DOCUMENT RESUME

ED 350 464 CE 062 149

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TITLE	Emergency Medical Services. Project Report Phase I with Research Findings.
INSTITUTION	Georgia Univ., Athens. Div. of Vocational Education.
SPONS AGENCY	Georgia State Dept. of Technical and Adult Education, Atlanta.
PUB DATE	89
CONTRACT	GA-89-110013
NOTE	189p.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC08 Plus Postage.
DESCRIPTORS	Accidents; *Allied Health Occupations Education; Allied Health Personnel; Competency Based Education; Curriculum Development; Educational Equipment; Educational Research; *Educational Resources; *Emergency Medical Technicians; First Aid; Instructional Materials; Job Analysis; Job Skills; Medical Services; Occupational Information; *Paraprofessional Personnel; Postsecondary Education; Program Design; Program Development; Rescue; Secondary Education; Statewide Planning; *Task Analysis
IDENTIFIERS	Georgia

ABSTRACT

This report provides results of Phase I of a project that researched the occupational area of emergency medical services (EMS), established appropriate committees, and conducted task verification. These results are intended to guide development of a program designed to train paramedics. Section 1 contains general information: purpose of Phase I; description of the occupation, including nature of work, working conditions, and related occupations; direction of the occupation, including employment, training and other qualifications, advancement, job outlook, and earnings; program development committee; areas of concern; State Technical Committee developmental recommendations; and project staff recommendations. Section 2 presents research findings: accreditation and certification; appropriate trade resources and sources, including references and textbooks, journals, and periodicals; and typical job titles. Program objectives are grouped into six divisions: prehospital, preparatory, trauma, medical, obstetrical/gynecological/neonatal, and behavioral. These objectives comprise 67 pages. Other contents include a tools and equipment list and staff and facilities recommendations. Appendixes include the Georgia Basic Emergency Medical Technician course outline; Georgia standards for program approval; and supplemental reference task list. (YLB)

GEORGIA DEPARTMENT OF TECHNICAL AND
ADULT EDUCATION
FY 89
CONTRACT # 89-110013

PHASE I

PROJECT REPORT

EMERGENCY MEDICAL SERVICES

WITH

RESEARCH FINDINGS

EMERGENCY MEDICAL SERVICES

PROJECT REPORT

PHASE I

WITH

RESEARCH FINDINGS

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Project Staff Foreward

It should be noted that the project contract calls for the development of an Emergency Medical Technician program or programs. However, the State Technical Committee, working committee, and appropriate state staff members have recommended using a different program title: Emergency Medical Service.

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SECTION ONE

GENERAL INFORMATION

Purpose of Phase I

Phase I focused on researching the occupation, establishing appropriate committees, and conducting task verification. The results of this phase have provided the basic information required to develop the program standards and guide and set up the committee structure to guide the project.

The program is designed to address the needs of emergency medical services that use or plan to use qualified graduates as paramedics.

Description of Occupation

The Emergency Medical Services program addresses the need for qualified personnel to enter the health services field as EMT paramedics.

Nature of the Work

EMT's determine the nature and extent of the patient's illnesses or injuries and establish priorities for emergency treatment. They also determine whether the patient has epilepsy, diabetes, or other preexisting medical conditions, so they can provide the correct treatment. Operating under strict guidelines, EMT's give appropriate emergency care, including opening airways, restoring breathing, controlling bleeding, treating for shock, immobilizing fractures, bandaging, assisting in childbirth, managing emotionally disturbed patients, treating and resuscitating heart attack victims, and giving initial care to poison and burn victims. Some procedures may only be carried out under the step-by-step direction of medical staff with whom the EMT's are in radio contact.

EMT's are trained to distinguish one kind of emergency from another. Often, the situation is serious enough to require a radio report directly to the hospital about the nature and the extent of injuries or illness. EMT's may then be instructed by the hospital emergency staff to transmit vital signs and other information so that they can determine what treatment the EMT's should provide.

When patients are trapped, as sometimes is the case in an automobile or truck accident, EMT's face a double problem. First, they must assess the patients' injuries and supply all possible emergency medical care while protecting them from such dangers as chemicals or the possibility of fire. Then they must use the correct equipment and techniques to safely remove the patients. EMT's may use the radio or telephone to contact the dispatcher to request additional help or special rescue or utility services.

In case of death, EMT's notify the proper authorities and arrange for the protection of the deceased's property.

When patients must be transported to a hospital, EMT's place them on stretchers or other patient-handling devices, carry them to the ambulance and lift them in, and then secure both patient and stretcher for the trip. EMT's then drive to the hospital specified by their instructions, or, if none has been stipulated in advance, chose the nearest appropriately equipped hospital. On the way to the hospital, EMT's monitor the patient's vital signs and give additional care as needed or as directed by a physician with whom they have remained in radio contact.

Some EMT's work in large hospital trauma centers which use helicopters to transport critically ill or injured patients. Experience has shown that critically injured patients have a much better chance of survival if they can be transported to aa trauma center within an hour of being injured. For this reason, and because operating costs are so high, helicopters are usually reserved only for patients who require the immediate or specialized attention available at a trauma center.

Upon arrival at the hospital, EMT's help transfer patients from the ambulance to the emergency department. They report their observations and care of the patients to the emergency department staff for diagnostic purposes and as a matter of record. EMT's may help the emergency department staff.

One of the duties of EMT's is to maintain a clean, well-equipped ambulance. After each run, EMT's replace the used linen, blankets, and other supplies, send reusable items to the sterilized, and carefully check all equipment so that the ambulance is ready for the next trip. If they have carried patients who have a contagious disease, they decontaminate the interior of the ambulance and report such calls to the proper authorities. In cases of radiation contamination, they seek special experts to remove the radiation. EMT's make sure that the ambulance is in good operating condition by checking the gasoline, oil, tire pressure, lights, siren, heater, brakes, and communications equipment before their shift begins.

