous plants

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.7.8	Describe the general principles of management of a patient with inhaled poison.
P	R	P	4.7.9	Describe the signs, symptoms and management of the following specific cases of inhaled poisons: a. Carbon monoxide b. Freon c. Ammonia d. Chlorinated hydrocarbons e. Methyl chloride
P	R	P	4.7.10	Describe the general principles of management of a patient with injected poison.
P	R	P	4.7.11	Describe the signs, symptoms and management of the following specific cases of injected poison: a. Bees, hornets, wasps or yellow jackets b. Brown recluse spider c. Black widow spider d. Scorpion e. Rattlesnakes, copperhead or cotton-mouth water moccasin. f. Coral snake g. Marine animals
P	R	P	4.7.12	Describe the special consideration when dealing with an Africanized Honeybee attack.
P	R	P	4.7.13	Describe the general principles of management of a patient with a surface absorbed poison.
P	R	P	4.7.14	Describe the signs, symptoms and management of the following specific cases of surface absorbed poison: a. Organophosphate chemicals b. Cyanide
P	R	P	4.7.15	Describe the general principles of management of a patient with an overdose.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.7.16	Describe the signs, symptoms and management of the following specific cases of overdose: a. Narcotics b. Sedatives/depressants c. Aspirin d. Acetaminophen.
P	R	P	4.7.17	Discuss the incidence of drug abuse in the U.S.
P	R	P	4.7.18	Define the following terms: a. Substance or drug abuse b. Substance or drug dependence c. Tolerance d. Withdrawal e. Addiction.
P	R	P	4.7.19	List the most commonly abused drugs (both by chemical name and "street names") and describe their physiological and psychological effects.
P	R	P	4.7.20	Describe the management of emergencies stemming from the use of the following: a. Hallucinogens (LSD, mescaline, DMT, psilocybin) b. Phencyclidine (PCP) c. Cocaine d. Cannabis (marijuana) e. Amphetamine
P	R	P	4.7.21	Discuss the incidence of alcoholism in the U.S.
P	R	P	4.7.22	Discuss the signs, symptoms and management of acute alcohol overdose.
P	R	P	4.7.23	Discuss the signs and symptoms of chronic alcohol use.
P	R	P	4.7.24	Discuss the signs, symptoms and management of alcoholic withdrawal (delirium tremens or "DT's").
P	R	P	4.7.25	Demonstrate the application of a constricting band.
P	R	P	4.7.26	Demonstrate the procedures for incising a snake bite wound.

Division 4

Medical

Section 8

Infectious Diseases

Division 4 — Medical

Section 8 — Infectious Diseases

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.8.1	Define: a. Virus. b. Bacteria. c. Fungus.
P	R	P	4.8.2	Discuss the body's immune system.
P	R	P	4.8.3	Define: a. Antigen. b. Antibody. c. Antigenic determinants. d. Clone cells. e. Leukocyte.
P	R	P	4.8.4	Discuss the major components of the immune system.
P	R	P	4.8.5	Define lymph.
P	R	P	4.8.6	Define interstitial fluid.
P	R	P	4.8.7	Discuss composition of lymph and interstitial fluid.
P	R	P	4.8.8	Discuss the lymphatic system.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.8.9	Discuss lymph circulation.
P	R	P	4.8.10	Discuss the function of: a. Lymph b. Antibody c. Thymus d. Spleen.
P	R	P	4.8.11	Discuss the formation and types of lymphocytes.
P	R	P	4.8.12	Discuss the development, activation and function of B cells.
P	R	P	4.8.13	Discuss the development, activation and function of T cells.
P	R	P	4.8.14	Identify and discuss the location of lymphocytes.
P	R	P	4.8.15	Describe the structure and types of antibodies.
P	R	P	4.8.16	Discuss gammaglobulinemia.
P	R	P	4.8.17	Define autoimmune diseases.
P	R	P	4.8.18	Define infectious disease and the general cause.
P	R	P	4.8.19	List 3 examples of infectious diseases and the general cause.
P	R	P	4.8.20	Discuss how infectious diseases are transmitted.
P	R	P	4.8.21	Define communicable disease.
P	R	P	4.8.22	Give an example of a highly communicable disease caused by a virus.
P	R	P	4.8.23	Give an example of a communicable disease caused by bacteria.
P	R	P	4.8.24	Give an example of a communicable disease caused by fungi.
P	R	P	4.8.25	Discuss how stress may be related and affect disease.
P	R	P	4.8.26	Refer also to anatomy and physiology of specific body systems, which are affected by specific diseases.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.8.27	Identify the pertinent history-related questions to be asked when evaluating the patient with an infectious disease.
P	R	P	4.8.28	Identify signs and symptoms to be evaluated in a patient with an infectious disease, including: a. Primary survey, including level of consciousness b. Vital signs c. Secondary survey (head-to-toe survey) d. Neurological evaluation.
P	R	P	4.8.29	Define tuberculosis.
P	R	P	4.8.30	Discuss the pathophysiology of tuberculosis, including: a. Acute generalized form b. Chronic localized form.
P	R	P	4.8.31	Discuss the body systems commonly affected by tuberculosis.
	R	P	4.8.32	Discuss signs and symptoms related to the patient with tuberculosis.
P	R	P	4.8.33	Discuss assessment and management of the patient with tuberculosis.
P	R	P	4.8.34	Discuss EMT safety as related to handling the patient with tuberculosis.
P	R	P	4.8.35	Define hepatitis.
P	R	P	4.8.36	Discuss the pathophysiology of hepatitis.
P	R	P	4.8.37	Discuss the body systems commonly affected by hepatitis.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.8.38	Discuss symptoms related to the patient with: a. Hepatitis acute anicteric b. Hepatitis cholangiolitic c. Hepatitis fulminant d. Infectious hepatitis (include: how transmitted) e. Serum hepatitis (include: how transmitted) f. Toxic hepatitis g. Viral hepatitis 1. Type A 2. Type B
P	R	P	4.8.39	Discuss assessment and management of the patient with hepatitis.
P	R	P	4.8.40	Discuss EMT safety as related to handling the patient with hepatitis.
P	R	P	4.8.41	Define meningitis.
P	R	P	4.8.42	Discuss the causes of meningitis.
P	R	P	4.8.43	Discuss the pathophysiology of meningitis.
P	R	P	4.8.44	Discuss the body systems commonly affected by meningitis.
P	R	P	4.8.45	Discuss signs and symptoms related to the patient with meningitis
P	R	P	4.8.46	Briefly discuss the following: a. Acute meningitis b. Cerebral meningitis c. Cerebrospinal meningitis d. Pneumococcal meningitis e. Spinal meningitis f. Traumatic meningitis g. Tuberculous meningitis
P	R	P	4.8.47	Discuss assessment and management of the patient with meningitis.
P	R	P	4.8.48	Discuss EMT safety as related to handling the patient with meningitis.
P	R	P	4.8.49	Define syphilis.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.8.50	Discuss the types of syphilis.
P	R	P	4.8.51	Discuss the pathophysiology of syphilis.
P	R	P	4.8.52	Discuss the body systems commonly affected by syphilis.
P	R	P	4.8.53	Discuss the signs and symptoms related to the patient with syphilis.
P	R	P	4.8.54	Define gonorrhea.
P	R	P	4.8.55	Discuss the pathophysiology of gonorrhea.
P	R	P	4.8.56	Discuss the body systems commonly affected by gonorrhea.
P	R	P	4.8.57	Discuss the signs and symptoms related to the patient with gonorrhea.
P	R	P	4.8.58	List two types of herpes simplex
P	R	P	4.8.59	Discuss the pathophysiology of herpes simplex type 2.
P	R	P	4.8.60	Discuss the body systems commonly affected and incubation period of herpes simplex type 2.
P	R	P	4.8.61	Discuss the signs and symptoms related to the patient with herpes simplex type 2.
P	R	P	4.8.62	Define Acquired Immune Deficiency Syndrome (AIDS).
P	R	P	4.8.63	Discuss the pathophysiology of AIDS.
P	R	P	4.8.64	Discuss the body systems commonly affected and incubation period of AIDS.
P	R	P	4.8.65	Discuss the signs and symptoms related to the patient with AIDS.
P	R	P	4.8.66	Discuss assessment and management of the patient with a sexually transmitted disease.
P	R	P	4.8.67	Discuss EMT safety as related to handling the patient with a sexually transmitted disease.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.8.68	Define and discuss the pathophysiology of scabies.
P	R	P	4.8.69	Define and discuss the pathophysiology of lice.
P	R	P	4.8.70	Discuss the body systems commonly affected by scabies/lice.
P	R	P	4.8.71	Discuss the signs and symptoms related to the patient with scabies/ lice.
P	R	P	4.8.72	Discuss assessment and management of the patient with scabies/lice.
P	R	P	4.8.73	Discuss EMT safety as related to handling the patient with scabies/ lice.
P	R	P	4.8.74	Define measles.
P	R	P	4.8.75	Discuss the pathophysiology of measles.
P	R	P	4.8.76	Discuss the signs and symptoms related to the patient with measles.
P	R	P	4.8.77	Define mumps.
P	R	P	4.8.78	Discuss the pathophysiology of mumps.
P	R	P	4.8.79	Discuss the signs and symptoms related to the patient with mumps.
P	R	P	4.8.80	Define chickenpox.
P	R	P	4.8.81	Discuss the pathophysiology of chickenpox.
P	R	P	4.8.82	Discuss the signs and symptoms related to the patient with chickenpox.
P	R	P	4.8.83	Discuss the assessment and management of the patient with a childhood disease.
P	R	P	4.8.84	Discuss EMT safety as related to handling the patient with a childhood disease.
P	R	P	4.8.85	Discuss follow-up after exposure: a. Notification procedures by hospital b. Notification procedures by EMT

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.8.86	Discuss EMT personnel hygiene.
P	R	P	4.8.87	Discuss vehicle cleaning procedures.
P	R	P	4.8.88	Demonstrate the ability to take a history from the patient with an infectious disease.
P	R	P	4.8.89	Demonstrate the ability to perform a complete physical assessment on the patient with an infectious disease.

Division 4

Medical

Section 9

Environmental Injuries

Division 4 — Medical

Section 9 — Environmental Injuries

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.9.1	Define steady-state metabolism and identify the oral and rectal temperatures associated with a metabolic steady state.
P	R	P	4.9.2	List the two terms associated with bodily temperature extremes.
P	R	P	4.9.3	List and define the function of two structures in the body's primary thermoregulatory mechanism.
P	R	P	4.9.4	List two mechanisms of thermal generation within the body and the basic mechanism associated with each.
P	R	P	4.9.5	Describe the body's compensatory mechanism for excess thermal gain.
P	R	P	4.9.6	Describe four ways in which the body dissipates heat into the external environment.
P	R	P	4.9.7	Describe the body's compensatory mechanism for excess thermal loss.
P	R	P	4.9.8	State three common forms of heat disorder.
P	R	P	4.9.9	Define the role of sodium in heat cramps.
P	R	P	4.9.10	List the signs and symptoms associated with heat cramps.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.9.11	Describe the treatment of heat cramps.
P	R	P	4.9.12	Define the role of sodium in heat exhaustion.
P	R	P	4.9.13	List the signs and symptoms associated with heat exhaustion.
P	R	P	4.9.14	Describe the treatment of heat exhaustion.
P	R	P	4.9.15	List two environmental factors associated with heat stroke.
P	R	P	4.9.16	Describe the role of the body's primary thermoregulatory mechanism in heat stroke.
P	R	P	4.9.17	State the critical upper range temperature at which cellular deterioration begins.
P	R	P	4.9.18	Differentiate the following parameters among heat cramps, heat exhaustion and heat stroke: a. Pathophysiology b. Cramping c. Mental status d. Skin condition e. Internal temperature f. Pulse g. Blood pressure
P	R	P	4.9.19	State the treatment modality that is common to heat cramps, heat exhaustion and heat stroke besides the ABC's of basic life support.
P	R	P	4.9.20	List predisposing factors and preventative measures associated with heat disorders.
P	R	P	4.9.21	Define fever (pyrexia) and identify the pathophysiological mechanisms causing the disorder.
P	R	P	4.9.22	Define hyperpyrexia and identify pathophysiological mechanisms.
P	R	P	4.9.23	State the field treatment of pyrexia.
P	R	P	4.9.24	State the causative factor associated with acute systemic hypothermia.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.9.25	State the temperature range, signs and symptoms associated with mild systemic hypothermia.
P	R	P	4.9.26	State the temperature range, signs and symptoms associated with severe systemic hypothermia.
P	R	P	4.9.27	Describe the metabolic responses to both mild and severe systemic hypothermia and the implications of these responses to pharmacotherapy and defibrillation.
P	R	P	4.9.28	Discuss the treatment of hypothermia.
P	R	P	4.9.29	State conditions under which rewarming should be initiated in the field.
P	R	P	4.9.30	Define "afterdrop phenomenon" and its prognostic implications.
P	R	P	4.9.31	List two metabolic factors that may be associated with chronic hypothermia.
P	R	P	4.9.32	List individuals who are at greatest risk for hypothermia.
P	R	P	4.9.33	Differentiate between frostnip, superficial frostbite and deep frostbite.
P	R	P	4.9.34	State the steps in the field management of frostbite.
P	R	P	4.9.35	State the immersion rewarming temperature for frostbitten extremities and the rationale for this temperature.
P	R	P	4.9.36	State the importance of near-drowning as a leading cause of accidental death in the U.S.
P	R	P	4.9.37	Describe the usual physiologic sequence of events in a near-drowning episode.
P	R	P	4.9.38	Describe the pulmonary and systemic pathophysiology in near-drowning patients.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.9.39	State the factors affecting survival times and probability of successful resuscitation in near-drowning patients.
P	R	P	4.9.40	Describe the management of the near-drowning patient.
P	R	P	4.9.41	Identify the common types and sources of ionizing radiation.
P	R	P	4.9.42	Identify sources of normal background radiation.
P	R	P	4.9.43	Describe the pathophysiology of ionizing radiation received over acute and/or chronic exposure.
P	R	P	4.9.44	Describe the signs, symptoms and management of the radiated patient.
P	R	P	4.9.45	Describe the relative risks to the paramedic in handling the radiated patient.
P	R	P	4.9.46	Describe the anatomy and physiology of breathing gas under pressure.
P	R	P	4.9.47	List the common medical problems associated with diving accidents.
P	R	P	4.9.48	Describe the various major physiologic factors which may predispose a diver to decompression sickness.
P	R	P	4.9.49	Describe the pathophysiology of decompression sickness.
P	R	P	4.9.50	Describe the signs, symptoms and management of decompression sickness.
P	R	P	4.9.51	Describe the pathophysiology of pulmonary overpressure accidents.
P	R	P	4.9.52	Describe the signs, symptoms and management of pneumomediastinum.
P	R	P	4.9.53	Describe the signs, symptoms and management of subcutaneous emphysema.
P	R	P	4.9.54	Describe the signs, symptoms and management of air embolism.

Division 4

Medical

Section 10

Geriatrics/Gerontology

Division 4 — Medical

Section 10 — Geriatrics/Gerontology

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.10.1	Discuss statistics on aging, including increased life expectancy, percent of population over 65 years old, and leading causes of death in geriatric population.
P	R	P	4.10.2	Discuss at least 6 factors which contribute to the elderly being at high risk for increased medical care.
P	R	P	4.10.3	Discuss general decline in organ systems, including: a. Respiratory system b. Cardiovascular system c. Renal system d. Nervous system e. Musculoskeletal system f. Gastrointestinal system g. Response to emotions/stress.
P	R	P	4.10.4	List at least 12 diseases/disorders common in the elderly.
P	R	P	4.10.5	List 4 factors that complicate clinical evaluation of the geriatric patient.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.10.6	As related to the geriatric patient's history, discuss the following considerations: a. Common complaints of the geriatric patient (not specific to any one disorder). b. 4 considerations which may mask the patient's ability to communicate significant signs/symptoms.
P	R	P	4.10.7	As related to the physical examination of a geriatric patient, discuss the following considerations: a. Fatigue b. Excessive clothing c. Disguised signs/symptoms.
P	R	P	4.10.8	Define syncope.
P	R	P	4.10.9	Define pre-syncope.
P	R	P	4.10.10	Discuss the pathophysiology of syncope.
P	R	P	4.10.11	Discuss the following types of syncope: a. Vasodepressor syncope b. Orthostatic syncope c. Cardiac syncope.
P	R	P	4.10.12	Define seizure and discuss the progression of events.
P	R	P	4.10.13	Define vertigo and discuss the progression of events.
P	R	P	4.10.14	Define dementia: a. Discuss the etiologies of chronic senile dementia b. Discuss the etiologies of acute organic brain syndrome. NOTE: Important to distinguish between acute and chronic dementia.
P	R	P	4.10.15	Define delirium.
P	R	P	4.10.16	Define Alzheimer's Disease.
P	R	P	4.10.17	Discuss 6 signs/symptoms of Alzheimer's Disease and the progression of events.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.10.18	Define: a. Stroke b. TIA
P	R	P	4.10.19	Discuss 4 causes of other focal neurological deficits.
P	R	P	4.10.20	List 4 drugs which may produce adverse reactions in the geriatric patient and that may culminate in cerebral dysfunction.
P	R	P	4.10.21	Discuss the general management of neurological disorders. Refer to Cardiovascular Section.
P	R	P	4.10.22	Discuss signs/symptoms of cardiovascular conditions, specific to the geriatric patient.
P	R	P	4.10.23	Discuss syncope as related to cardiovascular conditions: a. Vasodepressor b. Orthostatic c. Vasovagal d. Cardiac
P	R	P	4.10.24	Discuss congestive heart failure as related to the elderly.
P	R	P	4.10.25	List 2 causes of dysrhythmias in the elderly.
P	R	P	4.10.26	Discuss the following as related to the geriatric patient: a. Aortic dissection. b. Abdominal aortic aneurysm. c. Peripheral arterial and venous conditions. d. General management. (See also Cardiovascular Section) 1. As related to general management, list 4 conditions which may cause the physician to alter cardiac drug therapy 2. Discuss precautions as related to administration of fluids.
P	R	P	4.10.27	As related to the elderly patient, list 6 conditions that may be associated with respiratory distress.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.10.28	Discuss findings which may be specific to the geriatric patient suffering from pulmonary embolism.
P	R	P	4.10.29	Discuss findings that may be specific to the geriatric patient suffering from respiratory tract infection.
P	R	P	4.10.30	Discuss chronic bronchitis with reference to the geriatric.
P	R	P	4.10.31	Discuss management of respiratory distress with reference to the geriatric.
P	R	P	4.10.32	Discuss the pathophysiology of carcinoma, in general.
P	R	P	4.10.33	List 4 kinds of cancer directly attributable to high mortality rate.
P	R	P	4.10.34	List 6 signs/symptoms of carcinoma.
P	R	P	4.10.35	Discuss general management of the cancer patient.
P	R	P	4.10.36	Discuss GI bleed as related to geriatric patients.
P	R	P	4.10.37	Discuss 2 causes of upper intestinal hemorrhage.
P	R	P	4.10.38	Discuss 4 causes of massive lower intestinal hemorrhage.
P	R	P	4.10.39	Discuss 6 significant signs of blood loss.
P	R	P	4.10.40	Discuss cholecystitis/biliary disease as related to the elderly patient.
P	R	P	4.10.41	Discuss small bowel obstruction and 2 causes.
P	R	P	4.10.42	Discuss large bowel obstruction, including: a. Main cause b. Main signs/symptoms
P	R	P	4.10.43	Discuss diverticulitis, including signs/symptoms.
P	R	P	4.10.44	Discuss appendicitis, including: a. Signs/symptoms b. Complications

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.10.45	Discuss pancreatitis, including common cause and symptoms.
P	R	P	4.10.46	Discuss peptic ulcer disease/perforation, including: a. Common cause b. Signs/symptoms
P	R	P	4.10.47	As related to the elderly, list related signs and symptoms as associated with gastrointestinal disorders.
P	R	P	4.10.48	Discuss the general management of critical GI bleed in the elderly.
P	R	P	4.10.49	Refer to Environmental Emergencies Section. Discuss tolerance of temperatures.
P	R	P	4.10.50	Discuss 6 predisposing factors for hypothermia common in geriatric patients.
P	R	P	4.10.51	Discuss 3 predisposing factors for hyperthermia common in geriatric patients.
P	R	P	4.10.52	Discuss general management of environmental emergencies.
P	R	P	4.10.26	List at least 6 reasons that the elderly are more prone to falls.
P	R	P	4.10.27	List 3 reasons that the elderly are more prone to head injuries.
P	R	P	4.10.28	List 3 reasons that the elderly are more prone to cervical spine injuries.
P	R	P	4.10.29	Prehospital priorities of care for trauma in elderly are similar to those for all trauma patients; list 2 considerations.
P	R	P	4.10.30	Discuss trauma management considerations in the elderly for the following systems: a. Cardiovascular system b. Respiratory system c. Renal system
P	R	P	4.10.31	Discuss positioning, immobilization and packaging of the elderly trauma patient (with consideration of physical deformities).

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.10.32	List at least 6 factors which contribute to adverse drug reactions in the elderly.
P	R	P	4.10.33	List at least 10 drugs which commonly cause toxicity in the geriatric patient.
P	R	P	4.10.34	As related to digitalis intoxication, discuss: a. Symptoms b. Drug interactions c. Management
P	R	P	4.10.44	As related to diuretic use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.
P	R	P	4.10.45	As related to antihypertensive drug use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.
P	R	P	4.10.46	As related to antiarrhythmic drug use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.
P	R	P	4.10.47	As related to psychotropic drug use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.
P	R	P	4.10.48	As related to antidepressant use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.10.49	As related to salicylate use, discuss: a. Symptoms of adverse reaction b. Drug interaction c. Management.
P	R	P	4.10.50	Discuss geriatric abuse and factors which precipitate abuse.
P	R	P	4.10.51	Discuss signs and symptoms as related to geriatric abuse.
P	R	P	4.10.52	Discuss the profile of a potential geriatric abuser.
P	R	P	4.10.53	Discuss at least 2 considerations as related to obtaining a history from the abused geriatric.
P	R	P	4.10.54	Discuss, in general gerontology program services, including objectives of the program.
P	R	P	4.10.55	Discuss the following components of a gerontology program: a. In-home assessment b. Family conference.

Division 4

Medical

Section 11

Pediatrics

Division 4 — Medical

Section 11 — Pediatrics

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.11.1	Define the terms growth and development.
P	R	P	4.11.2	Identify the general goals of management of the pediatric patient.
P	R	P	4.11.3	Discuss the sources of historical information in the pediatric patient.
P	R	P	4.11.4	List the principles in the general approach to the pediatric patient.
P	R	P	4.11.5	Identify normal age-related vital signs in the pediatric patient.
P	R	P	4.11.6	Describe the normal and abnormal appearance of the anterior fontanelle in the infant.
P	R	P	4.11.7	For each of the following age groups identify the relevant aspects of normal growth and development, personality development, relationship to parents, history factors, common illnesses and accidents and approach. a. Neonate b. 1 to 5 months c. 6 to 12 months d. 12 to 36 months e. 3 to 5 years f. 6-12 years g. 12 to 15 years
P	R	P	4.11.8	Define Sudden Infant Death Syndrome (SIDS).

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.11.9	Describe the incidence of SIDS.
P	R	P	4.11.10	Discuss the current theories on SIDS .
P	R	P	4.11.11	Describe the assessment and management of SIDS cases.
P	R	P	4.11.12	Identify the immediate needs of the SIDS family.
P	R	P	4.11.13	Describe the characteristics of the child abuser.
P	R	P	4.11.14	Describe the characteristics of the abused child.
P	R	P	4.11.15	Discuss the assessment of the potentially abused child including important historical information.
P	R	P	4.11.16	Describe the management of the victim and family in the child abuse situation.
P	R	P	4.11.17	Discuss legal requirements of health professionals to report suspected child abuse.
P	R	P	4.11.18	Describe the pathophysiology, assessment and management of pediatric seizures.
P	R	P	4.11.19	Describe the pathophysiology, assessment and management of dehydration in the pediatric patient.
P	R	P	4.11.20	Describe the pathophysiology, assessment and management of the child with suspected meningitis.
P	R	P	4.11.21	Describe the pathophysiology, assessment and management of the child with suspected septicemia.
P	R	P	4.11.22	Describe the pathophysiology, assessment and management of the child with suspected Reyes Syndrome.
P	R	P	4.11.23	Identify the steps in relieving airway obstruction in the infant and child according to American Heart Association standards.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.11.24	Discuss the pathophysiology, assessment and management of the following respiratory disorders: a. Bronchiolitis b. Croup c. Epiglottitis d. Asthma
P	R	P	4.11.25	Discuss the pathophipiology, assessment and management of shock in the pediatric patient.
P	R	P	4.11.26	Discuss the pathophipiology, assessment and management of trauma in the pediatric patient. a. Drowning c. Bicycle accidents e. Burns b. Auto accidents d. Fractures/Falls f. Sports Injuries
P	R	P	4.11.27	Discuss the pathophipiology, assessment and management of toxicology emergencies in the pediatric patient. a. Ingestions b. Scorpion stings c. Drugs/Alcohol suicide gestures
P	R	P	4.11.28	Using AHA PALS Standards, identify the correct pediatric dosage and routes for the following: a. Epinephrine i. Atropine b. Naloxone j. Calcium Chloride 10% c. Sodium bicarbonate k. Adenosine d. Valium l. lidocaine e. Phenobarbital m. Bretylium f. Dextrose (D25) n. Aminophylline g. Proventil o. Dopamine h. Bronkosol
P	R	P	4.11.29	Describe the technique for endotracheal intubation in the pediatric patient.
P	R	P	4.11.30	Identify appropriate blade sizes and endotracheal tube sizes for the pediatric patient.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	4.11.31	Describe the site selection for intravenous infusions in the pediatric patient.
P	R	P	4.11.32	Describe the equipment selection for intravenous therapy in the pediatric patient.
P	R	P	4.11.33	Demonstrate the ability to assess vital signs in the pediatric patient utilizing the appropriate equipment.
P	R	P	4.11.34	Demonstrate the ability to obtain an appropriate history when evaluating the pediatric patient.
P	R	P	4.11.35	Demonstrate the ability to perform an appropriate systematic assessment when evaluating the pediatric patient.
P	R	P	4.11.36	Demonstrate the ability to manage airway obstruction in the neonate, infant and child.
P	R	P	4.11.37	Demonstrate the manual methods of airway management in the pediatric patient.
P	R	P	4.11.38	Demonstrate the mechanical methods of airway management in the pediatric patient. a. Oropharyngeal airway d. Oral intubation b. Gastric decompression e. Needle Cricothyrotomy c. Sellick's maneuver f. Needle Thoracostomy
P	R	P	4.11.39	Demonstrate the ability to perform CPR on the pediatric patient according to American Heart Association standards.
P	R	P	4.11.40	Demonstrate the ability to perform electrical therapy and apply the transcutaneous external pacemaker in the pediatric patient.
P	R	P	4.11.41	Demonstrate the ability to perform intravenous therapy on the pediatric patient including selection of appropriate equipment, solutions and anatomical sites.

Division 5
OB/GYN/Neonatal

Section 1

GYN

Division 5 — OB/GNY/Neonatal

Section 1 — GYN

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	5.1.1	Identify and describe the location and functions of the following: a. Ovaries b. Uterus c. Cervix d. Labia e. Fallopian tubes f. Vagina g. Perineum h. Endometrium
P	R	P	5.1.2	Describe the normal menstrual cycle.
P	R	P	5.1.3	Identify specific details of history that should be obtained in the gynecologic patient.
P	R	P	5.1.4	Identify specific physical findings that should be assessed in the gynecologic patient.
P	R	P	5.1.5	List the side effects of commonly used contraceptives.
P	R	P	5.1.6	Describe the typical signs, symptoms and management of pelvic inflammatory disease.
P	R	P	5.1.7	Identify sources of nontraumatic abdominal pain.
P	R	P	5.1.8	Identify potential sources of trauma to the external genitalia and management of injuries.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	5.1.9	Discuss the assessment of a sexual assault victim and identify the ways in which it differs from usual assessment.
P	R	P	5.1.10	Identify principles of management for the sexual assault victim.
P	R	P	5.1.11	Demonstrate the ability to properly assess the patient with a possible gynecologic disorder.

Division 5
OB/GYN/Neonatal

Section 2

OB

Division 5 OB/GNY/Neonatal

Section 2 OB

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	5.2.1	Identify the normal site of: a. Ovum fertilization b. Ovum implantation
P	R	P	5.2.2	Identify and describe the functions of the following: a. Placenta b. Umbilical cord c. Amniotic sac and fluid
P	R	P	5.2.3	Describe fetal development and circulation.
P	R	P	5.2.4	Define the following terms: a. Antepartum e. Postpartum b. Natal f. Prenatal c. Primigravida g. Primipara d. Multigravida h. Multipara
P	R	P	5.2.5	Identify specific details of history that should be obtained in the obstetric patient.
P	R	P	5.2.6	Identify specific physical findings that should be assessed in the obstetric patient.
P	R	P	5.2.7	List early signs and symptoms of pregnancy.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	5.2.8	Discuss the possible effects of trauma on both mother and fetus.
P	R	P	5.2.9	Discuss the effect of pregnancy on the following pre-existing diseases: a. Diabetes b. Essential hypertension c. Neuromuscular disorders d. Cardiac disorders
P	R	P	5.2.10	Define the following terms: a. Spontaneous abortion b. Therapeutic abortion
P	R	P	5.2.11	Describe the pathophysiology, assessment and management of the patient who has had, or is having an abortion.
P	R	P	5.2.12	Describe the pathophysiology, assessment and management of the following: a. Ectopic pregnancy b. Abruptio placenta c. Placenta previa
P	R	P	5.2.13	Describe Braxton-Hicks contractions and their significance.
P	R	P	5.2.14	Describe the pathophysiology, assessment and management of eclampsia and preeclampsia
P	R	P	5.2.15	Describe the signs, symptoms and management of supine hypotensive syndrome.
P	R	P	5.2.16	Define the stages of labor and the length of each.
P	R	P	5.2.17	Describe the progression of labor.
P	R	P	5.2.18	Define the following terms: a. Effacement b. Cervical dilatation c. Crowning d. Presenting part

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	5.2.19	Discuss factors that influence transport decisions for the patient in labor.
P	R	P	5.2.20	List and describe steps for a normal delivery.
P	R	P	5.2.21	Describe the management during delivery when the cord is wrapped around the baby's neck.
P	R	P	5.2.22	Describe the pathophysiology, assessment and management of cephalopelvic disproportion (CPD).
P	R	P	5.2.23	List factors that may cause a large fetus.
P	R	P	5.2.24	List and describe 5 abnormal positions or presentations of the fetus during delivery and the general management principles.
P	R	P	5.2.25	Describe the pathology and management of a prolapsed umbilical cord.
P	R	P	5.2.26	Describe the management of the multiple birth delivery.
P	R	P	5.2.27	Describe the occurrence, complications anal management of a precipitate labor.
P	R	P	5.2.28	Describe the pathophysiology, assessment and management of postpartum hemorrhage.
P	R	P	5.2.29	Discuss the indications for and technique of fundal massage.
P	R	P	5.2.30	Describe the pharmacology and actions, indications, precautions, administration and side effects of oxytocin.
P	R	P	5.2.31	Describe the pathophysiology, assessment and management of uterine rupture.
P	R	P	5.2.32	Identify the pathophysiology, assessment and management of uterine inversion.
P	R	P	5.2.33	Identify the pathophysiology, assessment and management of pulmonary embolism during the antepartum or postpartum period.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	5.2.34	Demonstrate the ability to perform an appropriate assessment when evaluating an obstetric patient.
P	R	P	5.2.35	Demonstrate the ability to appropriately administer oxytocin.
P	R	P	5.2.36	Demonstrate the technique of fundal massage.
P	R	P	5.2.37	Demonstrate the ability to use bulb syringe suction, and DeLee suction.
P	R	P	5.2.38	Demonstrate the ability to clamp and cut an umbilical cord.
P	R	P	5.2.39	Demonstrate the ability to properly assess the pregnant patient.
P	R	P	5.2.40	Demonstrate the ability to obtain an appropriate history when evaluating the patient with an obstetric chief complaint.

Division 5
OB/GYN/Neonatal

Section 2

OB

Division 5 — OB/GNY/Neonatal

Section 3 — Neonatal

Lecturer qualifications: The lecturer for this section shall be a Paramedic, Registered Nurse, or Physician.

"P" = Present and "R" = Review

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	5.3.1	Describe the routine care of the newborn.
P	R	P	5.3.2	List 4 means by which heat loss occurs in infants.
P	R	P	5.3.3	Describe methods of heat conservation in the newborn.
P	R	P	5.3.4	Discuss the effects of hypothermia on the newborn infant.
P	R	P	5.3.5	Define the parameters of Apgar scoring and the numerical values utilized.
P	R	P	5.3.6	Describe resuscitation for the distressed infant.
P	R	P	5.3.7	Describe 2 methods of stimulating the distressed infant.
P	R	P	5.3.8	Describe the appropriate administration of oxygen to the newborn.
P	R	P	5.3.9	Describe methods of ventilatory assistance for the newborn infant.
P	R	P	5.3.10	Identify the rate of ventilation to be used in the nonbreathing newborn.
P	R	P	5.3.11	Describe the technique for cardiac compressions on the newborn.
P	R	P	5.3.12	Identify the significance of meconium staining.
P	R	P	5.3.13	Identify the major problems that occur during transport of the neonate.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	5.3.14	Identify heat sources that may and may *not* be utilized to warm the neonate.
P	R	P	5.3.15	Demonstrate the ability to calculate an accurate Apgar score.
P	R	P	5.3.16	Demonstrate the ability to appropriately manage a newborn infant.
P	R	P	5.3.17	Demonstrate the ability to perform infant CPR according to AHA standards.

Division 6

Behavioral

Section 1

Behavioral Emergencies

Division 6

Behavioral

Section 1

Behavioral Emergencies

Lecturer qualifications: The lecturer for this section shall be a Basic EMT, Paramedic, Registered Nurse, or Physician with at least 1200 hour of expirence working in a psychiatric intake unit or crissis unit or mobile crissis unit (Masters Degree in a psychiatric field may substitute for the 1200 hours of expirence requirement).

"P" = Present and "R" = Review

I	I-p	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	6.1.1	Define the term "Behavioral Emergency."
P	R	P	6.1.2	List factors that may alter the emotional status of the ill or injured.
P	R	P	6.1.3	List those factors specific to the pediatric patient experiencing emotional crisis.
P	R	P	6.1.4	List the techniques of management of all children who are emotional.
P	R	P	6.1.5	List those factors specific to the elderly patient experiencing crisis.
P	R	P	6.1.6	Define the following terms: a. Anxiety b. Anger c. Conversion reaction d. Depression. e. Confusion f. Emotional crisis g. Fear
P	R	P	6.1.7	List the proper verbal communication techniques useful in managing the emotionally disturbed patient.
P	R	P	6.1.8	List the reasons for taking appropriate means to insure the safety of the paramedic.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	6.1.9	Describe the reason for reassuring the patient experiencing an emotional crisis.
P	R	P	6.1.10	Describe the circumstances when bystanders and relatives should be removed from the scene.
P	R	P	6.1.11	List those factors that increase the risk of suicides.
P	R	P	6.1.12	Describe those behaviors that are indirect indicators of an impending suicide attempt.
P	R	P	6.1.13	Describe those overt behavioral modifications associated with: a. Rage b. Suicide c. Depression d. Paranoia. e. Hostility f. Violence g. Hyperactivity
P	R	P	6.1.14	Define the following terms: a. Facilitation b. Open-ended questions c. Posture d. Confrontation e. Affect f. Mental status.
P	R	P	6.1.15	Describe the techniques that facilitate the systematic gathering of information from the disturbed patient.
P	R	P	6.1.16	Describe the techniques that are useful in managing the effects of crisis situations on the advanced level EMT.
P	R	P	6.1.17	Define the term "debriefing" as a technique for controlling advanced level EMT stress following a stress situation.
P	R	P	6.1.18	Describe the techniques that may be useful in redirecting anxiety in relatives and bystanders.
P	R	P	6.1.19	Describe the appropriate action of the advanced level EMT when confronted by the uncontrollable armed patient.
P	R	P	6.1.20	Describe the appropriate techniques used in restraining the patient.

I	I-P	P	Number	Objective: At the conclusion of this subsection, the instructor will have provided sufficient information, demonstration, practice, and evaluation with remediation to the student, to ensure his/her ability to:
P	R	P	6.1.21	Describe those techniques useful in protecting the advanced level EMT when attacked by a violent patient.
P	R	P	6.1.22	List those situations in which the advanced level EMT is expected to restrain or transport a patient forcibly and against his will.
P	R	P	6.1.23	List the appropriate communications of significant findings to the resource hospital.
P	R	P	6.1.24	Describe the techniques that are useful in managing the effects of crisis situations on the EMT.
P	R	P	6.1.25	Define the term "debriefing" as a technique for controlling advanced level EMT stress following a stress situation.

Clinical Instruction

Critical Care

Critical Care

The Critical Care rotation consists of students being assigned to a Registered Nurse, Nurse Practitioner, or Physician preceptor in the ICU, CCU, Surgical-ICU, Nuro-ICU in any combination. Additionally a program may schedule up to 20 hours in the Post-Anesthesia Care Unit (excluding time in the operating room).

The program director must meet with the head of the Critical Care unit(s) as required in rule and review this portion of the curriculum. Preceptors are required to supervise and provide remedial training for each objective.

Objective: At the conclusion of this clinical rotation, under the supervision of the assigned preceptor, the student must:
Perform a patient assessment on at least four (4) patients.
Obtain a medical history on at least four (4) patients.
Identify and discuss with the preceptor, the proper management of EKG rhythms of at least eight (8) patients
Identify any paced rhythms and malfunctioning pacemakers for any patient in the unit and discuss the unit and discuss with the preceptor, the proper management.
Demonstrate to the preceptor, the ability to calculate the rate on at least four (4) different EKGs using three different calculating methods.
Review the medications being administered to at least two patients and correctly identify, to the preceptor, the indications, contraindications, side effects, and dosages.
Report any observed changes in an EKG rhythm appropriately.

Clinical Instruction

Emergency Department

Emergency Department

The Emergency Department rotation consists of students being assigned to a Registered Nurse, Nurse Practitioner, or Physician preceptor in the Emergency Department.

The program Director must meet with the head of the Emergency Department as required in rule and review this portion of the curriculum. Preceptors are required to supervise and provide remedial training for each objective.

Objective: At the conclusion of this clinical rotation, under the supervision of the assigned preceptor, the student must:
Perform, and document on a training program skills sheet, an adequate physical examination and assessment of patient's condition, obtain an accurate medical history, and perform auscultation of heart and lung sounds on at least ten (10) patients.
Obtain, and record on a training program skills sheet, a complete set of vital signs on at least twenty-five (25) patients.
Describe signs and symptoms of the presenting problem, to the preceptor, in a comprehensive and orderly fashion on at least ten (10) patients.
Prepare and administer any of the drugs carried in the paramedic (I-EMT) drug box via IV, IM, Sub Q, and oral routes.
Establish, and record on a training program skill sheet, an intravenous (IV) line on at least fifteen (15) patients.
Observe the emergency department physician interview and assess at least 10 patients. Make an analysis the systematic approach the physician uses and determine if there are any variations from the approach taught in the training program. Discuss with the physician the rationale for any variations.
Develop skills in the recognition of infiltration, and discontinuing IV lines.
Assist in the triage of at least ten (10) patients.
Place and change monitor leads on at least ten (10) patients.
Develop skills in the recognition or cardiac arrhythmias with emphasis on knowledge of standard emergency care and treatment.

Objective: At the conclusion of this clinical rotation, under the supervision of the assigned preceptor, the student must:
Assist with defibrillation and/or cardioversion of any patient requiring said treatment in the Emergency Department.
Discuss with the preceptor and demonstrate knowledge of emergency drugs including pharmacological properties, dosage, clinical indications, contra indications, and possible side effects.
Assist in application of casts and splints on any patient requiring said treatment in the Emergency Department.
Assist in the care of lacerations, suturing, control of bleeding, and application of dressing of any patient requiring said treatment in the Emergency Department.
Develop skills in the insertion and maintenance of nasogastric tubes and foley catheters and be aware of possible complications in their use on any patient requiring said treatment in the Emergency Department.
Obtain blood samples on any patient requiring said procedure in the Emergency Department.
Accurately and comprehensively report treatment and response to treatment of emergency department patients to the preceptor.
Observe each use of the telemetry unit between paramedic/I-EMT unit in the field and Emergency Department personnel, and assess the quality and quantity of information given by unit in the field and response of emergency room personnel on information given.
Perform all airway skills including endotracheal and nasotrachial intubation on any patient requiring said procedure in the Emergency Department.

Clinical Instruction

Labor and Delivery

Labor and Delivery

The Labor and Delivery rotation consists of students being assigned to a Registered Nurse, Nurse Practitioner, or Physician preceptor in the Labor and Delivery Department.

The program director must meet with the head of the Critical Care unit as required in rule and review this portion of the curriculum. Preceptors are required to supervise and provide remedial training for each objective.