In addition to the EMT-Ambulance or EMT-A, the entry level worker whose duties have just been described, there are two other levels of EMT's, known in most places as EMT-Intermediates and EMT-Paramedics. These have more training that EMT-A's and can accordingly perform additional procedures, as specified by state law. In most states, EMT-Intermediates may assess trauma patients, administer intravenous therapy, and use anti-shock garments and esophageal airways. EMT-Intermediates are widely used in rural areas, where the number and type of services called for require an individual with more training that an EMT-A but less than an EMT-Paramedic.

EMT-Paramedics are trained in advanced life support skills. Working with radio communication under the direction of a physician. EMT-Paramedics in most states may administer drugs, both orally and intravenously, interpret EKG's, perform endotracheal intubation, and use complex equipment such as a defibrillator. The military services title technicians in the EMT role as Nursing Technicians.

Working Conditions

Because EMT's must treat patients indoors and out, they are exposed to all kinds of weather. Much of their time is spent standing, kneeling, bending, and lifting. The work is not only physically strenuous, but emotionally draining - not surprising in a job that involves life and death situations. Individuals in this occupation are likely to experience considerable job-related stress.

EMT's employed by fire departments often have a 56-hour workweek. Those employed by hospitals and police departments often work 40 hours a week. Those in private firms often work more. Some EMT's, especially those in police and fire departments, have to be on call for extended periods. Volunteer EMT's have varied work schedules, but many put in from 8 to 12 hours a week. Because many ambulance services function 24 hours a day, EMT's often work nights, weekends, and holidays. Irregular working hours add to the stress of the job.

Related Occupations

Other workers in occupations that require similar skills are police officers, firefighters, and registered nurses, radiology technicians and medical lab technicians.

Training, Other Qualifications, and Advancement

Few EMT's received formal training until recent years. Now, instruction in emergency medical care techniques is mandatory. A national standard training course is the 110-hour program designed by the U.S. Department of Transportation. In Georgia this program has been increased to 240 hours and is monitored by the Georgia Department of Human Resources. This program or its equivalent is available in all 50 states, the District of Columbia, and the Virgin Islands. It is offered by police, fire, and health departments; in hospitals; and as a nondegree course in medical schools, colleges, and universities.

The 110-hour program provides instruction and practice in dealing with emergencies such as bleeding, fractures, airway obstruction, cardiac arrest, and practice in dealing with emergencies such as bleeding, fractures, airway obstruction, cardiac arrest, and emergency childbirth. Students learn to use and care for common emergency equipment, such as backboards, suction devices, splints, oxygen delivery systems, and stretchers. Physicians, nurses, and experienced EMT's usually give the lectures and demonstrations.

After completing basic EMT training, students may take a 2-day course dealing with the removal of trapped victims and a 5-day course on driving emergency vehicles.

EMT-Intermediates have basic EMT training plus some of the EMT-Paramedic course material. Training requirements for EMT-Intermediates vary from state to state, but typically include further instruction in patient assessment as well as the use of esophageal airways, intravenous fluids, and antishock garments.

Training programs for EMT-Paramedics, of which were about 450 in 1987, generally last an average of 9 months. The American Medical Association's Committee on Allied Health Education and Accreditation accredits EMT-Paramedic programs that meet its standards. In many places, refresher courses and continuing education are available to EMT's.

Although requirements vary, applicants to an EMT training course generally must be at least 18 years old, have a high school diploma or the equivalent, and have a valid driver's license. Among high school subjects recommended for persons interested in the field are driver education and health and science courses. Training in the Armed Forces as a "medic" is good preparation for prospective EMT's.

Graduates of approved EMT training programs who meet certain experience requirements and pass a written and practical examination administered by the National Registry of Emergency Medical Technicians earn the title of Registered EMT-Ambulance. To maintain their proficiency, all EMT's must reregister every 2 years. To reregister, an individual must be working as an EMT, meet a continuing education requirement, and pay a fee.

The level of registration for EMT-Paramedics by the National Registry of Emergency Medical Technicians requires current registration or state certification as a EMT-Ambulance, successful completion of an EMT-Paramedic training program, 6 months of field experience as an EMT-Paramedic, and passing a written and practical examination.

Although not a general requirement for employment, registration is acknowledgment of an EMT's qualification and makes higher paying jobs easier to obtain. In 1987, about 46,000 basic EMT's were registered.

In addition, all 50 states have some kind of certification procedure. In 24 states, the Virgin Islands, and the District of Columbia, registration with the National Registry is required at some or all levels of certification. Seventeen other states require their own certification examination or provide the option of taking the National Registry examination.

EMT's should have good dexterity and physical coordination. They must be able to lift and carry up to 100 pounds. EMT's need good eyesight (corrective lenses may be used) with accurate color vision.

Because EMT's often work under trying conditions, they must exercise good judgment under stress and have leadership ability. Emotional stability and the ability to adapt to many different situations help them handle difficulties. They should have a neat and clean appearance and a pleasant personality.

National Standard Curriculum for EMT-Paramedics

The EMT-P WSC instructors' lessons plans include the following background information. There are more than 35,000 Emergency Medical Technician-Paramedics (EMT-P) currently State certified or Nationally Registered in the United States. Of the total, almost 85% are paid professionals. Approximately 70% of all EMT-P's reside in six states. The rest are spread out over the other 44 states, most of which have prehospital advanced life support (ALS) capabilities.

Since the inception of Emergency Medical Service (EMS), great strides have been made. Death tolls on the nation's highways, as well as deaths from sudden illness, have decreased because of the number of rescue personnel working in an organized EMS system. The typical EMT-P is a paid employee of a municipal or hospital based system, and mobile communications afford enhanced scene-hospital interaction. For training consistency throughout the nation, the National Standard Training Curriculum (NSTC) for the EMT-Paramedic is the accepted minimum training standard.

It has become clear in the 1980's that the basic body of knowledge that should be taught to the EMT-P must be expanded. In the early 1970's a task force of the National Academy of Science and the National Research Council arrived at a list of minimum skills that must be achieved by each EMT-P. This reflected, to a large extent, what was already being taught in the majority of programs. In 1982, a Department of Transportation (DOT) support committee was created to ensure that evolutionary changes in prehospital care were included in the paramedic curriculum on an ongoing basis.