Objective: At the conclusion of this clinical rotation, under the supervision of the assigned preceptor, the student must:
Observe three (3) live vaginal births.
Describe in depth, to the preceptor, the anatomy and physiology of the female genitourinary system, and application of this knowledge in the examination of the patient presenting with a gynecological or obstetrical problem.
Develop the skills and knowledge necessary to recognize normal labor, abnormal and premature labor and be able to provide the appropriate care and treatment of each.
Observe and assist the preceptor with care of at least three (3) labor patient.
Perform the following skills on at least three (3) patients: 1. Timing contractions 2. Checking fetal heart tones 3. Vital signs of the mother 4. Recognize the various stages of labor 5. Interpret fetal monitoring
Perform the newborn assessment with regard to the APGAR rating system and fetal heart tones in the delivery suite on at least three (3) patients.
Provide immediate care of the mother after delivery including observation for signs of post-partum hemorrhage or shock, retained placenta and multiple birth on at least three (3) patients.
Demonstrate aseptic technique and demonstrate correct gowning and gloving procedures to be used during delivery and examination of the labor patient.
Prepare and administer drugs IV, IM, and Sub Q and develop skills in insertion of IV's, recognition of infiltration and discontinuation of I.V.'s on any patient requiring said treatment in the Labor and Delivery Department.

Objective: At the conclusion of this clinical rotation, under the supervision of the assigned preceptor, the student must:
Demonstrate knowledge of, and discuss with the preceptor, fluid monitoring/use in the labor patient.
Demonstrate knowledge in the care of premature labor patients and be knowledgeable about both field and hospital care, including history, assessment, pathophysiology, causes and interventions on any patient requiring said care in the Labor and Delivery Department.
Assist in the care and treatment of pre-eclampsia, abruptio placenta, placenta previa and ectopic pregnancy on any patient requiring said care in the Labor and Delivery Department.

Clinical Instruction

Pediatric Department

Pediatrics

The Pediatric rotation consists of students being assigned to a Registered Nurse, Nurse Practitioner, or Physician preceptor in the Pediatric Emergency Department or pediatric unit.

The program director must meet with the head of the Pediatric unit as required in rule and review this portion of the curriculum. Preceptors are required to supervise and provide remedial training for each objective.

Objective: At the conclusion of this clinical rotation, under the supervision of the assigned preceptor, the student must:
Perform pediatric physical examinations (including estimation of weights) on at least 5 patients.
Perform intravenous therapy including recognition of infiltration, discontinuing IV lines on at least three (3) patients.
Administer any IV drug contained in the paramedic (I-EMT) drug box to any patient requiring said treatment.
Place monitor leads and identify the EKG rhythm on at least three (3) patients.
Provide physical and emotional safety measures for any pediatric and neonatal patients the student comes in contact with.
Develop skills in dealing and communicating with parents in order to obtain an adequate history.
Accurately and comprehensively report to the preceptor all patient findings.
Demonstrate knowledge of normal physical/mental development of various age group: a. Normal Newborn b. 1 to 3 months c. 3 to 6 months d. 6 to 9 months e. 9 to 12 months f. 12 to 24 months g. Toddlers h. Preschool i. School age j. Adolescents
Identify and discuss knowledgeably with the preceptor, common pediatric diseases/emergencies and their treatment.
Recognize signs of child abuse or parental neglect and report pertinent findings to appropriate agencies on any patient requiring said intervention.

Clinical Instruction

Psychiatric Department

Psychiatric

The Psychiatric rotation consists of students being assigned to a Registered Nurse, Nurse Practitioner, Physician, or Psychologist preceptor in the Psychiatric unit, crisis unit, or mobile crisis team.

The program director must meet with the head of the Psychiatric unit as required in rule and review this portion of the curriculum. Preceptors are required to supervise and provide remedial training for each objective.

Objective: At the conclusion of this clinical rotation, under the supervision of the assigned preceptor, the student must:
Perform a patient interview and identify the psychiatric condition of at least two (2) patients.
Discuss with the staff of the unit, the diagnosis and therapy plan for at least two (2) patients.
Research and write a 500 word term paper on one of the following abnormal psychiatric conditions: 1. Clinical Depression 2. Bi-polar disorder 3. Schizophrenia 4. Drug induced psychosis 5. Anti-social disorder 6. Senile Dementia 7. Organic Brain Syndrome 8. Borderline Personality disorder 9. Attention Deficit Hyperactive Disorder 10. Oppressive compulsive disorder
Discuss with the staff of the unit, the appropriate procedure for dealing with the violent patient.
Perform at least one (1) four point restraint on any patient that require said intervention or in a simulated scenario with the staff of the unit.
Discuss with the staff of the unit, the various classifications of Seriously Mentally Ill (SMI) drugs including indications, contraindication, and side effects.
Discuss with the staff of the unit, the federally mandated SMI blueprint and its impact on prehospital care of behavioral emergencies.

Clinical Instruction

Neonatal or Nursery

Neonatal/Nursery

The Neonatal/Nursery rotation consists of students being assigned to a Registered Nurse, Nurse Practitioner, Physician, preceptor in a neonatal unit or a newborn nursery.

The program director must meet with the head of the Neonatal/nursery unit as required in rule and review this portion of the curriculum. Preceptors are required to supervise and provide remedial training for each objective.

Objective: At the conclusion of this clinical rotation, under the supervision of the assigned preceptor, the student must:
Perform newborn physical examinations (including estimation of weights) on at least five 5 patients.
Observe and assist in the routine care of the newborn on at least five (5) patients.
Discuss with the staff of the unit, the means by which heat loss occurs, its significance, and methods of heat conservation in newborns.
Discuss with the staff of the unit, the parameters of APGAR scoring and numerical values used.
Perform APGAR scoring on at least five (5) newborn patients.
Observe and assist in resuscitation of a newborn in distress, for any patient requiring said intervention in the Neonatal/Nursery unit.
Discuss with the staff of the unit, methods of stimulating the distressed infant.
Discuss with the staff of the unit, and assist when possible, with the administration of oxygen, and ventilatory management of the newborn.
Discuss with the staff of the unit, the relationship of birth weight to gestational age.

Vehicular Internship

Vehicular

The vehicular internship is designed to give the student the ability to synthesize information and skills acquired and apply them in a prehospital setting under the supervision of an experienced preceptor

The program director must meet with the manager of the EMS service as required in rule and review this portion of the curriculum. Preceptors are required to supervise and provide remedial training for each objective.

Objective: At the conclusion of this vehicular internship, under the supervision of the assigned preceptor, the student must:
Perform an inventory, and discuss with each preceptor, the use and operation of the: (1) ALS drug box, (2) Monitor/Defibrillator, (3) Telemetry/communications equipment, (4) Advanced airway equipment, and (5) Report forms.
Discuss with the preceptor, the policies of the unit's agency relating to emergency vehicle response (use of lights and sirens and driving), body substance isolation, drug box security, and drug box exchange.
Discuss with the preceptor, after each of the first five calls, the triage procedure utilized including how the preceptor assessed: (1) scene safety, (2) number and level of critical-ness of each patient, (3) patients needs, and (4) resources required.
Discuss with each preceptor, the dispatch procedure of the unit.
Discuss with each preceptor, the role of each team member on the unit.
Discuss with each preceptor, the units role on a dispatched EMS call relating to the overall EMS system.
Participate in the care of at least {paramedic students = 15, I-EMT students = 7, and I-P students = 5} ALS level patient by preforming any one of the following skills: (1) Establish an intravenous, (2) Intubate or perform an advanced airway procedure, (3) Defibrillate of cardiovert, (4) Administer any drug in the drug box, or (5) insert a gastric tube. Note: The student must perform one of the five skills and a patch to medical control must be made by the preceptor or student and an appropriate transfer of patient care must be made by the student to the transporting unit or receiving facility.
Perform any basic life support skills on any patient, when said skills are required.
Perform any advanced airway skills, including intubation and cricothyrotomy, on any patient, when said skills are required.
Establish an intravenous line, in the prehospital setting, on at least five (5) patients.

Objective: At the conclusion of this vehicular internship, under the supervision of the assigned preceptor, the student must:
Perform a patient (primary and secondary) assessment and interview on at least five (5) patients.
Obtain a complete set of vital signs, in the prehospital setting, on at least five (5) patients.
Perform ACLS intervention, including basic skills, drug administration, rhythm interpretation, defibrillation, and cardioversion on any patient requiring said intervention.
Administer any drug box medication, when said medication is ordered by the ALS base Hospital either by standing order or direct communication.
Perform a radio patch, relay patient information, and receive physician orders on at least three (3) patients.
Complete a written run report, including demographic and patient information on at least three (3) patients.

EXHIBIT V

ARIZONA DEPARTMENT OF HEALTH SERVICES
OFFICE OF EMERGENCY MEDICAL SERVICES

ADVANCED LIFE SUPPORT TRAINING PROGRAM
COURSE COMPLETION REPORT

This report must be submitted with an Official Class Roster (form OEMS-005).

Program name _____ Certificate number _____

Program Director's name (print) _____

Medical Director's name (print) _____

Date of completion _____ Course type _____

I, as Medical Director of this training program verify that I understand and have complied with all requirements of the Arizona Administrative Code R9-13-403.

I, as Program Director of this training program verify that I understand and have complied with all requirements of the Arizona Administrative Code R9-13-404.

We verify that each student on the attached official class roster has:

1. *Achieved competency of every stated objective for didactic, clinical, and vehicular components of the Arizona Advanced Life Support Curriculum.*

2. *Met the minimum contact hour requirements for didactic, clinical, and vehicular components as stated in the Arizona Advanced Life Support Curriculum.*

3. *Demonstrated proficiency in all skills encompassed in the Arizona Advanced Life Support Curriculum by successfully performing the procedure on live patients, cadavers, manikins or a combination of these.*

By affixing our signatures to this form we verify that each student listed on the Official Class Roster has successfully completed all requirements of the Arizona Advanced Life Support Curriculum. We verify that records required by Arizona Administrative Code, Title 9, Chapter 13, Article 4, are available for inspection on request.

_____ _____
Medical Director Date

_____ _____
Program Director Date

EXHIBIT X

SIDE 1

USE NO. 2 PENCIL ONLY

ARIZONA DEPARTMENT OF HEALTH SERVICES - EMERGENCY MEDICAL SERVICES
EMERGENCY MEDICAL TECHNICIAN
ORIGINAL CERTIFICATION APPLICATION

1. SOCIAL SECURITY NUMBER

2. BIRTH DATE

3. APPLICATION TYPE
- ☐ ORIGINAL CERTIFICATION
- ☐ OUT OF STATE

4. LEVEL
- ☐ PARAMEDIC
- ☐ INTERMEDIATE
- ☐ BASIC EMT

5. EMT EXAM
- ☐ NR
- ☐ STATE

NOTE: National Registry (NR) requires an additional NR application AND a money order made payable to: NATIONAL REGISTRY OF EMTS.
Please see instruction page for additional information.

6. NAME

7. TITLE
- ☐ SR
- ☐ JR
- ☐ III
- ☐ IV

8. PROGRAM END DATE

9. MISDEMEANOR OR FELONY INFORMATION

YES	NO	
☐	☐	HAVE YOU EVER BEEN CONVICTED OF A MISDEMEANOR INVOLVING MORAL TURPITUDE OR A FELONY, INCLUDING CONVICTIONS THAT HAVE BEEN EXPUNGED OR VACATED?

10. DRUG USE INFORMATION

YES	NO	
☐	☐	DO YOU USE OR HAVE YOU USED WITHIN THE LAST 6 MONTHS, ANY ILLEGAL DRUGS OR ANY PRESCRIPTION DRUGS WITHOUT THE SUPERVISION OF A PHYSICIAN?

11. ALCOHOL USE INFORMATION

YES	NO	
☐	☐	DO YOU USE OR HAVE YOU USED WITHIN THE LAST 6 MONTH, ALCOHOL TO AN EXTENT THAT IT COULD IMPAIR YOUR ABILITY TO SAFELY FUNCTION AS AN EMT? (SEE TITLE 9, CHAPTER 13 ARIZONA ADMINISTRATIVE CODE FOR EMT FUNCTIONS.)

DHS USE ONLY

STAMP

PHY ☐

CARD ☐

EXAM SITE CODE

DHS USE ONLY

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SIDE 2

MY SIGNATURE ATTESTS THAT ALL INFORMATION ON THIS APPLICATION IS TRUE AND ACCURATE.

SIGNATURE: _____ DATE: _____

DHS USE ONLY

EXHIBIT Y

Arizona Department of Health Services
Office of Emergency Medical Services

PHYSICAL EXAMINATION FORM

This document is a medical record and shall be kept confidential subject to Arizona Administrative Code R9-1-312.

To be completed by a physician (MD or DO), Physician's Assistant, or Nurse Practitioner licensed in the State of Arizona.

INSTRUCTIONS:

1. Please read this form carefully.
2. Perform a physical examination including a medical history.
3. Answer the questions on the reverse side of this form.
4. Print, type or stamp your name, address, and phone number.
5. Sign your name, provide your Arizona license number, and date the form.

PLEASE READ: This form is in support of an application as an Emergency Medical Technician (EMT) at the Basic, Intermediate, or Paramedic level.

The applicant must be capable of performing a wide range of functions that require vision, hearing, speech, and physical capabilities. Finally, the applicant should be free from any medical, or psychological diseases or disorders that would impact the applicant's ability to perform the duties of an EMT, or which may put the applicant or patients at risk.

Eligibility for certification will be determined based on your responses on this form. You will be responsible for evaluating the applicants medical, psychological, and physical status. If you are not capable of accomplishing this, please refer the patient to his/her primary care physician.

APPLICANT'S NAME: _____

ADDRESS: _____
Number/Street City State ZIP

TRAINING PROGRAM: _____ INSTRUCTOR: _____

Medical Status

1	Please verify that the applicant has had a TB test or chest x-ray with a negative result within the last six months. CAN YOU VERIFY THIS?	Y	N
2	Please verify that the applicant has immunity to Rubella (German Measles). Immunity is assured in individuals born before January 1, 1942; or the applicant must have a record of having received one dose of live rubella vaccine since June 1, 1969 on or before their first birthday; or there must be a documented laboratory confirmation of immunity to rubella. CAN YOU VERIFY THIS?	Y	N
3	Please verify that the applicant has immunity to Rubeola (Measles). Immunity is assured in individuals born before January 1, 1957; or the applicant must have a record of having received two doses of live measles vaccine since June 1, 1968 on or before their first birthday; or there must be a documented laboratory confirmation of immunity to rubella. CAN YOU VERIFY THIS?	Y	N
4	Is the applicant free from any physiologic or pathologic disorder or disease that would preclude the applicant from remaining calm or using good judgement in a high-stress situation?	Y	N
5	Is the applicant free from any physiologic or pathologic disorder or disease that would cause the applicant to be impaired by flashing lights or loud noises?	Y	N
6	Is the applicant free from any physiologic or pathologic disorder or disease that would preclude the applicant from functioning effectively throughout an entire work shift; at times up to 24 hours, without regularly scheduled meals or rest periods; and/or performing moderate to high level physical activity?	Y	N
7	Is the applicant free from any physiologic or pathologic disorder or disease that would preclude the applicant from withstanding varied environmental conditions such as extreme heat, cold or moisture?	Y	N
8	Is the applicant free from any physiologic or pathologic disorder or disease that would preclude the applicant from working in low light or confined spaces?	Y	N
9	Are the physical findings such as HEENT, vital signs, lung sounds, heart sounds, palpation of the abdomen, and assessment of the extremities within normal limits?	Y	N
10	Is the visual acuity correctable to at least 20/40 in one eye for the far sight and is the near sight such that the applicant can read 20/20 from 16 inches?	Y	N
11	Is the applicant free from any physiologic or pathologic disorder or disease that would preclude the applicant from conversing in person, and via the telephone or 2 way radio?	Y	N
12	Is the applicant free from any evidence of communicable diseases that would put the applicant or patients at risk?	Y	N

Continued next page

Physical Status

13	Can the applicant lift balance and carry 125 pounds independently and 250 pounds with assistance?	Y	N
14	Does the applicant have full flexion and extension of all four extremities?	Y	N
15	Does the applicant have the manual and digital dexterity to perform allied health related functions?	Y	N
16	Can the applicant bend, stoop, and crawl on uneven terrain?	Y	N

Psychological Status

17	Is the applicant free from any psychological disease or disorder that, uncontrolled with medication, would impede the applicant from providing patient care?	Y	N

Physician, PA, or NP's Name _____

Arizona License Number _____ Phone Number _____

Address _____

Signature _____ Date _____

EXHIBIT Z

ARIZONA DEPARTMENT OF HEALTH SERVICES - EMERGENCY MEDICAL SERVICES
EMERGENCY MEDICAL TECHNICIAN RECERTIFICATION APPLICATION

USE NO. 2 PENCIL ONLY

1.
LAST NAME:
FIRST NAME: MI:

2.
MAILING ADDRESS:
CITY: STATE: ZIP:
IS THIS ADDRESS DIFFERENT FROM THE ADDRESS ON YOUR LAST APPLICATION? ☐ YES ☐ NO
PHONE NUMBER: ( )

3. SOCIAL SECURITY NUMBER

4. EMT LEVEL
- ☐ PARAMEDIC
- ☐ INTERMEDIATE
- ☐ INTERMEDIATE WITH DEFIB
- ☐ BASIC EMT
- ☐ BASIC EMT WITH IV
- ☐ BASIC EMT WITH DEFIB
- ☐ BASIC EMT WITH IV & DEFIB

5. EXAM TYPE
☐ NR ☐ STATE

NOTE: National Registry (NR) requires an addition NR application AND a money order made payable to: NATIONAL REGISTRY OF EMTS. Please see instruction page for additional information.

6. MISDEMEANOR/FELONY INFORMATION
YES ☐ NO ☐ HAVE YOU EVER BEEN CONVICTED OF A MISDEMEANOR INVOLVING MORAL TURPITUDE OR A FELONY, INCLUDING CONVICTIONS THAT HAVE EXPUNGED OR VACATED, THAT YOU HAVE NOT REPORTED TO A.D.H.S./O.E.M.S. ON A PREVIOUS CERTIFICATION APPLICATION?

7. DRUG USE INFORMATION
YES ☐ NO ☐ DO YOU USE OR HAVE YOU USED WITHIN THE LAST 2 YEARS, ANY ILLEGAL DRUGS OR ANY PRESCRIPTION DRUGS WITHOUT THE SUPERVISION OF A PHYSICIAN?

8. ALCOHOL USE INFORMATION
YES ☐ NO ☐ DO YOU USE OR HAVE YOU USED WITHIN THE LAST 2 YEARS, ALCOHOL TO AN EXTENT THAT IT COULD IMPAIR YOUR ABILITY TO SAFELY FUNCTION AS AN EMT? (SEE TITLE 9, CHAPTER 13 ARIZONA ADMINISTRATIVE CODE FOR EMT FUNCTIONS.)

9. APPLICANT SIGNATURE
MY SIGNATURE ATTESTS THAT ALL INFORMATION ON THIS APPLICATION IS TRUE AND ACCURATE.
SIGNATURE: DATE:

STAMP

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PHY ☐ CARD ☐ EXAM SITE CODE

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EXHIBIT AA

Arizona Department of Health Services
Office of Emergency Medical Services

PHYSICAL VERIFICATION FORM

This document is a medical record and shall be kept confidential subject to Arizona Administrative Code R9-1-312.

To be completed by a physician (MD or DO), Physician's Assistant, or Nurse Practitioner .

INSTRUCTIONS:

1. **Please read this form carefully.**
2. **Answer the questions on this form.**
3. **Print, type or stamp your name, address, and phone number.**
4. **Sign your name, provide your Arizona license number, and date the form.**

PLEASE READ: This form is in support of an application for recertification as an Emergency Medical Technician (EMT) at the Basic, Intermediate, or Paramedic Level. Eligibility for recertification will be determined based on your responses on this form. If you feel that you are not capable of completing this form, the applicant may be referred to his/her primary care physician or may submit a complete physical examination form on a separate form provided by the Department of Health Services, Office of EMS.

The applicant must be capable of performing a wide range of functions that require vision, hearing, speech, and physical capabilities. Finally, the applicant should be free from any medical or psychological diseases or disorders that would impact the applicant's ability to perform the duties of an EMT or which may put the applicant or patients at risk.

FUNCTIONS OF AN EMT:

The following paragraph details typical functions performed by an EMT:

Ability to communicate verbally via telephone and radio equipment; ability to lift, carry and balance 125 pounds independently and 250 with assistance; ability to interpret written, oral and diagnostic form instructions; ability to use good judgement and remain calm in high stress situations; ability to be unaffected by loud noises and flashing lights; ability to function efficiently throughout an entire work shift, at times up to 24 hours, without interruption; ability to read small print, such as on medication vials; ability to accurately discern street signs and address numbers in the sunlight and at night; ability to converse in English with co-workers and hospital staff as to the status of patients. Good manual dexterity, with ability to perform all tasks related to the highest quality patient care. Ability to bend, stoop and crawl on uneven terrain; ability to withstand varied environmental conditions such as extreme heat, cold and moisture; ability to work in low light and confined spaces.