The Committee conducted a formal study, questioning the majority of EMT-P training programs, all 50 State's training coordinators, and a sampling of field EMT-P's regarding the initial EMT-P curriculum. It was found that support of the curriculum existed; however suggestions were made to alter the curriculum to reflect the actual needs of the field EMT-P's. It was noted that some areas of peripheral background material could be de-emphasized (e.g., blood gases) while other areas needed more emphasis, such as geriatrics, hypothermia, and crisis intervention. Additionally, anatomy and physiology were requested to be tied more directly to disease processes and the occurrence of injury rather than being fragmented, as in the initial curriculum.

The update of the National Standard Training Curriculum is based upon the following six factors:

(1) The EMT-P is a health care professional. While much of the material in the curriculum is peripheral to many of the psychomotor skills, this knowledge is essential for EMT-P's to know if they are to continue working under the written and/or verbal standing orders of physicians as most services presently function. This knowledge is also vital should tele-communications be interrupted and to provide a long-term academic base for continuing education.

(2) The overall knowledge and skills defined in the original curriculum still have validity in 1985. The previously mentioned study called for a restructuring and updating of the curriculum based upon the evolutionary changes that have occurred since 1976.

(3) The NSTC for the EMT-P is being restructured to resemble more clearly how most EMT-P programs present their course material and to reflect how EMT-Paramedics apply this skill and knowledge.

(4) The updated curriculum (all six divisions) is considered essential and should be presented in its entirety to any field level provider who performs all the advanced life support skills.

(5) This curriculum identifies the minimum body of knowledge that one needs in order to be competent in the performance of prehospital ALS. The additional knowledge and skills that are necessary to function in a particular locale must be added by each individual instructor/coordinator.

(6) The integration and intermeshing of the knowledge and skills necessary to be an EMT-Paramedic is a very individualized process that cannot completely be defined or met in a curriculum. However, it is a necessary part of the "art and the

science" of emergency medicine that each instructor must strive toward.

Direction of the Occupation

Employment

Although no exact figures are available on how many EMT Paramedics are needed in Georgia per year, research indicates that the employment market demand is high. The Occupational Outlook Handbook indicates that in 1986, nationally there were 65,000 paid EMT's; an estimated 10 percent of them were EMT-Paramedics. Most paid EMT's work full time, while most volunteers work part time.

Nearly all EMT jobs are found in private ambulance services, in hospitals, or in municipal police, fire, or rescue squad departments.

Not surprisingly, volunteers are generally basic EMT's. Those with more education and training, such as EMT-Intermediates, are more likely to hold a paid position. At the highest level, EMT-Paramedic, relatively few are volunteers. According to information from Georgia employers, a Paramedic EMT will be more marketable in the future than either a basic EMT or cardiac (intermediate) EMT.

Job Outlook

Employment of EMT's is expected to grow about as fast as the average for all occupations through the year 2000. Conflicting forces will shape demand for these workers. On the one hand, population growth - very rapid growth in the number of older people in particular - is expected to lead to more jobs for EMT's. Developments in the field of emergency medicine may heighten demand as well. As more physicians and nurses specialize in emergency medicine, appropriately trained EMT's are likely to be used more effectively. Upgrading of the profession is expected to stimulate job growth for paid EMT's.

Other factors are likely to constrain job growth, however. Of foremost importance is the rising cost of training and equipping EMT's. Cost containment will doubtless remain a preoccupation of emergency medical service providers for some time to come. The clinical benefits of providing emergency medical services will accordingly be weighed against the cost to a greater extent than was true in the past. Other factors that may adversely affect demand for EMT's include the termination of Federal startup funds for community emergency medical services, taxpayer resistance to increased local government expenditures, and the availability of unpaid volunteers.

Opportunities for paid EMT's are expected to be best in municipal governments and private ambulance services. In many localities, taxpayers have come to regard emergency medical services as a basic municipal service - as essential as police and fire protection, for example. However, a growing number of municipalities are contracting with private ambulance services to furnish emergency medical services instead of setting up a new municipal program or hiring additional city or county EMT's. If this trend persists, employment prospects in private ambulance services should be especially favorable.

Demand for EMT's in hospitals probably will be constrained by the continued slowdown in hospital industry growth, together with administrators' efforts to phase out unprofitable programs and services. While some hospitals are likely to expand their emergency and trauma services - initiating helicopter services, for example - others will find that running an ambulance service is too expensive. Such hospitals may decide to leave the provision of emergency medical services to others in the community.

In addition to job openings created by expansion of emergency medical services, many additional openings will occur because of replacement needs, which are substantial in this occupations. Turnover is reported to be quite high, reflecting the stress and heavy responsibility the work entails, and the modest pay.

Prospects for qualified applicants should be excellent in the years ahead. Indeed, with the impending decline in the young adult population - the traditional source of supply for entry level EMT's, employers may have to develop recruitment and retention programs.

Earnings

Earnings of EMT's depend on the employment setting and geographic location as well as the individual's training and experience. According to a survey conducted by the Journal of Emergency Medical Services, average earnings in 1987 were $18,700 for an EMT-Ambulance (basic); $18,800 for EMT-Intermediate; and $24,300 for an EMT-Paramedic.

EMT's working for police and fire department usually are paid the same salaries as police officers and firefighters.

The fringe benefits offered by private ambulance companies vary widely. EMT's employed by hospitals and police and fire departments receive the same benefits as other employees.

The information presented in direction and description of the occupation is an adaptation of public domain material, originally published in the Occupational Outlook Handbook, by the Bureau of Labor Statistics, U. S. Department of Labor, Washington, D. C. 20212, Bulletin 2300.

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State Technical Committee Areas of Concern

The State Technical Committee members expressed concern about:

a) the shortage of paramedics and the need for recruitment,

b) the high turnover rate of basic EMT's,

c) the need for basic-EMT advancement to the paramedic level, and

d) the burden on county emergency medical services if technical institution programs are not provided to train basic-EMT's and paramedics.

State Technical Committee Developmental Recommendations

The State Technical Committee recommended that:

a) the Emergency Medical Services program be interpreted as an paramedic preparation program;

b) the program include and/or exceed the objectives of the U. S. Department of Transportation national curriculum and the requirements of the Georgia Department of Human Resources;

c) the program include basic math, communications, and employability skills that are appropriate to occupationl needs;

d) the program be approximately one year long;

e) the program be offered at the diploma level;

f) the program should emphasize professionalism and use of the most up-to-date emergency medical service methods.

Project Staff Recommendations

The Project staff has found that basic-EMT training can be included in the paramedic diploma program as a credit accruing course, or it can be offered as a continuing education non-credit course.

SECTION TWO

RESEARCH FINDINGS

Accreditation and Certification

This program must conform to the institutional accreditation requirements of the Southern Association of Colleges and Schools by meeting Commission on Colleges (COC) or Commission on Occupational Education Institutions (COEI) accreditation requirements and must not conflict with the accreditation criteria established by COC or COEI.

This program must meet the requirements stated in the Emergency Medical Technician - Paramedic: National Standard Curriculum, prepared by the U. S. Department of Transportation, National Highway Safety Administration.

EMT levels are certified by the Georgia Department of Human Resources and the Emergency Medical Services program must conform to the Georgia Department of Human Resources requirements. (See Appendix B.)

Appropriate Trade Resources

References and Textbooks:

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Appropriate Trade Resources

Journals:

Computers in Nursing
J. B. Lippincott Co.
2350 Virginia Avenue
Hagerstown, MD 21740

Cumulated Index Medicus
Public Health Service
National Library of Science
Bethesda, MD

Cumulative Index to Nursing & Allied Health Literature
Glendale Advenist Medical Center
Glendale, CA

Emergency Care Quarterly
Aspen Publishers, Inc.
7201 McKinney Circle
Frederick, MD 21701

Emergency Medicine
475 Park Avenue South
New York, NY 10016

Emergency Nursing Reports
Aspen Publishers, Inc.
7201 McKinney Circle
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Emphasis: Nursing
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Emergency Medical Technician Legal Bulletin
Med/Law Publishers, Inc.
P. O. Box 293
Westville, NJ 08093

Journal of Emergency Nursing
Emergency Department Nurses' Association
C. V. Mosby Co.
11830 Westline Industrial Drive
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Journal of Emergency Medical Services
215 South Highway 202, Suite 200
P. O. Box 1026
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Regan Report on Nursing Law
Medica Press
1231 Fleet National Bank Bldg.
Providence, RI 02903

Topics in Emergency Medicine
Aspen Publishers, Inc.
7201 McKinney Circle
Frederick, MD 21701

Appropriate Trade References

Periodicals:

EMS Management Advisor
Aspen Publishers, Inc.
1600 Researcch Blvd.
Rockville, MD 20850

Emergency; the journal of emergency services
Hare Publications
Box 159
Carlsbad, CA 92008

Emergenccy Medical Care Digest; an authoritative monthly review for emergency clinicians
P.M. Inc.
14545 Friar, No. 106, Box 2160
Van Nuys, CA 91404

Emergency Medical Services; the journal of emergency care and transportation
Creative Age Publications
7628 Densmore Ave.
Van Nuys, CA 91406-2088

Emergency Medicine; common emergencies in daily practice
Cahners Publishing Co., Inc.
249 W. 17th St.
New York, NY 10011

Emergency Medical Observer
Aspen Publishers, Inc.
1600 Research Blvd.
Rockville, MD 20850

Emergency Medical Technician Legal Bulletin
Med-Law Publishers, Inc.
Box 293
Westville, NJ 08093

Typical Job Titles

The U. S. Department of Transportation National Highway Traffic Safety Administration lists three performance levels:

Emergency Medical Technician - Basic
Emergency Medical Technician - Intermediate
Emergency Medical Technician - Paramedic

The Dictionary of Occupational Titles (1977), U. S. Department of Labor has one job title/description for this occupation.

079.374-010 EMERGENCY MEDICAL TECHNICIAN (medical ser.)

Administers first-aid treatment to and transports sick or injured persons to medical facility, working as member of emergency medical team: Responds to instructions from emergency medical dispatcher and drives specially equipped emergency vehicle to specified location. Monitors communication equipment to maintain contact with dispatcher. Removes or assists in removal of victims from scene of accident or catastrophe, to establish first aid procedures to be followed or need for additional assistance, basing decisions on statements of persons involved, examination of victim or victims, and knowledge of emergency medical practice. Administers prescribed first-aid treatment at site of emergency, or in specially equipped vehicle, performing such activities as application of splints, administration of oxygen or intravenous injections, treatment of minor wounds or abrasions, or administration of artificial resuscitation. Communicates with professional medical personnel at emergency treatment facility to obtain instructions regarding further treatment and to arrange for reception of victims at treatment facility. Assists in removal of victims from vehicle and transfer of victims to treatment center. Assists treatment center admitting personnel to obtain and record information related to victims' vital statistics and circumstances of emergency. Maintains vehicles and medical and communication equipment and replenishes first-aid equipment and supplies. May assist in controlling crowds, protecting valuables, or performing other duties at scene of catastrophe. May assist professional medical personnel in emergency treatment administered at medical facility.

Individuals' qualifications reflect specific titles within the occupational field. The National Registry of Emergency Medical Technicians awards the following:

EMT-Ambulance
EMT-Intermediate
EMT-Paramedic

Program Objectives

The Emergency Medical Services State Technical Committee has elected to use the curriculum objectives which appear in the 1985 edition of Emergency Medical Technician - Paramedic: National Standard Curriculum as the basis for program development. This list of objectives replaces the duty/task commonly used in program development. These objectives were developed by the U. S. Department of Transportation, National Highway Traffic Safety Administration and are required by law.

Section 1. Roles and Responsibilities

Objectives

At the conclusion of Subsection 1, the instructor will have provided sufficient information, demonstration and practice to the student, to ensure his/her ability to:

1.1.1 Identify and describe those activities performed by an EMT-Paramedic in the field.

1.1.2 Define the role of an EMT-Paramedic.

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 EMT-Paramedic continuing education.

1.1.14 Define and discuss at least three reasons why continuing education is important for the EMT-Paramedic.

1.1.15 Define the terms "certification, licensure, and registration."

1.1.16 Name and describe current state legislation outlining the scope of pre-hospital Advanced Life Support.

1.1.17 State the reason that it is important to keep one's EMT-Paramedic 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 EMT-Paramedics teaching in their community.