Applicants Name: _____

Social Security or OEMS Certification ID # _____

Continued next page

1	In your professional medical opinion is there any reason why the applicant would not be able to perform the functions of an EMT as described above?	Y	N
2	In the last two years of the certification period has the applicant developed any significant medical or psychological diseases or disorders that would interfere with his/her ability to perform the functions of an EMT?	Y	N

Physician, PA, or NP's Name _____

Arizona License Number _____

Address _____

Phone Number _____

Signature _____ Date _____

EXHIBIT BB

ARIZONA DEPARTMENT OF HEALTH SERVICES
OFFICE OF EMERGENCY MEDICAL SERVICES

APPLICATION FOR EXTENSION OF CERTIFICATION

Applicant's name _____

Certification or OEMS ID number _____ Exp _____

Applicant's address _____

Applicant's phone number _____

EMS Employer _____

EMS Employer's address _____

EMS Employer's phone number _____

I attest, under penalty of perjury, that I was unable to complete the recertification requirements during the effective period of certification for the following reason:

(Check one)

_____ I had a mental or physical disability or health related problem that precluded me from meeting the recertification requirements. Note: You must attach a statement signed by a physician licensed in Arizona verifying this fact.

_____ I was involved in active military duty. Note: You must attach documentation signed by your commanding officer.

_____ I had an undue hardship. Please describe: _____

_____

_____

_____

Note: You must attach a statement from a third party attesting to this.

APPLICANT'S SIGNATURE: _____ DATE: _____

EXHIBIT CC

ALS Prehospital Provider Immunization Training

Course Outline & Summation

Minimum Course Length (Lessons 1-12): 6 hours
Clinical Assessment (Lesson 13): 4 hours

Lesson 1

Epidemiology of Vaccine Preventable Disease - Overview of each vaccine preventable disease, including the identification, signs and symptoms, transmission, incubation period, communicability, and the side effects of the disease versus side effects of the vaccine.

Lesson 2

Routine Immunization Scheduling - Focuses on the immunization schedule from birth to age six, outlining the appropriate immunization(s) for each age group.

Lesson 3

The Vaccine Screening Process - Emphasizes screening (consent) forms that must be signed and understood by individuals prior to receiving immunizations. Also addresses screening questions.

Lesson 4

Vaccine Administration - Instructs students on the proper injection techniques, routes, dosages and contraindications for each vaccine. Post immunization documentation is also covered.

Lesson 5

Management of Adverse Reactions - Presents the most common side effects for each vaccine along with the proper medical management.

Lesson 6

Vaccine Management/Maintaining the Cold Chain - Provides an overview for the appropriate storage procedures for each vaccine, along with expiration dates, thawing and freezing, safe vs. unsafe vaccine, and general handling of each vaccine.

Lesson 7

Bloodborne Pathogens/Standards and Immunizations - Focuses on work practice controls and how to avoid possible contamination and exposure. OSHA standards are also addressed.

Course Outline & Summation (cont.)

Lesson 8

Standards for Pediatric Immunizations - National standards that are recommended for use by all health professionals providing care in public or private health care settings who are involved in the administration of vaccines or the management of immunization services for children.

Lesson 9

Program Planning - Establishes criteria necessary to effectively set up an immunization clinic.

Lesson 10

Hepatitis B Prevention Program - Displays a comprehensive knowledge of Hepatitis B, the methods of transmission, high risk groups and the proper immunization schedule.

Lesson 11

Final Written Test - Test of knowledge in epidemiology, immunization scheduling, vaccine screening process, vaccine administration, adverse reactions and management of, maintaining the cold chain, bloodborne pathogens, liability and the law, and standards for pediatric immunizations.

Lesson 12

Final Practical Evaluation Skills - Evaluation of skills learned throughout the program. Major emphasis placed on the process of immunization administration from start to finish. Skill sheets will be utilized.

Lesson 13 (4 hours additional)

Immunization Clinical Assessment - Identifies assessment criteria that the student must demonstrate competency in during an already established immunization clinic. The student will work with a preceptor during this period.

Lesson 1 - Epidemiology of Vaccine Preventable Diseases

Objectives:

At the conclusion of Lesson 1, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- List the vaccine preventable diseases.
- State the signs and symptoms of each preventable disease.
- Describe in their own words how each preventable disease is transmitted
- Define in their own words basic outbreak control
- Describe vaccination reporting procedures

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)
(One of the following for each student)
Disease profile handouts for each vaccine preventable disease with each disease profile containing the following information:

- Disease Identification
- Signs and Symptoms
- Transmission
- Incubation Period
- Communicability
- Disease side effects
- Vaccine side effects

Other material as needed

Equipment:

- Erasable board with markers
- Overhead projector
- VCR capabilities
- Slide projector

Instructors:

- Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Review the lesson outline to ensure understanding
- Preview all references and visual aids selected for the lesson
- Be aware that this is new information for many students and material will need to be repeated and reinforced in subsequent lessons.

Lesson 2 - Routine Immunization Scheduling

Objectives:

At the conclusion of Lesson 2, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- List the biologics found on a routine immunization schedule
- State the age each individual biologic should be administered
- State the biologicals scheduled to be administered given a child's age.

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)
(One of the following for each student)

- "Routine Immunization Schedule" handouts. This form should be available through your County Department of Public Health.
- "Children Need Immunizations" handout. This form is supplied through The Center for Disease Control.
- Other material is available and should be used as needed. The aforementioned agencies are excellent resources.

Equipment:

- Erasable board with markers
- Overhead projector
- Slide projector
- Demonstration Biologics

Instructors:

- Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Review the lesson outline to ensure understanding
- Preview all references and visual aids selected for the lesson
- Prepare appropriate instructional aids in addition to those suggested
- Be aware that this is new information for many students and material will need to be repeated and reinforced in subsequent lessons.

Lesson 3 - The Vaccine Screening Process

Objectives:

At the conclusion of Lesson 3, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- Verify client and consenting adult identities.
- Apply proper immunization schedule rules.
- Obtain adequate medical histories.
- Accurately assess each client's record.
- Determine each client's immunization needs.
- Identify all valid contraindications.
- Understand the model for "Barrier-Free Immunizations" practice.
- Understand the "Important Information Statements" and be capable of providing counseling on the following:
  a. DTP/DTaP
  b. OPV/IPV
  c. DT, Td
  d. Hib
  e. MMR
  f. HBV
  g. Tb Skin Test

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)

(One of the following for each student)

- Immunization Screening Information/Questions
- Consent for Immunization Against Measles, Mumps and Rubella (German Measles)
- "Important Information Sheets" for each of the following biologics:
  a. Diptheria, Tetanus, and Pertussis
  b. Polio
  c. Haemophilus Influenza Type b and Haemophilus b Conjugate Vaccine
  d. Hepatitis B, Hepatitis B Vaccine, and Hepatitis B Immune Globulin
  e. Measles, Mumps, and Rubella
- Td screening questions
- MMR screening questions
- Immunization Program Log sheet

Lesson 3 - The Vaccine Screening Process (cont.)

Materials (cont.)

- Sample copy of Immunization Record with Seal
- Model for "Barrier-Free Immunizations" Practice
- Guide to Contraindications and Precautions to Immunizations (Spiral Booklet) - Available through the Center for Disease Control or your local Health Department.

Equipment:

- Erasable board with markers
- Overhead projector
- Slide projector
- Demonstration Biologics

Instructors:

- Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Review the lesson outline to ensure understanding
- Preview all references and visual aids selected for the lesson
- Prepare appropriate instructional aids, transparencies, etc in addition to those suggested
- Be aware that this is new information for many students and material will need to be repeated and reinforced. Review of prior lessons should be completed. This can be accomplished at the beginning of class by asking questions or giving a short 5-7 questions quiz over pertinent information.

Lesson 4 - Vaccine Administration

Objectives:

At the conclusion of Lesson 4, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- Understand the immunization schedule and be able to respond to immunization needs.
- Describe administration of individual vaccines by dose, route and site.
- Describe vaccine contraindications, valid and non-valid.
- Describe adverse events related to the administration of vaccines.
- Provide proper post-immunization counseling.
- Describe the proper sequence for the administration of 4 different vaccines.
- Demonstrate the proper documentation procedures following vaccine administration.
- Identify the steps in proper sharps management.

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)

(Suggest one of each of the following for each student - most of the forms/handouts are available from the Arizona Department of Health Services Immunization Services or your local County Health Department)

- Vaccine administration handout
- Arizona Immunization Guide
- Contraindication Poster
- Guide to Contraindications to Childhood Vaccinations
- Ideal Immunization Schedule
- VAERS form
- Administration sequence handout
- Immunization sites handout
- Recommended Sites and Techniques for Injections handout
- Therapeutic Holds for Immunizations handout
- Comfort measures for Possible Immunization Reactions
- Categories of Vaccine handout
- Other material is available and should be used as needed.

Lesson 4 - Vaccine Administration (cont.)

Equipment:

- Erasable board with markers
- Overhead projector
- Slide projector
- VCR capabilities
- Demonstration Biologics
- Transparencies
- Applicable needles and syringes
- Sharps containers
- Child and infant manikins
- Vaccine administration video
- Slides demonstrating IM and SQ injections, especially on pediatric patients

Instructors:

- Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Review the lesson outline to ensure understanding
- Preview all references and visual aids selected for the lesson
- Have full understanding of immunization techniques, routes and dosages. This may necessitate a visit to an already established immunization clinic prior to teaching this lesson.
- Prepare appropriate instructional aids and transparencies.
- Be aware that this is new and intense information for many students and material needs to be repeated and reinforced. Provide a short review of prior lessons through written or oral evaluations.

Lesson 5 - Management of Adverse Reactions

Objectives:

At the conclusion of Lesson 5, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- Differentiate between "common side effects" and an "adverse reaction" and describe the correct procedure to be followed when reporting them.
- Discuss VAERS as it applies to immunizations.
- Explain the National Childhood Vaccine Injury Act.
- Demonstrate appropriate emergency medical treatment in the event of an adverse reaction, following local protocol procedures.

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)

(One of each of the following for each student - most of the forms/handouts are available from the Arizona Department of Health Services Immunization Services or your local County Health Department))

- Local medical standing orders and/or local protocols
- Vaccine Adverse Event Reporting (VAERS) form
- National Childhood Vaccine Injury Act, 1986
- Guide to Contraindications to Childhood Vaccinations
- Vaccine Injury Table
- Other material as needed

Equipment:

- Erasable board with markers
- Overhead projector
- Transparencies

Instructors:

- Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Review the lesson outline to ensure understanding
- Preview all references and visual aids selected for the lesson
- Prepare appropriate instructional aids in addition to those suggested
- Be aware that this is new information for many students and material will need to be repeated and reinforced in subsequent lessons.

Lesson 6 - Maintaining the Cold Chain

Objectives:

At the conclusion of Lesson 6, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- Correctly initiate vaccine ordering/receiving.
- List three of four guidelines for transporting vaccine.
- List four guidelines for receiving vaccines.
- Differentiate between vaccines that must be frozen and those that are refrigerated.
- Describe reasons for rotating stock monthly and checking refrigerator daily.
- Identify problems associated with vaccine management.
- Recognize the importance of record keeping

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)
(One of each of the following for each student - most of the forms/handouts/videos are available from the Arizona Department of Health Services Immunization Services or your local County Health Department))

- "Champagne and Roses" videotape
- Styrofoam containers and ice packs
- Charts: Vaccine Handling and Storage; Handle with Care; Temperature Log; Do Not Unplug
- Forms:
  a. Vaccine usage (Doses Administered Report)
  b. Physical Inventory
  c. Inventory Adjustments
  d. Returned Vaccine

Equipment:

- TV/VCR capabilities
- Erasable board with markers
- Overhead projector & Transparencies

Instructors: Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Review the lesson outline to ensure understanding
- Preview all references, forms and visual aids selected for the lesson

Lesson 7 - Bloodborne Pathogens/Standards and Immunizations

Objectives:

At the conclusion of Lesson 7, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- Demonstrate compliance with Infection Control Measures.
- Identify the steps in proper sharps management.
- List five engineering controls identified in the Bloodborne Pathogens Standard.
- Describe employees procedure for reporting an exposure.
- Identify three items that must be available to each vaccinator.

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)
(One of each of the following for each student)

- Engineering and Work Practice Control handout.
- Workplace exposure forms
- Other material as needed

Equipment:

- Slide projector
- Overhead projector
- Transparencies

Instructors:

- Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Review the lesson outline to ensure understanding
- Preview all references and visual aids selected for the lesson
- Prepare appropriate instructional aids in addition to those suggested
- Review previous lesson content at beginning of class.

Lesson 8 - Standards for Pediatric Immunization Practice

Objectives:

At the conclusion of Lesson 8, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- Understand the purpose of the Standards for Practice.
- Describe ways to implement the Standards for Practice in their work setting.
- Define a missed opportunity.
- List three barriers to immunizations in their work setting.

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)
(One of each of the following for each student)

- "Standards for Pediatric Immunization Practices"
- Poster/handout of valid versus non-valid contraindications

Equipment:

- Slides or overhead transparencies of "Standards"
- Overhead projector
- Slide projector

Instructors: Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Review the lesson outline to ensure understanding
- Preview all references and visual aids selected for the lesson
- Prepare appropriate instructional aids in addition to those suggested
- Review previous lesson content

Lesson 9 - Program Planning

Objectives:

At the conclusion of Lesson 9, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- Describe three types of immunization delivery programs.
- Identify three key factors in selecting an immunization site.
- Describe three effective ways to incorporate community agencies and/or volunteer into immunization programs
- Discuss the personnel and logistics requirements for community-based immunization programs.
- Develop evaluation plan for a community-based immunization program.

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)

- Transparencies and handouts as needed
- Other material as needed

Equipment:

- Erasable board with markers
- Overhead projector
- Transparencies

Instructors: Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Review the lesson outline to ensure understanding
- Preview all references and visual aids selected for the lesson
- Prepare appropriate instructional aids in addition to those suggested
- Review material from previous lesson(s)

Lesson 10 - Hepatitis B Prevention Program

Objectives:

At the conclusion of Lesson 10, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- Display a comprehensive knowledge of hepatitis B; that it is a preventable disease.
- Describe the methods of transmission.
- Explain who is at risk; who are the high risk individuals.
- Relate the urgency of screening pregnant women and caring for their newborn infants and household contacts.
- Outline the immunization schedule.
    - Where mother is hepatitis B positive
    - Universal immunization program

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)
(One of each of the following for each student)

- Fact sheet on Hepatitis B
- Hepatitis B Immunization Recommendations
- Hepatitis B Prevention and Pregnancy (County Health Dept.)
- Other material as needed

Equipment:

- Erasable board with markers
- Overhead projector
- Transparencies
- Slide projector

Instructors: Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Review the lesson outline to ensure understanding
- Preview all references and visual aids selected for the lesson
- Prepare appropriate instructional aids in addition to those suggested
- Review previous lesson content

Lesson 11- Final Written Evaluation

Objectives:

At the conclusion of Lesson 11, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- Complete a 25 question written examination with an 80% or better or better score.

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)

Equipment:

- Erasable board with markers
- Overhead projector
- Transparencies

Instructors: Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Review and prepare the examination

Lesson 12 - Practical Skills Stations

Objectives:

At the conclusion of Lesson 12, the instructor will have provided sufficient information, demonstration and practice to the student to ensure their ability to:

- Demonstrate the administration of all biologics.
- Demonstrate holding positions for administration of biologics.
- Complete a record assessment by obtaining an appropriate history
- Describe the after immunization care to the parents or client.
- Demonstrate proper handling of the biologics to maintain the cold chain.

Requirements:

Materials: Instructor Resource Manual
(Available through Phoenix Fire Department Information Services (602) 256-3534)

Equipment: As listed in the Instructor Resource Manual

Instructors: Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Prepare the stations will all required equipment prior to class.
- Divide class evenly amongst the stations and rotate each student through each skill.
- Complete an evaluation sheet for each student

Lesson 13 - Clinical Assessment

Objectives:

At the conclusion of Lesson 13, approximately 4 hours, the student shall be able to:

- Demonstrate the administration of all biologics.
- Demonstrate holding positions for administration of biologics.
- Complete a record assessment by obtaining an appropriate history
- Describe the after immunization care to the parents or client.
- Demonstrate proper handling of the biologics to maintain the cold chain.
- Demonstrate proper documentation following biologic administration
- Demonstrate the proper handling of sharps and syringes according to OSHA guidelines

Requirements:

Materials:

- An Immunization Clinical site established and providing immunizations that will provide preceptors and allow students to screen, prepare medications and administer biologics to their clients.
- Clinical Evaluation Form for each student

Equipment: Not applicable or as required by the Clinical site

Instructors: Physicians, Nurses, Paramedics and any other medical personnel knowledgeable in all areas of the subject matter.

Instructor Preparations: **The Instructor should:**

- Meet with the preceptors prior to the day of the clinic and review the skills and methods by which the students will be evaluated.
- Accompany students to the clinical site
- Divide class evenly amongst the clinical stations and rotate each student through each skill (i.e. screening, prepping, administering).
- Insure that an evaluation sheet for each student is completed by the preceptor

Immunization Training
Practical Evaluation Form

Station # 1
Record Assessment, Screening, and Consent

Student Name: _____ Evaluator: _____
Date: _____

Competency	Satisfactory	Unsatisfactory
Given an immunization record/history, determines the required vaccinations.		
Verifies client's identity as being that of person named on the immunization record.		
Verifies signature and relationship of consenting adult.		
Documents any vaccines deferred or refused.		
Appropriately answers questions regarding "Important Information".		
Screens for contraindications and possible risks.		
When presented with a "delayed" child, determines appropriate immunizations and scheduling.		
Thoroughly completes necessary consent forms and instructs parent appropriately.		

Immunization Training
Practical Evaluation Form

Station # _____(2, 3, and 4)
Immunobiologics Administration

Student Name: _____ Evaluator: _____
Date: _____

Competency	Satisfactory	Unsatisfactory
Verifies client's identity as being that of person named on the immunization record.		
Proofs consent form, making sure biologics to be administered are accurate.		
Confirms child or infant is in the proper holding position prior to administering the medication.		
Demonstrates proper biologic administration in each of the following sites and routes: A/L Thigh _____ IM _____ Deltoid _____ SQ _____ Post. Arm _____ IM _____		
Chooses appropriate needle gauge and length to administer biologic.		
Prepares appropriate dosage for a given biologic. (Write example of medication evaluated) Biologic _____ Dose _____		
Demonstrates proper injection techniques when giving biologics.		
Disposes of needles/syringes in sharps container properly and according to OSHA regulations.		
Provides appropriate post immunization administration education to the client or consenting adult.		
Completes documentation immediately following vaccine administration.		
Uses universal infection control precautions when indicated.		

Immunization Training
Clinical Evaluation Form

Clinical site location: _____

Student Name: _____ Evaluator: _____
Date: _____

Competency	Satisfactory	Unsatisfactory
Sets up clinic supplies, to include emergency drugs and standing protocols.		
Dress is appropriate with identification clearly visible.		
Given a specific age, identifies appropriate biologic(s).		
Verifies client identity as being that of person named.		
Verifies signature and relationship of consenting adult.		
Verifies holding position of child or infant prior to administration of medication and administers the medication without undue harm to self or client.		
Demonstrates proper vaccination administration in each of the following sites and routes: A/L Thigh _____ IM _____ Deltoid _____ SQ _____ Post. Arm _____ IM _____		
Documents any deferred or refused biologics.		
Disposes of needles/syringes in sharps container properly and according to OSHA regulations.		
Provides appropriate post immunization administration education to the client or consenting adult.		
Completes documentation immediately following biologic administration.		
Uses universal infection control precautions when indicated.		

Comments

_____

_____

Student's Signature _____

EXHIBIT DD

Immunization Training
Practical Evaluation Form

Station # 1
Record Assessment, Screening, and Consent

Student Name: _____ Evaluator: _____
Date: _____

Competency	Satisfactory	Unsatisfactory
Given an immunization record/history, determines the required vaccinations.		
Verifies client's identity as being that of person named on the immunization record.		
Verifies signature and relationship of consenting adult.		
Documents any vaccines deferred or refused.		
Appropriately answers questions regarding "Important Information".		
Screens for contraindications and possible risks.		
When presented with a "delayed" child, determines appropriate immunizations and scheduling.		
Thoroughly completes necessary consent forms and instructs parent appropriately.		

Immunization Training
Practical Evaluation Form

Station # _____(2, 3, and 4)
Immunobiologics Administration

Student Name: _____ Evaluator: _____
Date: _____

Competency	Satisfactory	Unsatisfactory
Verifies client's identity as being that of person named on the immunization record.		
Proofs consent form, making sure biologics to be administered are accurate.		
Confirms child or infant is in the proper holding position prior to administering the medication.		
Demonstrates proper biologic administration in each of the following sites and routes: A/L Thigh _____ IM _____ Deltoid _____ SQ _____ Post. Arm _____ IM _____		
Chooses appropriate needle gauge and length to administer biologic.		
Prepares appropriate dosage for a given biologic. (Write example of medication evaluated) Biologic _____ Dose _____		
Demonstrates proper injection techniques when giving biologics.		
Disposes of needles/syringes in sharps container properly and according to OSHA regulations.		
Provides appropriate post immunization administration education to the client or consenting adult.		
Completes documentation immediately following vaccine administration.		
Uses universal infection control precautions when indicated.		

Immunization Training
Clinical Evaluation Form

Clinical site location: _____

Student Name: _____ Evaluator: _____
Date: _____

Competency	Satisfactory	Unsatisfactory
Sets up clinic supplies, to include emergency drugs and standing protocols.		
Dress is appropriate with identification clearly visible.		
Given a specific age, identifies appropriate biologic(s).		
Verifies client identity as being that of person named.		
Verifies signature and relationship of consenting adult.		
Verifies holding position of child or infant prior to administration of medication and administers the medication without undue harm to self or client.		
Demonstrates proper vaccination administration in each of the following sites and routes: A/L Thigh _____ IM _____ Deltoid _____ SQ _____ Post. Arm _____ IM _____		
Documents any deferred or refused biologics.		
Disposes of needles/syringes in sharps container properly and according to OSHA regulations.		
Provides appropriate post immunization administration education to the client or consenting adult.		
Completes documentation immediately following biologic administration.		
Uses universal infection control precautions when indicated.		

Comments

_____

_____

Student's Signature _____

EXHIBIT EE

Arizona Department of Health Services
Office of Emergency Medical Services

VERIFICATION OF RECERTIFICATION REQUIREMENTS

Applicant's Name _____ Social Security Number _____

Certification Number _____ Expiration Date _____

Applicant's Address _____

This is to verify that the applicant identified above has completed all continuing education and vehicular time requirements according to Arizona Administrative Code R9-13-610

Documentation of all continuing education credit hours and vehicular time logs will be made available to the Department upon request.

Base Hospital Coordinator's Signature _____ Date _____

Base Hospital Medical Director's Signature _____ Date _____

EMS Employer/Supervisor's Signature _____ Date _____

Applicants Signature _____ Date _____

EXHIBIT FF

ALS EXAMINATION BLUEPRINT

Intermediate:

Division 1 - Prehospital	20 questions
Division 2 - Preparatory	20 questions
Division 3 - Trauma	40 questions
Division 4 - Medical	40 questions
Division 5 - Obstetrics, Gynecology, Neonatal	15 questions
Division 6 - Psychology	15 questions

Paramedic and Intermediate to Paramedic:

Division 1 - Prehospital	20 questions
Division 2 - Preparatory	25 questions
Division 3 - Trauma	20 questions
Division 4 - Medical	40 questions
Division 4 - Cardiology	30 questions
Division 5 - Obstetrics, Gynecology, Neonatal	10 questions
Division 6 - Psychology	5 questions

EXHIBIT GG

Arizona Department of Health Services
Office of Emergency Medical Services

RECOMMENDATION FOR RECERTIFICATION

Applicant's Name _____ Social Security Number _____

Certification Number _____ Expiration Date _____

Applicant's Address _____

This is to verify that the applicant identified above has been under my administrative medical control for a minimum of six months, has no performance related patient care issues that are unresolved, and is recommended for recertification pursuant to Arizona Administrative Code R9-13-510.

BLS Medical Director's Signature _____ AZ License # _____ Date _____

Applicant's Signature _____ Date _____

NOTICE OF PROPOSED RULEMAKING

TITLE 9. HEALTH SERVICES

CHAPTER 28. ARIZONA HEALTH CARE COST CONTAINMENT SYSTEM (AHCCCS) ARIZONA LONG-TERM CARE SYSTEM

PREAMBLE

1. **Section Affected** — **Rulemaking Action**

Section Affected	Rulemaking Action
R9-28-301	Repeal
R9-28-301	New Section
R9-28-302	New Section
R9-28-303	Repeal
R9-28-303	New Section
R9-28-304	New Section
R9-28-305	New Section

2. **The specific authority for the rulemaking, including the authorizing statute (general) and the statutes the rules are implementing (specific):**

   Authorizing statute: A.R.S. § 36-2932(P)
   Implementing statutes: A.R.S. §§ 36-559, 36-2901, 36-2931, 36-2932(Q), 36-2933(B), 36-2936, and 36-2958.

3. **The name and address of agency personnel with whom persons may communicate regarding the rules:**

   Name: Debi Wells, Executive Administrator

   Address: AHCCCS Administration
   Office of Policy Analysis and Coordination
   801 East Jefferson, Mail Drop 4200
   Phoenix, Arizona 85034

   Telephone: (602) 417-4781
   Fax: (602) 256-6756

4. **An explanation of the rules, including the agency's reasons for initiating the rules:**

   A. General

   The AHCCCS Administration is repealing R9-28-301 and R9-28-303 and proposing for adoption R9-28-301, R9-28-302, R9-28-303, R9-28-304, and R9-28-305.

   The proposed rules are necessary to comply with rulemaking provisions of A.R.S. § 41-1001 et seq. for the preadmission screening (PAS) process used by the Administration to determine medical eligibility for applicants, eligible persons, and members for long-term care services provided through the Arizona Long-term Care System (ALTCS) program.

   AHCCCS has conducted preadmission screening for ALTCS applicants, eligible persons, and members since the beginning of the ALTCS program in 1988. During this time, the PAS instrument and the PAS process have been utilized under the general authority of A.R.S. § 36-2936 and 9 A.A.C. 28, Article 3.

   The current rules, R9-28-301 and R9-28-303, have been challenged by Community Legal Services and the Arizona Center for Law in the Public Interest in the case of Shea and Lacy et al. v. Chen, et al. (Maricopa County Superior Court, No. CV 93-18886), as not properly apprising applicants, eligible persons, and members of the medical eligibility requirements for ALTCS. Plaintiffs are requesting that the agency adopt more detailed rules that include:

   - definition of terms used by PAS assessors, including scoring definitions;
   - elements that are scored as well as the weights given;
   - standards for making a determination that a physician review is required;
   - standards for physician review;
   - definition of what it means to require an institutional level of care; and,
   - standards for when the PAS will be completed by a nurse or social worker.

   The Court granted Plaintiffs' motion for summary judgment, indicating that the agency's more detailed preadmission screening policies should be "rules" subject to the rulemaking requirements of the Administrative Procedure Act.

   As a result of the Court's ruling, Plaintiffs have filed an Order which would prevent AHCCCS from using any new PAS policies or PAS instruments until formal adoption and certification of new rules on these subjects. The Order requires, for a period of 90 days from the date of the Order or until changes to Article 3 have been promulgated pursuant to the Administrative Procedure Act, that AHCCCS use the proposed rule adoptions attached to the Order to determine medical eligibility for ALTCS services.

B. Specific

The proposed R9-28-301, Definitions, adds definitions of terms which are specific to the PAS program. These are terms which are not used elsewhere in the ALTCS rules. Those other general ALTCS words and phrases are defined in R9-28-101 and in statute, A.R.S. §§ 36-2931 (ALTCS) and 36-2901 (AHCCCS, acute care). It should be noted that the new rule definitions were requested by Plaintiffs in the Shea/Lacy case.

The proposed adoption of R9-28-302, General Provisions, significantly expands on the rule of the same name proposed for repeal, the current R9-28-301. The new rule implements A.R.S. §§ 36-2933(B) and 36-2936, statutes which mandate preadmission screening to determine if applicants are eligible for ALTCS institutional level services. This rule lays the groundwork for the PAS program and sets forth procedural steps for utilization of specific PAS instruments described in the 2 following rule adoptions, R9-28-303 and R9-28-304.

The proposed R9-3-303, Preadmission Screening for the Elderly and Physically Disabled (EPD), implements that portion of A.R.S. § 36-2936(A) which calls for a PAS "instrument that assesses the functional, medical, nursing, and social needs of the applicants." The rule describes assessment categories, details the scoring calculations, and indicates points available and weights. Usage of this PAS instrument specifically for the EPD population dates to 1992, when it was determined that unique PAS instruments were needed for EPD applicants and developmentally disabled applicants.

The proposed R9-28-304, Preadmission Screening for the Developmentally Disabled, also implements A.R.S. § 36-2936(A) and does so for developmentally disabled persons in accordance with A.R.S. § 36-559. Similar to the preceding rule, this Section describes assessment categories, details the scoring calculations, and indicates points available and weights. This rule reflects certain age-specific variables concerning risk of institutionalization, in line with differing developmental needs of children and other applicants over their lifetimes.

The proposed adoption of R9-28-305, Reassessments, also expands on the rule of the same name proposed for repeal, the current R9-28-303. The new rule implements that portion of A.R.S. § 36-2936(B) which states that "the Administration shall establish guidelines for the periodic reassessment of each member." The Section sets forth standards for such reassessments and indicates timeframes for conducting them. In the latter instance, the new Section goes beyond the old rule to identify specific exceptions to the usual annual intervals.

Overall, the proposed preadmission screening rules reflect conformity with federal Title XIX (Medicaid) requirements and sufficiency to retain federal monies for ALTCS, as mandated by A.R.S. § 36-2932(Q).

Continued federal funding is crucial to ensure continued ALTCS operations, rather than program suspension and denial of services under the harsh terms of A.R.S. § 36-2958.

5. A showing of good cause why the rules are necessary to promote a statewide interest if the rules will diminish a previous grant of authority of a political subdivision of this state:

Not applicable.

6. The preliminary summary of the economic, small business, and consumer impact:

The overall economic impact of the rules is that the benefits will outweigh the costs.

Small businesses that participate in the ALTCS program as providers of home and community-based services (HCBS) will be assured of continued funding to reimburse those services they provide to ALTCS eligible persons and members.

Certain consumers who are ALTCS-eligible persons and members will continue to receive health care services in the least restrictive medically appropriate setting, thereby enhancing their quality of life.

Finally, the state of Arizona will remain in compliance with the terms and conditions of this Section 115 waiver with the Health Care Financing Administration, thus resulting in continued federal funding for the ALTCS HCBS program.

7. The name and address of agency personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:

Name: Debi Wells, Executive Administrator

Address: AHCCCS Administration
Office of Policy Analysis and Coordination
801 East Jefferson, Mail Drop 4200
Phoenix, Arizona 85034

Telephone: (602) 417-4781
Fax: (602) 256-6756

8. The time, place, and nature of the proceedings for the adoption, amendment, or repeal of the rule; or, if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the rule:

No oral proceeding is scheduled at this time. AHCCCS will hold public hearings in June 1996 in Phoenix and Tucson with a specific time to be announced. A person may submit written comments or request an oral proceeding on the proposed rules. The written comments or request for hearing should be submitted no later than 5 p.m., April 30, 1996, to the person listed above.

9. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:

Not applicable.

10. Incorporations by reference and their location in the rules:
Section 1902(e)(9) of the Social Security Act, October 21, 1993 - R9-28-302.
PAS instrument for the elderly and physically disabled, October 1992 - R9-28-303.
PAS instruments for the developmentally disabled, August 1995 - R9-28-304

11. The full text of the rules follows:

TITLE 9. HEALTH SERVICES

CHAPTER 28. ARIZONA HEALTH CARE COST CONTAINMENT SYSTEM (AHCCCS) ARIZONA LONG-TERM CARE SYSTEM

Article 3. PREADMISSION SCREENING

Section:
R9-28-301. ~~General provisions~~ Definitions
R9-28-302. General Provisions
R9-28-303. ~~Reassessment~~ Preadmission Screening for the Elderly and Physically Disabled
R9-28-304. Preadmission Screening for the Developmentally Disabled
R9-28-305. Reassessments

Article 3. PREADMISSION SCREENING

~~**R9-28-301. General provisions**~~

~~A. To qualify for services under the ALTCS program, an individual shall meet the eligibility criteria as described in Article 4 of this Chapter and require long-term care services at an Intermediate or Skilled level of care as determined through preadmission screening.~~

~~B. Applicants for the ALTCS program shall be assessed using the preadmission screening instrument prescribed in this Section. The preadmission screening instrument shall be a standard form prescribed by the Director and used uniformly for the ALTCS program. The preadmission screening instrument shall consist of a standard set of questions and criteria designed to assess the functional, medical, psychosocial and nursing services needs of the individual.~~

~~C. When determining the medical eligibility of an ALTCS applicant on an original application for benefits and upon reassessment of eligibility, and the applicant exhibits indications of chronic mental illness, the following shall apply:~~
~~1. The determination of medical eligibility for those applicants who score above the preadmission screening eligibility threshold for ALTCS benefits shall be referred to a physician for the determination of medical eligibility.~~
~~2. The reviewing physician to whom the application is referred shall determine whether the applicant is medically eligible for ALTCS benefits based upon the medical care needs of the applicant other than those needs determined by the physician to be attributable to the chronic mental illness.~~

~~D. The preadmission screening instrument shall be used to:~~
~~1. Determine the need for service in a Nursing Facility (NF) Class 1, 2, 3, and 4, or Intermediate Care Facility for the Mentally Retarded (ICF-MR);~~
~~2. Assist in evaluation of appropriate and cost-effective placement for services;~~
~~3. Assist in the assessment and determination of ventilator dependent individuals for inclusion in the special fee-for-service ventilator dependent program; and~~
~~4. Assist in evaluation of the need for home and community based services.~~

~~E. In addition to a preadmission screening, to qualify for ALTCS institutional services an individual shall have certification documenting the individual's need for long-term care services. An individual's need for long-term care nursing facility services shall be certified and recertified in accordance with R9-28-511 by a physician, or a nurse practitioner or clinical nurse specialist who is not an employee of the facility but is working in collaboration with a physician.~~

R9-28-301. Definitions

A. Common definitions. The following words and phrases, in addition to definitions contained in A.R.S. Title 36, Chapter 29, and A.A.C. Title 9, Chapter 28, Article 1, have the following meanings for elderly and physically disabled individuals and for developmentally disabled individuals:
1. "Acute" means an active medical condition having a sudden onset, lasting a short time, and requiring immediate medical intervention.
2. "Chronic" means a medical condition which is always present or occurs periodically or is marked by a long duration.
3. "Constant/constantly" means at least once a day.
4. "Current" means belonging to the present time.
5. "Disruptive behavior" means inappropriate behavior that interferes with the individual's normal activities or the activities of others and requires intervention to stop or interrupt the behavior.
6. "Frequent/frequently" means weekly to every other day.
7. "Functional assessment" means the evaluation of information about the individual's ability to perform activities related to developmental milestones, activities of daily living, communication, and behaviors.
8. "History" means a medical condition which occurred in the past and may or may not have required treatment and is not now active.
9. "Intervention" means therapeutic treatment, including medication, behavior modification, and physical restraint.
10. "Medical assessment" means the evaluation of the individual's medical condition and the individual's need for medical services.
11. Medical/nursing services and treatments" means specific, ongoing medical, psychiatric, or nursing intervention used to actively resolve or prevent deterioration of a medical condition/diagnosis. Durable medical equipment and activities of daily living assistive devices are not considered to be treatment unless the equipment is used specifically and actively to resolve the existing medical condition.
12. "Occasional/occasionally" means less than weekly.
13. "Physical participation" means active participation, not just being passive or cooperative.
14. "Physically lift" means actively bearing some part of the individual's weight during movement or activity and excludes bracing or guiding activity.
15. "Social worker" means an individual with a baccalaureate or master's degree in social work, rehabilitation, counseling, education, sociology, psychology, or other closely related field, or 2 years of case management-related experience.

16. "Special diet" means a diet planned by a dietitian, nutritionist, or nurse such as high fiber, low sodium, or pureed.
17. "Toileting" means the process involved in managing the elimination of urine and feces in the appropriate place(s).
18. "Vision" means the ability to visually perceive objects.

B. Elderly and physically disabled. The following words and phrases, in addition to definitions contained in subsection (A), have the following meanings for elderly and physically disabled individuals only:

1. "Aggression" means physically attacking another, including, but not limited to, throwing objects, punching, biting, pushing, pinching, pulling hair, scratching, and physically threatening behavior.
2. "Bathing" means the process of washing, rinsing, and drying all parts of the body, including the individual's ability to transfer to the tub or shower and the ability to obtain the bath water and/or equipment.
3. "Continence" means the ability to control the discharge of body waste from bladder or bowel.
4. "Dressing" means the physical process of choosing, putting on, securing fasteners, and removing clothing and footwear, including weather appropriate but excluding aesthetic concerns such as matching colors. This includes artificial limbs, braces, and other appliances which are needed daily.
5. "Eating" means the process of putting food and fluids by any means into the digestive system.
6. "Elderly" means age 65 or older.
7. "Emotional and cognitive functioning" means the individual's orientation and mental state, as evidenced by overt behaviors.
8. "Grooming" means the process of tending to one's appearance. This may include, but is not limited to, combing or brushing hair, washing face and hands, shaving, routine nail care, oral hygiene (including denture care), and menstrual care. Grooming does not include aesthetics such as styling hair, skin care, and applying make-up.
9. "Mobility" means the extent of the individual's purposeful movement within the residential environment.
10. "Orientation" means the individual's awareness of one's self in relation to person, place, and time.
11. "Physically disabled" means the inability to do any substantial gainful activity by reason of any medically determinable physical impairment which impairment can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months.
12. "Self-injurious behavior" means self-induced, abusive behavior that is directed toward infliction of immediate physical harm to the body.
13. "Sensory" means of or relating to the senses.
14. "Suicidal behavior" means an act or intent to voluntarily take one's own life.
15. "Transferring" means the individual's ability to move horizontally or vertically between 2 surfaces within the residential environment, excluding transfer for toileting or bathing.
16. "Wandering" means moving about with no rational purpose and with a tendency to go beyond physical parameters of the environment in a manner that may jeopardize safety.

C. Developmentally disabled. The following words and phrases, in addition to definitions contained in subsection (A), have the following meanings for developmentally disabled individuals only:

1. "Aggression" means physically attacking another, including, but not limited to, throwing objects, punching, biting, pushing, pinching, pulling hair, and scratching.
2. "Ambulation" means the ability to walk and includes the quality of the ambulation and the degree of independence.
3. "Associating time with events and actions" means the individual's ability to associate regular events with specific timeframes.
4. "Bathing or showering" means the individual's ability to complete the bathing process including drawing the bath water, washing, rinsing, and drying all parts of the body, and washing the hair.
5. "Caregiver training" means a direct care staff or caregiver trained in special health care procedures normally performed or monitored by a licensed professional, such as a registered nurse. These procedures may include, but are not limited to, ostomy care, positioning for medical necessity, use of adaptive devices, or respiratory services such as suctioning or small volume nebulizer treatments.
6. "Clarity of communication" means the ability to speak in a recognizable language or use a formal symbolic substitution, such as American-Sign Language.
7. "Climbing stairs or ramps" means the individual's ability to move up and down stairs or ramps.
8. "Crawling and standing" means the individual's ability to crawl and stand with or without support.
9. "Developmental milestone" means a measure of an individual's functional abilities including fine and gross motor skills, expressive and receptive language, social and self-help skills, and emotional/affective development.
10. "Dressing" means the ability to put on and remove articles of clothing and does not include braces nor does it reflect the individual's ability to match colors or choose clothing appropriate for the weather.
11. "Eating/drinking" means the process of putting food and fluids by any means into the digestive system.
12. "Expressive verbal communication" means the individual's ability to communicate thoughts verbally with words or sounds.
13. "Food preparation" means the ability to prepare simple meals.
14. "Hand use" means the ability to use the hands, or hand if the individual has only one hand or has the use of only one hand.
15. "Limited/occasional" means a small portion of an entire task or assistance required less than daily.
16. "Personal hygiene" means the process of tending to one's appearance. This may include, but is not limited to, combing or brushing hair, washing face and hands, shaving, routine nail care, oral hygiene (including denture care), and menstrual care. This does not include aesthetics such as styling hair, skin care, and applying make-up.
17. "Physical interruption" means immediate hands-on interaction to stop a behavior.
18. "Remembering instructions and demonstrations" means the individual's ability to recall instructions or demonstrations on how to complete specific tasks.
19. "Resistiveness/rebelliousness" means any inappropriate stubborn or uncooperative behaviors, excluding difficulties with processing of information or reasonable expressions of self-advocacy.

20. "Rolling and sitting" means the individual's ability to roll and sit independently or with the physical support of another person or a device such as a pillow or specially designed chair.
21. "Running or wandering away" means leaving the situation or environment without either notifying or receiving permission from appropriate individuals as would normally be expected.
22. "Self-injurious behavior" means repeated behavior that causes injury and may include, but is not limited to, biting, scratching, putting inappropriate objects into ear, mouth, or nose, repeatedly picking at skin, head slapping, or banging.
23. "Verbal or physical threatening" means any behavior in which an individual verbally or physically threatens to harm self, others, or objects.
24. "Wheelchair mobility" means the individual's mobility using a wheelchair and does not include the ability to transfer to the wheelchair.

R9-28-302. General Provisions

A. To qualify for services described in A.R.S. § 36-2939 under the Arizona Long-term Care System (ALTCS), an individual shall meet the criteria described in Article 4 and shall be determined to require care at the level of a nursing facility or an intermediate care facility for the mentally retarded (ICF-MR) in accordance with the preadmission screening (PAS) process described in this Article.

B. An elderly or physically disabled (EPD) ALTCS individual shall be assessed using the PAS instrument prescribed in R9-28-303 with the exception of physically disabled children less than 6 years of age who shall be assessed using the PAS instrument prescribed in R9-28-304. A developmentally disabled (DD) ALTCS individual shall be assessed using the PAS instrument prescribed in R9-28-304 with the exception of a DD ALTCS individual in a nursing facility who shall be assessed using the PAS instrument prescribed in R9-28-303.