Section 2. EMS Systems

Objectives

At the completion of this section, the student will be able 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 EMT-P and the physician on the radio.

a. Physician who is with the patient when the EMT-P arrives.

b. The physician who arrives on the scene after the EMT-P's have started evaluating and treating the patient.

1.2.7 Describe the benefits of EMT-P 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.

a. Discuss ambulance placement and the parameters that should be utilized in its development, include the differences in urban, suburban and rural settings.

1.2.11 Discuss the medical community role in overseeing prehospital care.

1.2.12 Define protocols and standing orders.

1.2.13 Describe the development of protocols.

1.2.14 Define local training standards.

1.2.15 Describe the legislation in the EMT-P's state as regards prehospital care.

1.2.16 Describe integration of prehospital care into the continuum of total patient care with the Emergency Department phase of hospital care.

1.2.17 Discuss replacement of equipment and supplies.

1.2.18 Discuss the EMT-P's initial responsibilities when arriving on the scene.

1.2.19 Describe the relationship between the physician on the radio and the EMT-P at the scene.

1.2.20 Discuss the varying philosophies between the management of medical patients and trauma patients, prehospital.

1.2.21 Describe the transition of patient care from the EMT-P, including:

a. Transfer of responsibility (legal and medical).

b. Reporting of patient status to physician or nurse.

1.2.22 Describe the ability of physician run critique based on documentation.

1.2.23 Describe retrospective evaluation of patient care including run report review, continuing education, skill practice and skill deterioration.

Section 3. Medical/Legal Considerations

Objectives

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 incident.

1.3.4 Identify those situations that require the EMT-P to report those incidents to appropriate authorities.

1.3.5 Describe the four elements 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.

Section 4. EMS Communications

Objectives

At the completion of this section, the student will be able 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 base station.

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 function of an encoder and 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.

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.

S1.4.26 Demonstrate the proper use of a mobile transmitter/receiver to receive and transmit information.

S1.4.27 Demonstrate the proper use of a portable transmitter/receiver to receive and transmit information.

S1.4.28 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.

S1.4.30 Properly complete a written EMS form based on a real or simulated patient situation.

* Indicates optional

(S) Indicates Skill Objective

Section 5. Rescue

Objectives

At the completion of this section, the student will be able 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 EMT-P's patient assessment and management responsibilities during a rescue operation.

1.5.8 Identify the special expertise for special rescue resources available in the EMT-P's response area.

1.5.9 Identify the difficu'ties that maybe 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.

Section 6. Major Incident Response

Objectives

At the completion of this section the student will be able 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 "scene 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"

Section 7. Stress Management

Objectives

At the conclusion of this section, the student will be able 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. patient's families, and

c. the EMT-P

1.7.8 Name common causes of job stress for the EMT-P.

1.7.9 Describe various techniques the EMT-P 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 EMT-P in dealing with death and dying.

1.7.12 Describe common management techniques used by the EMT-P when a patient is dead or dying.

1.7.13 Identify issues of controversy in pre-hospital care involving death and dying.

Section 1. Medical Terminology

Objectives

At the completion of this section. the student will be able to:

2.1.1 Define and contrast medical terms.

2.1.2 Identify various medical terms given one or more anatomical par's 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 one or more medical terms in a medical dictionary.

Section 2. General Patient Assessment

Objectives

Upon the completion of this section, the student will be able 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 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 EMT-P might encounter in a hostile situation and describe mechanisms of management.

2.2.7 Describe the various types of protective equipment available to the EMT-P for self protection and patient protection.

2.2.8 Discuss the appropriate methods of patient protection in each situation.

2.2.9 Describe the emergency situations the EMT may encounter and describe the management of each.

2.2.10 Discuss backup personnel, transportation and equipment.

2.2.11 Define and describe the various classifications of emergencies which an EMT will encounter. Base this on medical needs.

2.2.12 Discuss how the assessment and management differs.

2.2.13 Describe the primary survey and what areas are critical to evaluate.

2.2.14 Describe the anatomy of the following: upper airway, tongue, hypopharynx, nasopharynx oropharynx, larynx, vocal cords.

2.2.15 Describe the function of the vocal cords.

2.2.16 Describe the flow of air from outside the body into the trachea.

2.2.17 Describe the reasons for and mechanism of humidification and warming of the air as it passes through the naso and oral pharynx.

2.2.18 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.

2.2.19 Describe the methods of airway management.

2.2.20 Describe the methods and management of an obstructed airway.

2.2.21 Describe the mechanical methods of airway management including the benefits and limitations. Oral, nasal and EOA.

2.2.22 Describe the trans-tracheal mechanisms of airway ventilation, including the benefits and limitations.

2.2.23 Describe how the cervical spine is protected throughout these maneuvers.

2.2.24 Describe the anatomy of the following:

a. Lungs
b. Trachea
c. Alveolus
d. Diaphragm
e. Thoracic wall
f. Pleural space.

2.2.25 Describe how pulmonary ventilation (inhalation and exhalation) is accomplished.

2.2.26 Describe the gaseous exchange across the alveoli-capillary membrane (O_2 and CO_2)

2.2.27 Describe the pulmonary problems that can complicate exhalation and inhalation, 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.

2.2.28 Describe the problems of ventilation.

2.2.29 Define mou..n to mask ventilation, its benefits and limitations.

2.2.30 Discuss the bag-valve mask, its benefits and limitations.

2.2.31 Discuss the techniques for evaluating the effectiveness of ventilation.

2.2.32 Describe the anatomy of the heart and the cardiovascular system.

2.2.33 Describe the problems that occur with decreased perfusion.

2.2.34 Describe the pathophysiology of cardiac arrest.

2.2.35 Describe the mechanisms of evaluating the effectiveness of perfusion, including pulse, skin color, capillary refill.