C. The PAS instrument shall be completed by an assessor who is a registered nurse or a social worker, who shall have attended a minimum of 24 hours of classroom training for each type of preadmission screening (EPD and DD. In addition, the assessor shall have intensive oversight/mentoring for the first 30 days of employment, and ongoing oversight for the subsequent period of employment.
   1. For initial assessments of EPD individuals, the PAS instrument shall be completed by a registered nurse or by a social worker.
   2. For initial assessments of DD individuals, the PAS instrument shall be completed by a registered nurse or by a social worker.
   3. For initial assessments on hospitalized individuals, the PAS instrument shall be completed by a registered nurse or a team of a registered nurse and social worker.
   4. For initial assessments and reassessments of individuals who use a ventilator, the PAS instrument shall be completed by a team composed of a registered nurse and a social worker.

D. Individuals classified as ventilator dependent, as specified in Section 1902(e)(9) of the Social Security Act, October 21, 1993, incorporated by reference and on file with the Office of the Secretary of State, shall be determined to require care that can only be provided at a nursing facility or ICF-MR level.

E. Except as provided in subsection (I), the PAS assessment shall be conducted face-to-face with the individual by the assessor. The assessor shall make reasonable efforts to obtain available medical records. In addition, the assessor may obtain information for the PAS assessment from interviews with the individual, parent, guardian, caregivers, or others familiar with the individual's functional or medical conditions.

F. Except as provided in subsections (K) and (L), the PAS assessment determines the individual's current need for long-term care.

G. Using the information described in subsection (E), and using professional judgment based on education, training, and experience, the assessor shall complete the questions on the PAS instrument.

H. Once the PAS instrument is completed, a PAS score is calculated. The calculated PAS score is compared to an established threshold score which is based on statistical analyses of the results of pilot studies completed prior to implementation. The threshold score represents the point at which an individual is determined to require care that can only be provided at the nursing facility or ICF-MR level except as provided in subsection (I). The scoring methodology and threshold scores are specified in R9-28-303 and R9-28-304.

I. The Administration shall request that an AHCCCS physician consultant review an individual's file if:
   1. The EPD individual's score is less than the threshold specified in R9-28-303, but is not less than 56;
   2. The DD individual's score is less than the threshold specified in R9-28-304 but is not less than 38;
   3. Notwithstanding the fact that the individual scores below the threshold, the Administration determines in the course of the preadmission screening that it has reasonable cause to believe that the individual's unique functional abilities or medical condition are such that a physician review is necessary to determine if the items contained in the scored portions of the PAS instrument would indicate that the individual's condition necessitates the level of care provided in a nursing facility or intermediate care facility for the mentally retarded;
   4. The individual has a documented diagnosis as seriously mentally ill as defined in A.R.S. § 36-550, and the Administration determines that the applicant has no medical diagnosis that could necessitate the level of care provided in a nursing facility or intermediate care facility for the mentally retarded. This review can only result in a determination of ineligibility if the physician determines that despite a score at or above the threshold the applicant does not meet the requirements of A.R.S. § 36-2936.

J. When conducting the review, the physician shall use the scored factors set out in the PAS instrument to determine whether the individual has a nonpsychiatric medical condition or has a developmental disability that, by itself or in combination with other medical conditions, necessitates the level of care which is provided in a nursing facility or intermediate care facility for the mentally retarded. The physician shall review the PAS instrument and available medical records. If the physician is unable to determine eligibility from the PAS instrument and available medical records, the physician may conduct a face-to-face review with the individual or contact others familiar with the individual's needs, including primary care physicians or other caregivers. If the reviewing physician recommends overturning the eligibility determination of the initial assessor, the physician shall state the reasons for that decision in the comments section of the instrument.

K. For initial assessments of individuals who are in a hospital or an intensive rehabilitation facility and for whom discharge is planned within 7 days, a PAS assessment shall be performed and medical eligibility determined. For individuals where discharge is not planned within 7 days, a PAS assessment shall not be done. Such individuals shall be denied for ALTCS. Their records shall be forwarded to the Department of Economic

Security for an AHCCCS acute care eligibility determination after the Administration determines whether their income is equal to or less than the Supplemental Security Benefit amount in effect, or shall be evaluated by the Administration for an acute care only determination, whichever is appropriate, depending on the age and disability of the individuals.

L. Upon request, the Administration shall conduct a PAS assessment to determine whether an individual, who has been in a nursing or ICF-MR facility within the 3 months prior to the month of application, is entitled to receive retroactive benefits for that prior 3-month period.

M. Upon request, the Administration shall conduct a PAS assessment to determine whether a deceased individual, who had been in a nursing facility or ICF-MR during the months covered by the application, would have been eligible to receive ALTCS benefits for those months.

~~R9-28-303. Reassessment~~

~~A. All ALTCS members shall be reassessed to determine continued need for ALTCS services. The criteria for continued qualification for ALTCS services shall be the same as those used for initial preadmission screening.~~

~~B. Reassessment may occur in any of the following forms:~~

~~1. Audit of the preadmisssion screening results by the Administration;~~

~~2. Periodic reassessment by the Administration;~~

~~3. Inspection of care conducted by the Administration. This applies only to care provided in ICF-MRs and IMDs.~~

~~C. All ALTCS members residing in a nursing facility shall receive at a minimum a quarterly resident assessment.~~

R9-28-303. Preadmission Screening for the Elderly and Physically Disabled

A. The PAS instrument for the elderly and physically disabled includes 4 major categories: intake information, functional assessment, emotional and cognitive functioning, and medical assessment.

1. The intake information category solicits information on the individual's demographic background. No components of the intake information category are included in the calculated PAS score.

2. The functional assessment category solicits information on the individual's:

a. Need for assistance with activities of daily living, including bathing, dressing, grooming, eating, mobility, transfer, and toileting in the residential environment or other routine setting;

b. Communication and sensory skills, including hearing, expressive communication, and vision; and

c. Continence, including bowel and bladder functioning. A history of transitory incontinence caused by an acute or temporary condition or illness shall not be considered for rating.

d. Some questions in the activities of daily living, communication and sensory skills, and continence sections are scored, as indicated in subsection (C), under the Functional Assessment matrices.

3. The emotional and cognitive functioning category solicits information on the individual's:

a. Orientation to person, place, and time; and

b. Behavior, including wandering, self-injurious behavior, aggression, suicidal behavior, and disruptive behavior. Some questions in the behavior section refer to intervention and medical attention. Intervention is therapeutic treatment, including the use of medication and physical restraints to control the behavior. Intervention may be formal or informal and includes actions taken by friends/family to control the behavior. Medical attention is an examination by a physician and/or primary care provider and treatment if necessary.

c. All questions in the orientation and behavior sections are scored, as indicated in subsection (C), under the Functional Assessment matrices.

4. The medical assessment category solicits information on the individual's:

a. Medical conditions and the medical condition's impact on the individual's ability to independently perform activities of daily living or whether such conditions require medical or nursing treatments;

b. Medications, treatments, and allergies; and

c. Specific services and treatments that the individual receives or needs and the frequency of those services and treatments.

d. Additional information captured in the medical assessment category includes a description of the individual's physical characteristics, hospital history, ventilator dependency, and current placement.

e. Some questions in the medical conditions and services and treatments sections are scored, as indicated in subsection (C), under the Medical Assessment matrices.

B. The PAS instrument for the elderly and physically disabled, October 1992, is incorporated by reference and is on file with the Office of the Secretary of State. Once the PAS instrument is completed, the answers selected by the assessor are used to calculate 3 scores: a functional score, a medical score, and a total score.

1. Functional score.

a. The functional score is based on answers to scored questions in the functional assessment and emotional and cognitive functioning categories. Each answer is assigned a certain number of points. For each scored question, the number of points is multiplied by a weighted numerical value, resulting in a weighted score for each question. The weighted numerical values are based on statistical analyses of pilot study results and reflect the importance of information on the PAS instrument in predicting whether the individual meets the criteria of A.R.S. § 36-2936.

b. It is the sum of the weighted scores that equals the functional score. The weighted score per question can range from 0 to 15. The maximum functional score attainable by an individual is 141. There is no minimum functional score that needs to be attained except as prescribed in subsections (B)(3)(b) and (3)(c).

2. Medical score.

a. The EPD population is divided into 2 groups for purposes of calculating the medical score. The primary distinction between the 2 groups is based on the differences in medical needs.

b. Group 1 includes individuals diagnosed with paralysis, head trauma, multiple sclerosis, amyotrophic lateral sclerosis, or Parkinson's disease which either impacts the individual's ability to independently perform activities of daily living or requires nursing services or treatments.

c. Group 2 includes individuals diagnosed with Alzheimer's disease, dementia, or an organic brain syndrome which either impacts the individual's ability to independently perform activities of daily living or

requires nursing services and treatments. If an individual does not meet 1 of these criteria, the individual is considered to be in Group 1.

d. Scoring methodology: Group individuals
   i. The medical score is based on information obtained from the medical conditions and the services and treatments sections of the PAS instrument.
   ii. Each response to a scored item in the medical assessment category is assigned a certain number of points, ranging from 0 to 4 points per item.
   iii. It is the sum of the points that equals the medical score, with a maximum score of 63. There is no minimum medical score that needs to be attained, except as prescribed in subsection (B)(3)(b).

e. Group 2 individuals.
   i. The medical score is based on information obtained from the services and treatments section of the PAS instrument.
   ii. Each response to a scored item in the medical assessment category is assigned a certain number of points, ranging from 0 to 16 points per item.
   iii. It is the sum of the points that equals the medical score, with a maximum score of 42. There is no minimum medical score that needs to be attained, except as prescribed in subsection (B)(3)(c).

3. The calculation of the total score is equal to the sum of the functional and medical scores.
   a. The total score is compared to an established threshold score. For all EPD individuals, regardless of whether the individual is in Group 1 or in Group 2, the threshold score is 60. Thus, an individual with a total score equal to or greater than 60 is deemed to require care that can only be provided at the nursing facility or ICF-MR level.
   b. If an individual is in Group 1 and has a total score less than 60, a functional score equal to or greater than 30 and a medical score equal to or greater than 13, the individual also is deemed to require care that can only be provided at the nursing facility or ICF-MR level.
   c. If an individual is in Group 2 and has a total score less than 60:
      i. A functional score equal to or greater than 30 and the weighted score from the orientation section is equal to or greater than 5, the individual also is deemed to require care that can only be provided at the nursing facility or ICF-MR level; or
      ii. A functional score equal to or greater than 30 and the individual is assigned at least 2 points for any 1 question in the behavior section, the individual also is deemed to require care that can only be provided at the nursing facility or ICF-MR level.

C. The following tables represent the number of points available and the weight for each scored question.

Functional Assessment	# of Points Available Per Question (P)	Weight (W)	Range of Possible Weighted Score per Question[1] (P)x(W)
Activities of Daily Living Section			
Bathing, Dressing, Grooming, Mobility, Toileting	0-5	3.00	0-15
Eating	0-6	2.50	0-15
Transfer	0-4	3.75	0-15
Continence Section			
Bowel	0-2	0	0
	3	.167	.5
Bladder	0-4	0.50	0-2
Sensory Section			
Vision	0-1	0	0
	2	1.75	3.5
	3	1.167	3.5
Orientation Section			
Person, Place, Time	0-3	1.00	0-3

1. The lowest value in the range of points available per question in the functional assessment category indicates minimal or no impairment and, conversely, the highest value indicates severe impairment.

Functional Assessment (continued)	# of Points Available Per Question (P)	Weight (W)	Range of Possible Weighted Score Per Question[1] (P)x(W)
Emotional/Cognitive Behavior Section			
Aggression, Self-Injurious, Suicidal, Wandering	0-3	1.00	0-3
Disruptive	0-3	3.00	0-9
Medical Assessment Group 1	**# of Points Available Per Question[2] (P)**	**Weight (W)**	**Range of Possible Weighted Score Per Question[1] (P)x(W)**
Medical Conditions Section			
Paralysis/Sclerosis	0-1	3.00	0 - 3
Alzheimers/OBS/Dementia	0-1	3.50	0 - 3.5
Services and Treatments Section			
Physical Therapy, Occupational Therapy, Speech Therapy	0-1	0.50	0 - 1.5
Suctioning, Oxygen, Small Volume Nebulizer, Tracheostomy Care, Postural Drainage, Respiratory Therapy	0-1	1.5	0 or 1.5

1. The lowest value in the range of points available per question in the functional assessment category indicates minimal or no impairment and, conversely, the highest value indicates severe impairment.

2. The lowest value in the range of points available per question in the medical assessment category, 0, indicates that the individual does not have the medical condition or does not need or receive the medical or nursing service treatment. Conversely, the highest value, 1, indicates that the individual does have the medical condition or does need or receive the medical or nursing service or treatment.

Medical Assessment Group 1 (continued)	# of Points Available per Question (P)	Weight (W)	Range of Possible Weighted Score Per Question[1] (P)x(W)
Services and Treatments Section (continued)			
Drug Regulation	0-1	2.00	0 or 2
Decubitus Care, Wound Care, Ostomy Care, Feedings-Tube and/or Parenteral, Catheter Care, Other Ostomy Care, Dialysis, Fluid Intake/Output	0-1	3.00	0 or 3
Teaching/Training Program, Bowel/Bladder Program, Range of Motion, Other Rehabilitative Nursing, Restraints	0-1	4.00	0 or 4
Medical Assessment Group 2	**# of Points Available per Question (P)**	**Weight (W)**	**Range of Possible Weighted Score Per Question[1] (W)**
Drug Regulation	0-1	2.00	0 or 2
Teaching/Training Program, Bowel/Bladder Program, Range of Motion, Other Rehabilitative Nursing	0-1	6.00	0 or 6
Restraints (Physical/Chemical)	0-1	16.00	0 or 16

1. The lowest value in the range of points available per question in the medical assessment category, 0, indicates that the individual does not have the medical condition or does not need or receive the medical or nursing service treatment. Conversely, the highest value, 1, indicates that the individual does have the medical condition or does need or receive the medical or nursing service or treatment.

R9-28-304. Preadmission Screening of the Developmentally Disabled

A. The Administration shall conduct preadmission screening of developmentally disabled individuals using one of 4 PAS instruments specifically designed to assess individuals in the following age groups: individuals 12 years of age and older; children 6 to 11 years of age; children 3 to 5 years of age; and children under 3 years of age.

1. The PAS instruments for developmentally disabled individuals include 3 major categories: intake information, functional assessment, and medical assessment.

a. The intake information category solicits information on the individual's demographic background. No components of the intake information category are scored.

b. The functional assessment category differs by age group, as indicated in subsection (A)(1)(c) through (8) below:

c. For individuals 12 years of age and older, the functional assessment category solicits information on the individual's:

i. Need for assistance with independent living skills, including hand use, ambulation, wheelchair mobility, transfer, eating/drinking, dressing, personal hygiene, bathing or showering, food preparation, community mobility, and toileting.

ii. Communication skills and cognitiveabilities, including expressive verbal communication, clarity of communication, associating time with events and actions, and remembering instructions and demonstrations;

iii. Behavior, including aggression, verbal, or physical threatening behavior, self injurious behavior and resistive/rebellious behavior.

iv. All questions in the behavior section are scored for individuals 12 years of age and older. Some questions in the independent living skills, and communication skills and cognitive abilities sections are scored, as indicated in subsection (C), under the Functional Assessment matrix.

d. For individuals 6 through 11 years of age, the functional assessment category solicits information on the individual's:

i. Need for assistance with independent living skills, including rolling and sitting, crawling and standing, ambulation, climbing stairs or ramps, wheelchair mobility, dressing, personal hygiene, bathing or showering and toileting, level of bladder control, and orientation to familiar settings.

ii. Communication, including expressive verbal communication and clarity of communication.

iii. Behavior, including aggression, verbal or physical threatening behavior, self-injurious behavior, running or wandering away, and disruptive behavior.

iv. All questions in the communication section are scored for individuals 6 years of age up to 12 years of age. Some questions in the independent living skills and behavior sections are scored, as indicated in subsection (C), under the Functional Assessment matrices.

e. For individuals 3 through 5 years of age, the functional assessment category solicits information on the individual's:

i. Status with respect to a series of developmental milestones, including 50 factors that measure the individual's degree of functional growth;

ii. Need for assistance with independent living skills, including toileting and dressing, and the individual's orientation to familiar settings.

iii. Communication, including clarity of communication;

iv. Behavior, including aggression, verbal or physical threatening behavior, and self-injurious behavior;

v. All questions in the developmental milestones and behavior section are scored for individuals 3 through 5 years of age. Some questions in the independent living skills section are scored, as indicated in subsection (C), under the Functional Assessment matrix. No questions in the communication section are scored.

f. Six months of age up to 3 years of age.

i. For individuals 6 months of age and up to 3 years of age, the functional assessment category solicits information on the individual's degree of functional growth using age specific factors.

ii. All questions regarding specific factors measuring the degree of functional growth are scored for individuals 6 months of age up to 3 years of age.

g. For individuals less than 6 months of age, a functional assessment is not completed.

h. The medical assessment category solicits information on the individual's:

i. Medical conditions;

ii. Specific services and treatments the individual receives or needs and the frequency of those services and treatments; and

iii. Current medications and treatments, medical stability, sensory functioning, and physical measurements.

iv. Additional information captured in the medical assessment category includes the individual's current placement, ventilator dependency, and developmentally disabled status, as determined by the Department of Economic Security.

i. Medical assessment scoring.

i. For individuals 12 years of age and older, some questions in the medical conditions section are scored, as indicated in subsection (C), under the Medical Assessment matrix.

ii. For individuals 6 years of age up to 12 years of age, some questions in the medical conditions section are scored, as indicated in subsection (C), under the Medical Assessment matrix.

iii. For individuals 3 years of age up to 6 years of age, some questions in the medical conditions and medical stability sections are scored, as indicated in subsection (C), under the Medical Assessment matrix.

iv. For individuals 6 months of age up to 3 years of age, some questions in the medical conditions, services and treatments and medical stability sections are scored, as indicated in subsection C, under the Medical Assessment matrix.

v. For individuals less than 6 months of age, a medical assessment is completed; however, no questions are scored. These individuals are

referred for physician review.

B. The PAS instruments for the developmentally disabled, August 1995, are incorporated by reference and are on file with the Office of the Secretary of State. When the PAS instrument is completed, the answers selected by the assessor are used to calculate 3 scores: a functional score, a medical score, and a total score.

1. Functional score.
   a. The functional score is based on answers to scored questions in the functional assessment category. Each answer is assigned a certain number of points. For each scored question, the number of points is multiplied by a weighted numerical value resulting in a weighted score for each question. The weighted numerical values are based on statistical analyses of the results of pilot studies completed prior to implementation and reflect the importance of information on the PAS instrument in predicting whether the individual meets the criteria of A.R.S. § 36-2936.
   b. It is the sum of the weighted scores that equals the functional score. The range of weighted score per question and maximum functional score for each age group is presented below:

AGE GROUP	RANGE FOR WEIGHTED SCORE PER QUESTION	MAXIMUM FUNCTIONAL SCORE ATTAINABLE
12+	0 - 11.2	118.9
6 - 11	0 -24.0	127.0
3 -5	0 - 15.6	78.2
0 - 2	0 - 1.4	70.0

   c. There is no minimum functional score that needs to be attained.
2. Medical score.
   a. The medical score is based on information obtained in the medical assessment category. Each response to a scored item is assigned a certain number of points. It is the sum of the points that equals the medical score. The range of points per item and the maximum medical score attainable by an individual is presented below:

AGE GROUP	RANGE OF POINTS PER ITEM	MAXIMUM MEDICAL SCORE ATTAINABLE
12+	0 - 20.6	21.4
6 - 11	0 -2.5	5.0
3 -5	0 - 14.8	23.0
0 - 2	0 - 7.0	44.3

   b. There is no minimum medical score that needs to be attained.
3. The calculation of the total score is equal to the sum of the functional and medical scores.
   a. The total score is compared to an established threshold score. For all DD individuals the threshold score is 40. Thus, an individual with a total score equal to or greater than 40 is deemed to require care that can only be provided at the nursing facility or ICF-MR level.

C. The following tables represent the number of points available and the weight for each scored question.

AGE GROUP 12 AND OLDER Functional Assessment	# of Points Available Per Question[2]	Weight	Scale[1]	
			If total # of points for section is[2]	Then weight is
Independent Living Skills Section				
Hand Use, Food Preparation	0-3	3.50	N/A	N/A
Ambulation, Eating, Dressing, Personal Hygiene	0-4	2.80	N/A	N/A
Toileting	0-4	1.50	N/A	N/A
Communicative Skills and Cognitive Abilities Section				
Associating Time, Remembering Instructions	0-3	0.50	N/A	N/A
Behavior Section				
Aggression, Threatening, Self Injurious	0-4	2.8	N/A	N/A
Resistive	0-3	3.5	N/A	N/A

[1] Certain scored questions do not have a weight and thus are not to be multiplied by the number of points. For these questions, an N/A is shown in the weight column and the information in the scale column is applicable. When using a scale, the number of points for the section equals the sum of the number of points for the scored questions in that section.

[2] The lowest value in the range of points available per question in the functional assessment category indicates minimal to no impairment and, conversely, the highest value indicates severe impairment.

AGE GROUP 12 AND OLDER Medical Assessment	# of Points Available Per Question[3]	Weight	Scale[1]	
			If total # of points for section is[3]	Then weight is
Medical Conditions Section				
Cerebral Palsy, Epilepsy	0-1	0.40	N/A	N/A
Moderate, Severe, Profound Mental Retardation	0-1	20.60	N/A	N/A

[1] Certain scored questions do not have a weight and thus are not to be multiplied by the number of points. For these questions, an N/A is shown in the weight column and the information in the scale column is applicable. When using a scale, the number of points for the section equals the sum of the number of points for the scored questions in that section.

[3] The lowest value in the range of points available per question in the medical assessment category, 0, indicates that the individual does not have the medical condition or does not need or receive the medical or nursing service or treatment. Conversely, the highest value, 1, indicates that the individual does have the medical condition or does need or receive the medical or nursing service or treatment.

AGE GROUP 6-11 Functional Assessment	# of Points Available Per Question[2]	Weight	Scale[1]	
			If total # of points for section is[2]	Then weight is
Independent Living Skills Section				
Climbing Stairs, Wheelchair Mobility, Bladder Control	0-3	1.875	N/A	N/A
Ambulation, Dressing, Bathing, Toileting	0-4	1.50	N/A	N/A
Crawling/Standing	0-5	1.14	N/A	N/A
Rolling/Sitting	0-8	0.833	N/A	N/A
Communication Section				
Clarity	0-4	1.50	N/A	N/A
Expressive Communication	0-5	4.25	N/A	N/A
Behavior Section				
Wandering	0-4	6.00	N/A	N/A
Disruptive	0-3	7.50	N/A	N/A

[1] Certain scored questions do not have a weight and thus are not to be multiplied by the number of points. For these questions, an N/A is shown in the weight column and the information in the scale column is applicable. When using a scale, the number of points for the section equals the sum of the number of points for the scored questions in that section.

[2] The lowest value in the range of points available per question in the functional assessment category indicates minimal to no impairment and, conversely, the highest value indicates severe impairment.

AGE GROUP 6 - 11 Medical Assessment	# of Points Available Per Question[3]	Weight	Scale[1]	
			If total # of points for section is[3]	Then weight is
Medical Conditions Section				
Cerebral Palsy, Epilepsy	0-1	2.50	N/A	N/A
AGE GROUP 3-5 **Functional Assessment**	**# of Points Available Per Question[2]**	**Weight**	**Scale[1]**	
			If total # of points for section is[2]	**Then weight is**
Developmental Milestones Section				
Factors Measuring an Individual's Degree of Functional Growth	0-1	0.70	N/A	N/A
Independent Living Skills Section				
Toileting, Dressing	0-4	3.90	N/A	N/A
Behavior Section				
Aggression, Threatening, Self Injurious	0-4	1.00	N/A	N/A

[1] Certain scored questions do not have a weight and thus are not to be multiplied by the number of points. For these questions, an N/A is shown in the weight column and the information in the scale column is applicable. When using a scale, the number of points for the section equals the sum of the number of points for the scored questions in that section.

[2] The lowest value in the range of points available per question in the functional assessment category indicates minimal to no impairment and, conversely, the highest value indicates severe impairment.

[3] The lowest value in the range of points available per question in the medical assessment category, 0, indicates that the individual does not have the medical condition or does not need or receive the medical or nursing service or treatment. Conversely, the highest value, 1, indicates that the individual does have the medical condition or does need or receive the medical or nursing service or treatment.

AGE GROUP 3 - 5 Medical Assessment	# of Points Available Per Question[3]	Weight	Scale[1]	
			If total # of points for section is[3]	Then weight is
Medical Conditions Section				
Moderate, Severe, Profound Mental Retardation	0-1	14.80	N/A	N/A
Medical Stability Section				
Direct Caregiver Required, Special Diet	0-1	4.10	N/A	N/A

[1] Certain scored questions do not have a weight and thus are not to be multiplied by the number of points. For these questions, an N/A is shown in the weight column and the information in the scale column is applicable. When using a scale, the number of points for the section equals the sum of the number of points for the scored questions in that section.

[3] The lowest value in the range of points available per question in the medical assessment category, 0, indicates that the individual does not have the medical condition or does not need or receive the medical or nursing service or treatment. Conversely, the highest value, 1, indicates that the individual does have the medical condition or does need or receive the medical or nursing service or treatment.

AGE GROUP 0-2 Functional Assessment	# of Points Available Per Question[2]	Weight	Scale[1]	
			If total # of points for section is[2]	Then weight is
Developmental Milestones Section				
Factors Measuring an Individual's Degree of Functional Growth	0-1	1.40	N/A	N/A

AGE GROUP 0-2 Medical Assessment	# of Points Available Per Question[3]	Weight	Scale[1]	
			If total # of points for section is[3]	Then weight is
Services and Treatments Section				
Non-Bladder/Bowel Ostomy, Tube Feeding, Oxygen	0-1	6.10	N/A	N/A
Medical Conditions Section				
Any Mental Retardation, Epilepsy, Cerebral Palsy	0-1	7.00	N/A	N/A
Medical Stability Section				
Trained Direct Caregiver, Special Diet or a Minimum of Two Hospitalizations	0-1	5.00	N/A	N/A

[1] Certain scored questions do not have a weight and thus are not to be multiplied by the number of points. For these questions, an N/A is shown in the weight column and the information in the scale column is applicable. When using a scale, the number of points for the section equals the sum of the number of points for the scored questions in that section.

[2] The lowest value in the range of points available per question in the functional assessment category indicates minimal to no impairment and, conversely, the highest value indicates severe impairment.

[3] The lowest value in the range of points available per question in the medical assessment category, 0, indicates that the individual does not have the medical condition or does not need or receive the medical or nursing service or treatment. Conversely, the highest value, 1, indicates that the individual does have the medical condition or does need or receive the medical or nursing service or treatment.

R9-28-305. Reassessments

A. All ALTCS members shall be reassessed to determine continued need for ALTCS services. The criteria for continued qualification for ALTCS services shall be the same as those used for the initial preadmission screening as prescribed in R9-28-302, R9-28-303, and R9-28-304.

B. Reassessments shall be completed by 1 or more individuals as provided in R9-28-302(C).

C. Reassessment by the Administration shall occur as follows:

1. Annually, except in the following circumstances:
   a. Elderly and physically disabled (EPD) individuals 80 years of age and older who have been ALTCS eligible for 2 consecutive years shall be reassessed every other year;
   b. EPD individuals diagnosed with Alzheimer's disease, dementia, or an organic brain syndrome and who have been ALTCS eligible for 2 consecutive years shall be reassessed every other year.
   c. In addition, the Administration may identify other EPD and developmentally disabled population groups within the ALTCS program that would have a reassessment period greater than 1 year;
2. In connection with routine audit of the preadmission screening by the Administration in which errors affecting eligibility are discovered;
3. In connection with an audit of the preadmission screening requested by a nursing facility, program contractor, case manager, or other party where the Administration has determined that continued eligibility is uncertain due to substantial evidence of a change in the member's circumstances or error in the preadmission screening;
4. At the request of the Administration's physician consultant.

NOTICE OF PROPOSED RULEMAKING

TITLE 14. PUBLIC SERVICE CORPORATIONS; CORPORATIONS AND ASSOCIATIONS; SECURITIES REGULATION

CHAPTER 2. CORPORATION COMMISSION FIXED UTILITIES

PREAMBLE

1. **Sections Affected**

Sections Affected	Rulemaking Action
R14-2-1201	New Section
R14-2-1202	New Section
R14-2-1203	New Section
R14-2-1204	New Section
R14-2-1205	New Section
R14-2-1206	New Section
R14-2-1207	New Section
R14-2-1208	New Section
R14-2-1209	New Section
R14-2-1210	New Section
R14-2-1211	New Section
R14-2-1212	New Section
R14-2-1213	New Section
R14-2-1214	New Section
R14-2-1215	New Section
R14-2-1216	New Section
R14-2-1217	New Section

2. **The specific authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):**

Authorizing statute: A.R.S. §§ 40-202, 40-203, 40-204, 40-250, 40-321, 40-322, 40-361, 40-365, 40-367, 40-424, 40-425, and the Arizona Constitution, Article 15 §§ 1, 2, 3, 4, 6, 16, and 19.

3. **The name and address of agency personnel with whom persons may communicate regarding the rulemaking:**

Name: Paul Bullis, Chief Counsel, Legal Division

Address: Corporation Commisssion
1200 West Washington
Phoenix, Arizona 85007

Telephone: (602) 542-3402
Fax: (602) 542-4870

4. An explanation of the rule, including the agency's reasons for initiating the rule:

The proposed rule establishes the Arizona Universal Service Fund (AUSF) in compliance with applicable rules for competitive telecommunications services set forth in R14-2-1101 through R14-2-1115, in particular R14-2-1113. The AUSF is the funding mechanism through which surcharges are collected from consumers of telecommunications services and support is paid to eligible providers of basic local telephone exchange service in areas where the cost of providing the service exceeds the rate authorized to be charged for the service.

5. A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

Not applicable.

6. The preliminary summary of the economic, small business, and consumer impact:

Rules for competitive telecommunications services require the establishment of a Universal Service Fund to assure the continued availability of basic telephone service at reasonable rates. In compliance, the proposed rule establishes the Arizona Universal Service Fund (AUSF) to collect and disburse money to maintain universal telephone service. The proposed rule will affect providers and users of telecommunications services in Arizona.

7. The name and address of agency personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:

Name:	Gary Yaquinto
Address:	Corporation Commission 1200 West Washington Phoenix, Arizona 85007
Telephone:	(602) 542-4251
Fax:	(602) 542-2129

8. The time, place, and nature of the proceedings for the adoption, amendment, or repeal of the rule or, if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rule:

Date:	February 15, 1996
Time:	10 a.m.
Location:	Corporation Commission 1200 West Washington Phoenix, Arizona
Nature:	Public Comment
Date:	February 16, 1996
Time:	10 a.m.
Location:	Corporation Commission 402 West Congress Tucson, Arizona
Nature:	Public Comment
Date:	February 23, 1996
Time:	11 a.m.
Location:	Council Chambers 211 West Aspen Flagstaff, Arizona
Nature:	Public Comment

9. Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:

Not applicable.

10. Incorporations by reference and their location in the rules:

Not applicable.

11. The full text of the rules follows:

TITLE 14: PUBLIC SERVICE CORPORATIONS; CORPORATIONS AND ASSOCIATIONS; SECURITIES REGULATION

CHAPTER 2. CORPORATION COMMISSION FIXED UTILITIES

Article 12. ARIZONA UNIVERSAL SERVICE FUND

Section

R14-2-1201. Definitions
R14-2-1202. Calculation of AUSF Support
R14-2-1203. Request for AUSF Support
R14-2-1204. Funding of the AUSF
R14-2-1205. Calculation of Surcharges
R14-2-1206. Implementation
R14-2-1207. Calculation of Monthly Payments and the Associated Collections
R14-2-1208. Monthly AUSF Disbursements
R14-2-1209. Procedures for Handling AUSF Rate Changes
R14-2-1210. Statement of Participation of All Telecommunications Service Providers in the AUSF
R14-2-1211. Duties and Responsibilities of the AUSF Administrator
R14-2-1212. Interim Administrator
R14-2-1213. Guidelines for Auditing the AUSF
R14-2-1214. Enforcement of Collection of Delinquent AUSF Amounts
R14-2-1215. AUSF Annual Report
R14-2-1216. Review Process
R14-2-1217. Supersession of Existing USF Mechanism

Article 12. ARIZONA UNIVERSAL SERVICE FUND

R14-2-1201. Definitions.

In this Article, unless the context otherwise requires, the following definitions shall apply:

1. "Administrator" is the person designated pursuant to R14-2-1212 to administer the AUSF and perform the functions required by this Article.
2. "Arizona Corporation Commission" or "Commission" is the regulatory agency of the state of Arizona having jurisdiction over public service corporations operating in Arizona.
3. "Arizona Universal Service Fund" or "AUSF" is the funding mechanism established by this Article through which surcharges are collected and support paid in accordance with this Article.
4. "AUSF Support" is the amount of money, calculated pursuant to this Article, which a provider of basic local telephone exchange service is eligible to receive from the AUSF pursuant to this Article.
5. "AUSF Support Area" is the geographic area for which a local exchange carrier's eligibility to receive AUSF support is calculated.
6. "Basic local exchange telephone service" is telephone service that provides the following features:
   a. Access to 1-party residential service with a voice grade line;
   b. Access to touchtone capabilities;
   c. Access to an interexchange carrier;
   d. Access to emergency services, including but not limited to emergency 911;
   e. Access to directory assistance service;
   f. Access to operator service;
   g. Access to a white page or similar directory listing; and
   h. Access to telephone relay systems for the hearing and speech impaired.
7. "Benchmark rates" for a telecommunications services provider are those rates approved by the Commission for that provider for basic local exchange telephone service, plus the Customer Access Line Charge approved by the Federal Communications Commission.
8. "Commercial Mobile Radio Service" is any radio communication service carried on between mobile stations or receivers and land stations, or by mobile stations communicating among themselves, that is provided for profit, and that makes available to the public service that is connected to the public switched network.
9. "Conversion Factor" is a multiplier that is used to convert a quantity of interconnecting trunks into equivalent access lines, for the sole purpose of developing Category 1 surcharges. The value of the Conversion Factor shall be 10 until completion of the review provided for in R14-2-1216.
10. "Interconnecting Trunk" is a 1-way or 2-way voice grade or equivalent voice grade switched message transmission channel furnished by a local switched access provider to a provider of wireless services to interconnect the provider of wireless services to the public switched network.
11. "Intermediate Local Exchange Carriers" are incumbent providers of basic local exchange telephone service with more than 20,000 access lines but fewer than 200,000 access lines in Arizona.
12. "Large Local Exchange Carriers" are incumbent providers of basic local exchange telephone service serving 200,000 or more access lines in Arizona.
13. "Small Local Exchange Carriers" are incumbent providers of basic local exchange telephone service with 20,000 or fewer access lines in Arizona.
14. "Total Service Long-run Incremental Cost" is the total additional cost incurred by a telecommunications company to produce the entire quantity of a service, given that the telecommunications company already provides all of its other services. Total Service Long-run Incremental Cost is based on the least cost, most efficient technology that is capable of being implemented at the time the decision to provide the service is made.
15. "U.S. Census Blocks" are geographic areas defined by the U.S. Department of Commerce. The areas, which define the way in which census data is aggregated, generally contain between 250 and 550 housing units.

R14-2-1202. Calculation of AUSF Support

A. The amount of AUSF support to which a provider of basic local exchange telephone service is eligible for a given AUSF support area shall be based upon the difference between the benchmark rates for basic local exchange telephone service provided by the carrier and the appropriate cost to provide basic local exchange telephone service as determined by the Commission, net of any universal service support from federal sources.

B. For a small local exchange carrier, the AUSF support area shall include all exchanges served by the local exchange carrier in Arizona. The appropriate cost of providing basic local exchange telephone service for purposes of determining AUSF

support for a small local exchange carrier shall be the embedded cost of the incumbent provider.

C. For an intermediate local exchange carrier, the AUSF support area shall be either all exchanges in Arizona served by that carrier or such other support area as may be approved by the Commission. The appropriate cost of providing basic local exchange telephone service for purposes of determining AUSF support for an intermediate local exchange carrier shall be the embedded cost of the incumbent provider. For any request for AUSF support by an intermediate local exchange carrier filed more than 3 years after the effective date of this Article, the AUSF support area shall be geographic areas as determined by the Commission, and the appropriate cost of providing basic local exchange telephone service for purposes of determining AUSF support shall be the Total Service Long Run Incremental Cost of the incumbent provider. In the event that the FCC adopts a somewhat different forward-looking costing methodology and/or a different geographic study/support area for the federal universal service fund program, a local exchange carrier may request a waiver from this rule in order to utilize the same cost study methodology and/or geographic study areas in both jurisdictions.

D. For a large local exchange carrier, the AUSF support area shall be U.S. census block groups, and the appropriate cost of providing basic local exchange telephone service for purposes of determining AUSF support shall be the Total Service Long-run Incremental Cost. In the event that the FCC adopts a somewhat different forward-looking costing methodology and/or a different geographic study/support area for the federal universal service fund program, a local exchange carrier may request a waiver from this rule in order to utilize the same cost study methodology and/or geographic study areas in both jurisdictions. Any request for AUSF support by a large local exchange carrier shall include a Total Service Long-run Incremental Cost study, or cost study based on FCC-adopted methodology, of basic local exchange service. The cost study shall be developed and presented in a manner that identifies the cost for the individual support areas for which AUSF funding is being requested.

R14-2-1203. Request for AUSF Support

A provider of basic local exchange telephone service may request that the Commission authorize AUSF support with a filing under R14-2-103 or other method as the Commission may prescribe, and upon compliance with all applicable rules set forth in R14-2-1101 through R14-2-1115. A request for AUSF support shall include a statement describing the need for such funding. The Commission shall determine the appropriate cost of providing basic local exchange service for each AUSF support area for which AUSF support is requested and shall calculate in accordance with R14-2-1202 the amount of AUSF support, if any, to which the applicant is entitled.

R14-2-1204. Funding of the AUSF

A. The AUSF shall be funded in accordance with this Article by all telecommunications service providers that interconnect to the public switched network. Within 30 days of the effective date of this Article, and thereafter on or before October 1 of each year, each telecommunications provider shall provide to the Administrator a list of all other telecommunications providers that interconnect to its facilities or network.

B. The AUSF shall be funded equally by toll and local customers of the providers of telecommunications services and shall be assessed in the following manner:

1. Category 1 - Providers of basic local exchange service, as discussed in R14-2-1204(B)(1)(a), and other service providers as required under R14-2-1204(B)(1)(a)(i) or permitted under R14-2-1204(B)(3)(b), shall be considered providers of Category 1 service.
   a. One-half of the AUSF funding requirement will be collected through Category 1 service providers. Category 1 AUSF assessment will be based upon access lines and interconnecting trunks and assessed by providers of local switched access as either an access line or interconnecting trunk surcharge. The "per access line" surcharge to be in place during a given year will be calculated by the Administrator using the total number of access lines and equivalent access lines deriving from interconnecting trunks that were in service for all Category 1 service providers on October 1 of the previous year. Access lines shall include business and residence lines, public access lines, and other identifiable access lines. All wireless providers including but not limited to paging and other Commercial Mobile Radio Service providers, that interconnect to the public switched network will contribute to the AUSF under the requirements of Category 1. The number of interconnecting trunks obtained from the local access provider by the wireless provider shall be utilized in conjunction with a Conversion Factor to determine AUSF support from such wireless provider by means of a surcharge on such interconnecting trunks. A wireless provider that fails to contribute to the AUSF as required by this Article shall be subject to termination of its interconnection arrangements pursuant to R14-2-1214(C)
   b. On or before November 1 of each year, each Category 1 local switched access service provider shall provide to the Administrator the number of access lines and number of interconnecting trunks that were in service on October 1 of that year. The Administrator will use these numbers together with the Conversion Factor in calculating the per-access-line surcharge and per-interconnecting-trunk surcharge for the following year. The Administrator will multiply the total number of interconnecting trunks by the Conversion Factor to obtain an equivalent number of access lines for the purpose of calculating the surcharges.
2. Category 2 - Providers of intrastate toll service, or other service providers as permitted under R14-2-1204(B)(3), shall be considered providers of Category 2 service and shall be assessed AUSF charges as follows:
   a. One-half of the AUSF funding requirement will be collected through Category 2 service providers. The Category 2 AUSF assessment will be based on total Arizona intrastate toll revenue and assessed as a percent of revenue. The percent of revenue assessment to be in place during a given year will be calculated by the Administrator using the annual Arizona intrastate revenue for all Category 2 service providers for the previous year.
   b. On or before November 1 of each year, each Category 2 service provider shall report to the Administrator the total Arizona intrastate revenue collected between August 1 of the current year and August 1 of the previous year. The Administrator will use this revenue so reported to calculate the AUSF assessment rate for the following year.

3. New telecommunications service providers.
   a. Telecommunications providers that begin providing basic local exchange service after the effective date of this Article shall be assessed AUSF charges pursuant to R14-2-1204.B.1. Telecommunications providers that begin providing toll service after the effective date of this Article shall be assessed AUSF charges pursuant to R14-2-1204(B)(2).
   b. All other telecommunications service providers that interconnect to the public switched network and begin providing telecommunications service after the effective date of this Article, shall choose to be considered either a Category 1 or Category 2 service provider. Such election shall be made in writing to the Administrator within 30 days of beginning to provide telecommunications service in Arizona, with a copy to the Director of Utilities. Written concurrence of the Director of Utilities must be received by the Administrator for such selection to be effective. Such selection will be irrevocable for a period of at least 3 years.
4. A telecommunications provider that provides both Category 1 and Category 2 services shall be assessed AUSF charges pursuant to both R14-2-1204(B)(1) and R14-2-1204(B)(2).