2.2.36 Discuss ventilation with an E.O.A. (benefits and limitations).

2.2.37 Discuss ventilation with an endotracheal tube (benefits and limitations) (optional EMT-I).

2.2.38 Describe the equipment and method of suctioning the airway, pharynx and endotracheal tube (optional).

2.2.39 Describe the anatomy of the skin, bones, vessels, subcutaneous tissue as it relates to hemorrhage control.

2.2.40 Discuss the benefits and complications of hemorrhage control by the following means:

a. Direct pressure
b. Tourniquets
c. Hemostats.

2.2.41 Define a mini-neurological examination (level of consciousness).

2.2.42 Describe exposing the patient's body for total evaluation.

2.2.43 Discuss when this should and should not be carried out.

2.2.44 Define shock.

2.2.45 Describe the reasons for and mechanisms of patient reassessment in the resuscitation phase.

2.2.46 Define the components of secondary survey and its benefits for patient evaluation.

2.2.47 Describe the assessment of the head, neck, thorax, abdomen, extremities and nervous system.

2.2.48 Describe the trauma score, define its usefulness and how it is accomplished.

2.2.49 Discuss the important components which must be identified in taking an appropriate history from a patient.

2.2.50 Describe which laboratory studies drawn in the field when the IV is started and their usefulness.

2.2.51 Define the definitive care phase.

2.2.52 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.

2.2.53 Describe how the patient is immobilized to the backboard.

2.2.54 Describe how the patient is immobilized to the stretcher, and to the ambulance.

2.2.55 Describe patient extrication.

2.2.56 Describe how the patient is monitored enroute to the hospital.

2.2.57 Describe how the hospitals are selected for receipt of patients based on patient need and hospital capability.

2.2.58 Describe the benefits and complications of lights and sirens and when this should be used.

2.2.59 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.

2.2.60 Describe the usefulness of a run report.

2.2.61 Describe the mechanisms of continued evaluation of the patient en route to the hospital.

S2.2.62 Perform a rapid assessment of the patient to identify priorities for care.

S2.2.63 Demonstrate the assessment of the head, neck, thorax, abdomen, extremities and neurological system.

S2.2.64 Demonstrate effective mouth-to-mask ventilation.

S2.2.65 Demonstrate effective bag valve

a. Mask

b. EOA

c. ET

S2.2.66 Demonstrate effective cardiopulmonary resuscitation.

S2.2.67 Demonstrate the manual methods of airway management.

S2.2.68 Demonstrate the methods of management of an obstructed airway.

S2.2.69 Demonstrate the mechanical methods of airway management.

a. Nasal
b. Oral
c. EOA
d. ET (Optional at EMT-I level)

S2.2.70 Demonstrate the use of self-protection equipment such as air pack (breathing apparatus), etc.

S2.2.71 Demonstrate the use of various types of portable and fixed suction devices.

(S) Indicates Skill Objective

Section 3. Airway and Ventilation

Objectives

At the conclusion of this lesson, the student will be able to:

2.3.1 Describe anatomy of the mouth, hypopharynx, trachea, larynx.

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 laryngoscope, suction, endotracheal tube and bag-valve mask

2.3.4 Discuss indications and contraindications of endotracheal intubation

2.3.5 Discuss alternatives to endotracheal intubation

2.3.6 Discuss skill deterioration and methods of prevention.

2.3.7 Discuss need for rapid placement of ET tube

2.3.8 Discuss methods of assuring and maintaining correct placement of ET tube

2.3.9 Demonstrate ventilation with bag-valve-mask.

S2.3.10 Demonstrate placement of ET tube (45 seconds).

S2.3.11 Demonstrate ventilation with bag valve and endotracheal tube

S2.3.12 Demonstrate method by assuring and maintaining correct placement of ET tube.

S2.3.13 Demonstrate reventilation for missed intubation.

S2.3.14 Demonstrate skills described above both on mannikin and live patient.

(S) Indicates Skill Objective

Section 4. Pathophysiology of Shock

Objectives

At the completion of this section, the student will be able 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.

2.4.4 Discuss red blood cell oxygenation in the lungs based on alveolar O_2 levels and transportation across the alveolar capillary wall.

2.4.5 Discuss tissue oxygenation based on tissue profusion and off-loading of oxygen.

2.4.6 Discuss the role played by respiration, inadequate ventilation in the management of shock.

2.4.7 Describe perfusion and the mechanisms of improvement of cardiac output based on the strength and rate of contractions.

2.4.8 Discuss the role of preload in improving cardiac output.

2.4.9 Discuss the fluid component of the cardiovascular system and the relationship between the volume of the fluid and the size of the container.

2.4.10 Discuss afterload (systemic vascular resistance), the relationship of diastolic pressure to the SVR and the effect of diastolic pressure on coronary circulation.

2.4.11 Discuss the container size in its relationship to the fluid volume and the effect on pre-load.

2.4.12 Discuss body fluids based on total body water, intracellular fluid, and extracellular fluid.

2.4.13 Identify the significant anions and cations in the body.

2.4.14 Describe the role of protein.

2.4.15 Discuss osmosis. Define semi-permeable membranes, and discuss their function.

2.4.16 Define isotonic fluids, hypotonic fluids, and hypertonic fluids.

2.4.17 Define and discuss diffusion.

2.4.18 Define active transport.

2.4.19 Describe the mechanisms of concentration of electrolytes.

2.4.20 Define Acid-Base balance.

2.4.21 Discuss Acid-Base balance based on hydrogen ion concentration, pH, buffer systems.

2.4.22 Define and discuss the following:

a. Respiratory acidosis.

b. Respiratory alkalosis.

c. Metabolic acidosis.

d. Metabolic alkalosis.

2.4.23 Describe the mechanism of the body response to perfusion change.

2.4.24 Identify the role of the baroreceptor.

2.4.25 Describe how the actions of the baro-receptor affect blood pressure and perfusion.

2.4.26 Describe compensated shock.

2.4.27 Describe uncompensated shock, both cardiac and peripheral effects.

2.4.28 Describe how anaerobic metabolism at the cellular level can lead to death several days later.

2.4.29 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.

2.4.30 Describe the three phases in the capillary cellular relationship (ischemia, stagnant, and washout).

2.4.31 Discuss the evaluation of the patient's perfusion status, based on physical observations within the primary survey, including pulse, skin, temperature, capillary refill.

2.4.32 Discuss the relationship of the neurological exam to evaluation of hypoperfusion and oxygenation.

2.4.33 Describe the information provided by the following in physical examination: pulse, blood pressure, diastolic pressure, systolic pressure, skin color, appearance, temperature, and respiration.

2.4.34 Discuss resuscitation of a shocky patient. Include red cell oxygenation, tissue ischemic sensitivity, IV fluids, the Pneumatic Anti-Shock Garment.

2.4.35 Describe the beneficial and detrimental effects of the Pneumatic Anti-Shock Garment.

2.4.36 Describe the indication and contraindications for the Pneumatic Anti-Shock Garment.

2.4.37 Discuss fluid replacement, the types of fluid that are available, the benefits and detrimental effects of each.

2.4.38 Discuss how fluid replacement is monitored and controlled.

2.4.39 Discuss the routes of fluid replacement and the advantages and disadvantages of each.

S2.4.40 Demonstrate in order of priority the steps of shock resuscitation.

S2.4.41 Demonstrate the use of the Pneumatic AntiShock Garment

S2.4.42 Describe the indications and contraindications of the Pneumatic Anti-Shock Garment and how it affects the patient in each.

(S) Indicates Skill Objective

Section 5. General Pharmacology

Objectives

At the conclusion of this section, the student will be able to:

2.5.1 Name and differentiate the sources of various drugs.

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 Define the following terms:

—capsules
—fluid extracts
—suppositories
—pills
—spirits
—lozenges
—ampules
—vials
—powders
—tinctures
—ointments
—tablets
—suspensions
—solutions

2.5.6 Identify those pharmaceutical preparations used internally.

2.5.7 Identify and state the given dosage of prepackaged pharmaceutical preparations.

2.5.8 State the purpose and use(s) of the *Physician's Desk Reference* (PDR).

2.5.9 Identify local and general or systemic effects of drugs.

2.5.10 List and compare the following factors on the action of drugs:

—age of patient
—condition of patient
—dosage
—absorption rate
—distribution
—elimination (excretion)

2.5.11 Rank the five methods of absorption from fastest to slowest.

2.5.12 Name the five routes in which drugs are absorbed.

2.5.13 Define the following terms:

—depression
—physiological
—therapeutic
—untoward
—initiation
—antagonism
—idiosyncrasy
—indication
—side effect
—cumulative effect
—tolerance
—synergism
—potentiation
—additive
—habituation
—hypersensitivity
—contraindication

2.5.14 Select the term that best describes a specific drug from the terms in number 13.

2.5.15 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
—imcompatibility
—side effects

2.5.16 List the two systems of weights and measures being used today.

2.5.17 Determine which weights and measures belong to the apothecary system or to the metric system.

2.5.18 State three advantages of the metric system.

2.5.19 Demonstrate the conversion of various measures between milligrams to grams.

2.5 20 Given a drug dose in milligrams and its specific concentration in tablet form, calculate how many tablets should be given to a patient.

2.5.21 Demonstrate the conversion of various measures between milliliters to liters.

2.5.22 Given a desired dose and concentration of a drug, calculate the volume of a drug to be administered.

2.5.23 Demonstrate the conversion of various measures between pounds to kilograms.

2.5.24 Given the weight of a patient in pounds and a drug dose in milligrams per kilogram, calculate the appropriate drug dosage for the patient.

2.5.25 State the number of macro and micro drops/cc.

2.5.26 State the formula used to determine the flow rate.

2.5.27 Given a rate of infusion for a IV fluid, determine the number of micro and/or macro drips per minute.

2.5.28 State four routes of drug administration.

2.5.29 Name at least eight safety considerations to remember when administering drugs.

2.5.30 Identify and describe local guidelines for drug administration.

2.5.31 Describe the different types and sizes of syringes and needles and the advantages and disadvantages of each.

2.5.32 Identify four routes of parenteral drug administration.

2.5.33 Describe the proper approach and explanation that should be given to a patient prior to the administration of a medication.

2.5.34 State what information should be elicited from a patient prior to administration of a medication.

2.5.35 State why ampule tops should be tapped before they are used.

2.5.36 State why air must be taken into the syringe when drawing a solution from a vial.

2.5.37 State why the IV tube is pinched off above the injection site when performing an IV push.

2.5.38 State the advantages and/or disadvantages of:
- —IV injections
- —Subcutaneous injections
- —Intramuscular injections

2.5.39 Describe why the skin is pinched when administering a subcutaneous injection.

2.5.40 Describe why the skin is stretched when administering an intramuscular injection.

S2.5.41 Withdraw a given amount of solution, given the dose, from an ampule or vial.

S2.5.42 Assemble a prepackaged syringe.

S2.5.43 Perform an IV push and inject a specified dose of medication into an already established IV line.

S2.5.44 Perform subcutaneous and intramuscular injections at any one of several locations.

(S) Indicates Skill Objective

Section 1. Trauma

Objectives

At the conclusion of Section 1, the instructor will have provided sufficient information, demonstration and practice 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.

3.1.15 Describe the advantages and disadvantages of each.

3.1.16 Describe 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 ventilations.

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 Describe the methods of hemmorhage control that should be used in the prehospital setting and those that should not and why.

3.1.33 Describe the mini-neurological exam.

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 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 hemmorhage and how they are managed.

3.1.50 Describe the physical examination of the neck.

3.1.51 Describe the anatomy of the neck.

3.1.52 Describe the pathophysiology of neck injuries.

3.1.53 Describe the assessment of the neck.

3.1.54 Describe the management of the neck.

3.1.55 Describe the general examination of the thoracic cavity.

3.1.56 Describe the anatomy of the thoracic cavity.

3.1.57 Describe the physiology of the thoracic cavity including ventilation, respiration, and Acid-Base Balance.

3.1.58 Describe the assessment of the thoracic cavity.

3.1.59 Describe the stethoscope, how it works and its uses in the physical examination.

3.1.60 Describe how the physical examination of the thoracic cavity is conducted in steps, and the various pathophysiologic processes that each step can identify.