R14-2-1205. Calculation of Surcharges

A. The Administrator will calculate the total AUSF support due all local exchange carriers who have been granted AUSF support by the Commission. Administrative costs and audit fees will be added to this amount. The amount of any excess funds in the AUSF will then be subtracted to determine the total funding requirement. The funding requirements from Category 1 and Category 2 service providers will then be calculated. One-half of the funding will be obtained from Category 1 providers through surcharges applied to access lines and interconnecting trunks in service. The other half will be obtained from Category 2 providers through surcharges on intrastate toll revenues.

B. For the purpose of determining the surcharges, the Administrator will develop growth factors to apply to the total reported access lines and toll revenues. Such growth factors will be calculated at 1/2 of the estimated annual percentage growth in access lines and in toll revenues.

C. Category 1 Surcharge. One-half of the total annual AUSF support approved by the Commission for all eligible recipients will be obtained from Category 1 service providers. A monthly per access line surcharge and a monthly per-interconnecting-trunk surcharge required to obtain this funding will be calculated as follows:
   1. Adding together the number of access lines and equivalent access lines for all Category 1 service providers, adjusted by the growth factor;
   2. Dividing the total annual AUSF support approved by the Commission for all eligible recipients by 2 to obtain the portion of AUSF support required from Category 1 service providers;
   3. Dividing the amount of Category 1 AUSF support calculated in subsection (C)(2) by the sum of access lines calculated in subsection (C)(1) to yield the per-access-line surcharge;
   4. Dividing the per-access-line surcharge calculated in subsection (C)(3) by 12 to determine the monthly access line assessment;
   5. Multiplying the surcharge obtained in subsection (C)(4) by the Conversion Factor to determine the monthly interconnecting trunk surcharge.

D. Category 2 Surcharge. One-half of the total annual AUSF support approved by the Commission for all eligible recipients will be obtained from Category 2 service providers. A percent of revenue surcharge required to obtain this funding will be calculated as follows:
   1. Totaling the annual intrastate toll revenues of all Category 2 service providers, adjusted by the growth factor;
   2. Dividing the total AUSF support approved by the Commission for all eligible recipients by 2 to obtain the portion of AUSF support required from Category 2 service providers;
   3. Dividing the amount of Category 2 AUSF support requirement calculated in subsection (D)(2) by the total annual intrastate toll revenues calculated in subsection (D)(1) to arrive at a percentage of revenue surcharge.

R14-2-1206. Implementation

A. Any provider of telecommunications service may file either an AUSF tariff or price list, if appropriate, establishing a flow-through mechanism to collect the surcharge approved by the Commission and calculated by the Administrator.

B. On or before the 20th day of each month, each Category 1 service provider responsible for collecting AUSF surcharges shall remit to the Administrator the AUSF surcharge, including any surcharge on wireless providers, collected by that provider during the preceding month. The Category 1 provider shall submit such documentation of AUSF revenues from the AUSF surcharge as may be required by the Administrator.

C. On or before the 20th day of each month, each Category 2 service provider responsible for collecting AUSF surcharges shall remit to the Administrator the AUSF surcharge collected by that provider during the 3rd preceding month. The Category 2 provider shall submit such documentation of AUSF revenues from the AUSF surcharge as may be required by the Administrator.

D. Eligible recipients of AUSF support are:
   1. Providers of telecommunications service engaged in providing basic local exchange telephone service in Arizona which have obtained a Commission order authorizing payments from the AUSF; and
   2. Providers that become entitled to AUSF support based upon the provisions of R14-2-1206.E.

E. If the Commission approves AUSF support to a provider of telecommunications service for a defined area, such AUSF support shall also be available to competitive providers of basic local exchange service in the same defined area that are contributing to the AUSF and that are willing to provide service to all customers in the specific AUSF support area as defined by the Commission. The AUSF support to which the competitive provider is eligible shall be calculated on a per-customer basis, at the same level at which the incumbent provider of telecommunications service receives AUSF support, and shall not result in an increase in the total AUSF support available for the specific census block groups or study area. If basic exchange service is provided through the resale of another carrier's local loop facilities, AUSF support will only be available to the retail service provider if AUSF support is not included in the wholesale price for the resold local service. This Section shall not apply to small local exchange carriers nor to the universal service support being received by any telecommunications service provider as of the effective date of this Article.

F. For small local exchange carriers and for any basic local exchange telephone service provider receiving universal service support as of the effective date of this Article, the AUSF support shall not be available to competitive providers of basic local exchange service prior to completion of the review provided for

in R14-2-1216. Following completion of the review, AUSF support provided to small and intermediate local exchange carriers shall be available to all competitive providers of basic local exchange service in the same defined area that are contributing to AUSF and that are willing to provide service to all customers in the specific geographic study area as defined by the Commission, unless otherwise ordered by the Commission.

R14-2-1207. Calculation of Monthly Payments and the Associated Collections

A. For the monthly Category 1 AUSF payment, each provider of local switched access shall remit to the Administrator an amount equal to the number of access lines in service on the 1st day of the month, times the monthly surcharge per access line plus the number of interconnecting trunks in service on the 1st day of the month, times the monthly interconnecting trunk surcharge.

B. The monthly AUSF payment that each Category 2 provider shall remit to the Administrator is an amount equal to its monthly intrastate toll revenue times the monthly surcharge percentage.

C. Payments must be received by the Administrator by the 20th day of each month. If the payment amount is greater than $10,000, then it shall be wire-transferred to the Administrator.

D. The Administrator shall enter into an appropriate non-disclosure agreement with each telecommunications service provider to assure that information necessary to allocate AUSF funding obligations and to calculate surcharges is reported, maintained, and used in a manner that will protect the confidentiality of company-specific data. The Administrator shall not use confidential data for any purpose other than administering the AUSF.

R14-2-1208. Monthly AUSF Disbursements

A. AUSF disbursement shall be made 30 days following the date of AUSF collections.

B. The Administrator shall not make AUSF support payments to a provider of telecommunications service until the Administrator has received a copy of a Commission decision authorizing the provider to receive such support.

R14-2-1209. Procedures for Handling AUSF Rate Changes

A. Category 1 and Category 2 AUSF surcharges shall be revised when the Commission authorizes new or revised AUSF payments to any provider of telecommunications service. The Administrator shall calculate the new AUSF flow-through surcharges in accordance with this Article, which surcharges shall become effective upon the Commission's approval of the new or revised AUSF payments.

B. An annual calculation to revise AUSF flow-through surcharges shall be made by the Administrator on December 1 of each year with an effective date the following January 1. The flow-through surcharges shall be calculated so that the total AUSF funding will equal the AUSF revenue requirements, plus administrative costs. No later than December 1 of each year the Administrator shall provide notice to the Commission and all telecommunication service providers who pay into the AUSF of the flow-through surcharge rates for the following calendar year.

R14-2-1210. Statement of Participation of All Telecommunications Service Providers in the AUSF

A. Within 30 days of the effective date of this Article, each telecommunications service provider shall provide a letter to the Administrator acknowledging that provider's obligation under this Article to pay AUSF surcharges. Failure to provide such a letter shall be grounds for termination of the provider's interconnection with the public switched network.

B. Any telecommunications service provider which begins providing telecommunications service after the effective date of this Article shall, within 30 days of beginning to provide intrastate service in Arizona, provide a letter to the Administrator acknowledging that provider's obligation under this Article to make monthly payments for the local and/or toll portion, as appropriate, of the AUSF contribution in accordance with this Article. Failure to provide such a letter shall be grounds for denying to the provider interconnection with the public switched network.

R14-2-1211. Duties and Responsibilities of the AUSF Administrator

The Administrator shall:

1. Develop, obtain, and, on or before December 15 of each year, file with the Commission such information and documentation as the Administrator deems necessary for the establishment and calculation of the Category 1 and Category 2 surcharges for the succeeding year. Such a filing shall also be made each time the Commission authorizes a change in the AUSF funding requirement.
2. Monitor the AUSF payments of all telecommunications providers.
3. Oversee the billing of AUSF surcharges.
4. Prepare the necessary forms to be used in reporting the AUSF collections and disbursements and maintain monthly records.
5. Coordinate the collection and disbursement of AUSF monies in accordance with this Article.
6. Prepare an annual report that provides a detailed accounting of the AUSF collections and disbursements and that identifies the annual cost of administration. The report shall be filed with the Commission on or before April 15 of each year.
7. Monitor procedures for auditing the AUSF collections and disbursements. The audit function shall be performed by an independent outside auditor.

R14-2-1212. Interim Administrator.

US WEST Communications, Inc., will serve as interim Administrator of the AUSF and will perform the functions detailed that are required of the Administrator for a transition period until a private, neutral 3rd party is appointed by the Commission to serve as Administrator of the AUSF. A neutral 3rd party shall be appointed no later than July 1, 1997.

R14-2-1213. Guidelines for Auditing the AUSF

A. The AUSF records covering both collections and disbursements shall be audited at the end of the 1st year following the designation of a 3rd party administrator. The AUSF records will then be audited at least once every other year in the subsequent years of operations.

B. The records shall be examined for accuracy and the existence of effective internal controls to ensure that the AUSF is being administered appropriately and properly.

C. An independent external auditor selected by the Commission shall be utilized to provide an unbiased audit opinion concerning the AUSF administration procedures and controls.

D. Any costs for conducting audits will be deducted from the revenues of the AUSF prior to disbursement of funds.

R14-2-1214. Enforcement of Collection of Delinquent AUSF Amounts

A. The Administrator shall issue past-due notices to each provider of telecommunications service that is 15 days or more delinquent in submitting its AUSF payments to the Administrator. A copy of this notice shall be provided to the Commission.

B. AUSF support payments shall be withheld from any provider of telecommunications service that is delinquent in submitting its AUSF payments to the Administrator. Each provider of telecommunications service will be fully liable for any accrued interest owing on its AUSF contributions that remain unpaid for 30 days. Such delinquent AUSF payments will begin accruing interest at the rate of 1 1/2% per month beginning with the 31st day until such amount is paid in full along with all accrued interest.

C. The local switched access service provider shall promptly notify the Commission and the Administrator of the identity of any wireless provider which fails or refuses to pay its AUSF surcharge. Such notice shall also be directed to the wireless provider. If the wireless provider has not paid the amount due within 30 days of such notice, the interconnection provider shall terminate the wireless provider's interconnection until the full amount, together with all accrued interest, is paid in full (unless the payment is in bona fide dispute and the wireless carrier has paid the undisputed amount).

D. Failure by a telecommunications service provider to comply with the provisions of this Article may result in sanctions as determined by the Commission.

R14-2-1215. AUSF Annual Report

A. On or before April 1 of each year, the Administrator shall file with the Commission an annual report which shall summarize the preceding year activity and contain the following,
   1. A statement of AUSF collections and disbursements.
   2. A record of the total cost of administration of the AUSF.
   3. Audit reports from the audits conducted during the year.

B. A copy of the annual report shall be provided to each provider of telecommunications service who contributes to the AUSF.

R14-2-1216. Review Process

A. Not later than 3 years from the effective date of this Article, the Commission Staff shall initiate a comprehensive review of this Article and shall provide the Commission with recommendations regarding any necessary changes to the Article. Any interested party may also make such recommendations. The Commission shall consider these recommendations in such proceeding as the Commission deems appropriate.

B. The costs used to calculate AUSF funding levels for a given provider or AUSF support area shall be reviewed by the Commission at least every 3 years following the effective date for any authorized AUSF support for the provider or study area. The Commission may reduce the authorized funding level and require that the AUSF surcharge be recalculated on the basis of this review.

R14-2-1217. Supersession of Existing USF Mechanism

The universal service funding mechanism initially approved by the Commission in Decision No. 56639 (September 22, 1989) is superseded by this Article, except that any calculation, contribution, or collection of, or entitlement to, universal service fund support approved by the Commission prior to the adoption of this Article shall remain in effect until otherwise ordered by the Commission or until the application of this Article leads to a different result.

NOTICE OF PROPOSED RULEMAKING

TITLE 19. ALCOHOL, HORSE AND DOG RACING, LOTTERY, AND GAMING

CHAPTER 3. ARIZONA STATE LOTTERY COMMISSION

PREAMBLE

1. **Sections Affected:** — **Rulemaking Action**
   R19–3–310 — New Section
   R19–3–311 — New Section

2. **The specific authority for the rulemaking, including both the authorizing statute (general) and the statutes the rules are implementing (specific):**
   Authorizing statute: A.R.S. §5–504 (B).
   Implementing statute: A.R.S. §5–504 (B).

3. **The name and address of agency personnel with whom persons may communicate regarding the rulemaking:**
   Name: Mr. Sam Wakasugi, Acting Executive Director
   Address: Arizona State Lottery Commission
   4740 East University Drive
   Phoenix, Arizona 85034
   Telephone: (602) 921–4400

5. **An explanation of the rules, including the agency's reasons for initiating the rules:**
   R19–3–310 and R19–3–311 set forth provisions unique to the conduct of the Arizona Lottery's instant games. The provisions of these rules are necessary to implement the requirements of A. R. S. §5–504 (B) which have not been specified generically in A.A.C. R19–3–301. The unique provisions described in these rules are the nature and location of play symbols, the ticket number, the validation code, the prize denominations, and the method of selecting a winning ticket.

6. **A showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:**
   Not applicable.

7. **The summary of the economic, small business, and consumer impact:**
   These games will provide our players with a larger variety of instant games with a potential increase in sales. The only impact these rules have upon Lottery retailers is to specify how they determine if a ticket is a winning ticket and, if so, the prize amount.

8. **The name and address of agency personnel with whom persons may communicate regarding the accuracy of the economic, small business, and consumer impact statement:**
   Name: Mr. Sam Wakasugi
   Address: Arizona State Lottery Commission
   4740 East University Drive
   Phoenix, Arizona 85034
   Telephone: (602) 921–4400

9. **The time, place, and nature of the proceedings for the adoption, amendment, or repeal of the rule, or, if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rules:**
   Date: February 16, 1996
   Time: 10 a.m.
   Location: Arizona State Lottery Commission
   4740 East Unversity Drive
   Phoenix, Arizona
   Nature: Public Meeting and Commission Meeting

9. **Any other matters prescribed by statute that are applicable to the specific agency or to any specific rule or class of rules:**
   Close of the record is 5:00, Thursday, February 15, 1996, for written comments and at the close of the public meeting for verbal comments.

10. **Incorporations by reference and their location in the rules:**
    None.

11. **The full text of the rules follows:**

TITLE 19. ALCOHOL, HORSE AND DOG RACING, LOTTERY, AND GAMING

CHAPTER 3. ARIZONA STATE LOTTERY COMMISSION

ARTICLE 3. INSTANT LOTTERY GAMES

Section
R19-3-310. "Fat Cat"
R19-3-311. "Winning Pairs"

ARTICLE 3. INSTANT LOTTERY GAMES

R19-3-310. "Fat Cat"

A. Six play symbols, which are contiguous to each other in 2 rows, appear under the latex in the play area located on the right side on the front of the ticket and are one of the following: "$1", "$2", "$5", "$10", "$20", "$50", "$100", or "$1,000" with confirming captions. The play symbols captions correspond with and verify the play symbols as follows:

Play Symbols	Caption
$1	ONEDOL
$2	TWODOL
$5	FIVDOL
$10	TENDOL
$20	TWYDOL
$50	FTYDOL
$100	ONEHUND
$1,000	ONETHOU

B. The pack-ticket number begins with 800001. The pack-ticket number is located in the lower-left side on the back of the ticket.

C. The retailer-validation code verifies instant winners of $1, $2, $5, $10, $20, $50, and $100 tickets. The retailer-validation code which corresponds with and verifies each of these winners as follows:

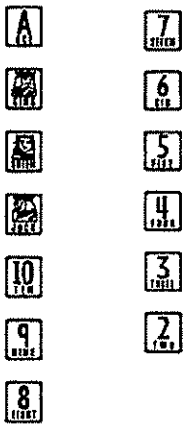
ONE	=	$1	TWY	=	$20
TWO	=	$2	FFY	=	$50
FIV	=	$5	ONH	=	$100
TEN	=	$10			

D. A prize winner in the "FAT CAT" instant game is determined by removing the latex from the play area on the front of the ticket to determine the 6 play symbols. Neither the retailer–validation code (or any portion thereof), the pack–ticket number (or any portion thereof), nor the validation number (or any portion thereof) are play symbols and are not usable or playable as such. If the ticket owner matches 3 like play symbols, he or she wins that prize. The prizes are as follows:

Match 3 $1	=	$1 (one dollar) or
Match 3 $2	=	$2 (two dollars) or
Match 3 $5	=	$5 (five dollars) or
Match 3 $10	=	$10 (ten dollars) or
Match 3 $20	=	$20 (twenty dollars) or
Match 3 $50	=	$50 (fifty dollars) or
Match 3 $100	=	$100 (one hundred dollars) or
Match 3 $1,000	=	$1,000 (one thousand dollars)

R19-3-311. "Winning Pairs"

A. Four pairs of 2 play symbols, which are in a horizontal row, appear under the latex in the play area located on the lower portion of the ticket. The 1st pair has "HAND 1" printed above, the 2nd pair has "HAND 2" printed above, the 3rd pair has "HAND 3" printed above, and the 4th pair has "HAND 4" printed above. Play symbol captions correspond with and verify each of the play symbols as follows:



B. A pack-ticket number beginning with 900001 is located in the lower-left portion on the back of the ticket.

C. Prize symbol captions correspond wiht and verify each of the prize symbols as follows:

Prize Symbol	Caption
$1	ONEDOL
$2	TWODOL
$3	THRDOL
$5	FIVEDOL
$10	TENDOL
$50	FTYDOL
$100	ONEHUND
$1,000	ONETHOU

D. The retailer-validation code verifies instant winners of $1, $2, $4, $5, $10, $20, $50, or $100. The retailer-validation code which corresponds with and verifies each of these winners is as follows:

ONE	=	$1	TEN	=	$10
TWO	=	$2	TWY	=	$20
FOR	=	$4	FFY	=	$50
FIV	=	$5	ONH	=	$100

E. A prize winner in the "WINNING PAIRS" instant game is determined by removing the latex from the play area on the front of the ticket to determine the 4 pairs of 2 play symbols. Neither the retailer-validation code (or any portion thereof), the pack-ticket number (or any portion thereof), nor the validation number (or any portion thereof) are play symbols and are not usable or playable as such. If the player's cards match each other in either "HAND 1", "HAND 2", "HAND 3", or "HAND 4", the player wins the amount printed below. There may be 4 ways to win on a ticket. The prizes are as follows:

$1	=	$1 (one dollar) or
$2	=	$2 (two dollars) or
$1 + $1	=	$2 (two dollars) or
$1+$1+$1+$1	=	$4 (four dollars) or
$2+$2+$1	=	$5 (five dollars) or
$2+$3	=	$5 (five dollars) or
$5+$5	=	$10 (ten dollars) or
$5+$2+$2+$1	=	$10 (ten dollars) or
$5+$5+$10	=	$20 (twenty dollars) or
$10+$5+$3+$2	=	$20 (twenty dollars) or
$50	=	$50 (fifty dollars) or
$100	=	$100 (one hundred dollars) or
$1,000	=	$1,000 (one-thousand dollars)

CORRECTIONS TO NOTICES OF PROPOSED RULEMAKING Initiated After January 1, 1995

Unless exempted by A.R.S. § 41-01995, each agency shall begin the rulemaking process by first filing a Notice of Proposed Rulemaking, containing the preamble and the full text of the rules, with the Secretary of State's Office. The Secretary of State shall publish the notice along with the Preamble and the full text in the next available issue of the Arizona Administrative Register.

Under the Administrative Procedure Act (A.R.S. § 41-1001et seq.) an agency must allow at least 30 days to elapse after the publication of the Notice of Proposed Rulemaking in the Register before beginning any proceedings for adoption, amendment, or repeal of any rule. A.R.S. §§ 41-1013 and 41-1022.

TITLE 15. REVENUE

CHAPTER 5. DEPARTMENT OF REVENUE
TRANSACTION PRIVILEGE AND USE TAX SECTION

The Department of Revenue submitted a Notice of Proposed Rulemaking which appeared in the December 15, 1995, issue of the *Register* (1 A.A.R. 2699). In this Notice, the location of the public hearing was listed as the Department of Revenue, 1700 West Washington, Room 500, Phoenix, Arizona. The street address in the Notice is correct; however, the building which was listed is incorrect.

The correct information for the Notice of Proposed Rulemaking is as follows:

An oral proceeding is scheduled as follows:

Date: January 24, 1996

Time: 9:30 a.m.

Location: State Capitol, Executive Tower
1700 West Washington, Room 500
Phoenix, Arizona 85007

Please refer the December 15, 1995, issue of the *Register* for the full text of this rule.