3.1.61 Describe the prehospital management of a pneumothorax, tension pneumothorax, and an open pneumothorax.

3.1.62 Describe the pathophysiology of each of the above.

3.1.63 Describe the management of a flail chest.

3.1.64 Describe the pathophysiology of a flail chest.

3.1.65 Describe a hemothorax and the prehospital significance of such a condition.

3.1.66 Describe a pulmonary contusion and its prehospital significance and management.

3.1.67 Describe cardiac tamponade based on anatomy, physiology, pathophysiology, and management.

3.1.68 Describe the need/non-need of prehospital management of a cardiac tamponade.

3.1.69 Describe cardiac contusion, including anatomy, pathophysiology, methods of assessment, significance of dysrthymias that occur, and its management.

3.1.70 Describe the abdominal examination and the significance of the abdominal pathology in the prehospital phase.

3.1.71 Describe the anatomy of the abdomen.

3.1.72 Describe the physiology of the abdomen.

3.1.73 Describe the pathophysiologic processes of the abdomen that affect prehospital care.

3.1.74 Describe the assessment of the abdomen.

3.1.75 Describe the management of these pathological processes.

3.1.76 Describe the management of extremity injuries, both upper and lower.

3.1.77 Describe the anatomy of the upper and lower extremities.

3.1.78 Describe the pathophysiological processes that affect the upper and lower extremities.

3.1.79 Describe the management of fractures.

3.1.80 Describe the management of dislocations, explaining which should be reduced prehospital, which should not and why.

3.1.81 Describe the management for lacerations.

3.1.82 Describe the various types of splints which can be used for the immobilization of fractures, and list the advantages and disadvantages for each.

3.1.83 Desrcribe in detail the short backboard, the various types on the market, and the principles of immobilization of the cervical spine.

3.1.84 Describe the management of pelvic fractures.

3.1.85 Describe the significant pathophysiology of pelvic fractures.

3.1.86 Describe the anatomy of the spine including the cervical, thoracic, lumbar, and coccygeal regions.

3.1.87 Describe the anatomical differences in the various regions.

3.1.88 Describe the construction of the vertebrae in the various regions.

3.1.89 Describe the pathophysiologic processes that affect the spine including both the bony structures and the neurological structures.

3.1.90 Describe the assessment of the spine including the differences in the bony assessment and neurological assessment.

3.1.91 Describe continued monitoring of a patient.

3.1.92 Describe the various scores for assessing the severity of trauma injuries that have prehospital significance and those that do not.

3.1.93 Describe how a patient is monitored.

3.1.94 Describe transportation of a patient to a hospital.

3.1.95 Describe communication with a hospital.

3.1.96 Describe the procedure for the EMT-P-to-physician communication, the steps and the important information included in each step and the priority in each of the steps.

S3.1.97 Mouth-to-mask ventilation.

S3.1.98 Mouth-to-mouth ventilation.

S3.1.99 Bag-valve mask ventilation.

S3.1.100 Demand-valve ventilation.

S3.1.101 Oral airway insertion.

S3.1.102 Nasal airway insertion.

S3.1.103 Endotracheal tube.

S3.1.104 Esophageal obturator airway.

S3.1.105 PTL airway.

S3.1.106 Assessment of adequate ventilations.

S3.1.107 Management of an open pneumothorax.

S3.1.108 Decompression of a tension pneumothorax.

S3.1.109 Insertion of an IV line.

S3.1.110 Application of MAST trousers.

S3.1.111 Assessment of reestablishment of perfusion.

S3.1.112 A mini-neurological examination.

S3.1.113 Exposure of a patient for physical exam.

S3.1.114 Physical examination of the head.

S3.1.115 Physical examination of the neck.

S3.1.116 Physical examination of the thorax.
S3.1.117 Physical examination of the abdomen.
S3.1.118 Physical examination of the upper extremities.
S3.1.119 Physical examination of the lower extremities.
S3.1.120 Physical examination of the pelvis.
S3.1.121 Neurological examination.
S3.1.122 Application of the short backboard.
S3.1.123 Application of a long backboard.
S3.1.124 Splinting techniques for the upper extremities.
S3.1.125 Splinting techniques for the lower extremities.
S3.1.126 Immobilization of the cervical spine.
S3.1.127 Rapid extrication.
S3.1.128 Application of a cervical collar.
S3.1.129 Insertion of ET tube in the trauma patient.
S3.1.130 Insertion of an ET tube in the nontrauma patient.
S3.1.131 Reduction of a knee dislocation.
S3.1.132 Reduction of a shoulder dislocation.
S3.1.133 Reduction of a finger dislocation.
S3.1.134 Reduction of a fracture/dislocation of the ankle.

(S) Indicates Skill Objective

Section 2. Burns

Objectives

At the completion of this section, the student will be able 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.

3.2.15 Describe assessment and management of inhalation injury.

Section 1. Respiratory Section

Objectives

At the completion of this section, the student will be able 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.

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 ellicited 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 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.

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. Bronksol
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

S4.1.25 Demonstrate the technique of direct laryngoscopy.

S4.1.26 Demonstrate the upper airway obstruction protocol according to American Heart Association standards.

S4.1.27 Demonstrate the techniques of inspection, auscultation, and palpation in examining the thorax.

S4.1.28 Identify the following abnormal lung sounds:

a. Stridor
b. Wheezes
c. Rales
d. Rhonchi

S4.1.29 Demonstrate the ability to obtain an appropriate history when evaluating patients with respiratory complaints.

S4.1.30 Demonstrate the ability to perform an appropriate assessment when evaluating patients with respiratory complaints.

S4.1.31 Demonstrate the ability to appropriately administer the following drugs for the adult and pediatric patient:

a. Oxygen
b. Epinephrine
c. Bronksol
d. Racemic epinephrine
e. Aminophylline
f. Diphenhydramine

(S) Indicates Skill Objective

Section 2. Cardiovascular Section

Objectives

At the completion of this section the student will be able to:

4.2.1 Describe the size, shape, and location/orientation (in regards to other body structures) of the heart muscle.

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 septua
- —Superior and inferior vena cava
- —Aorta
- —Pulmonary vessels
- —Coronary arteries
- —Tricuspid valve
- —Mitral valve
- —Aortic valve
- —Pulmonic valve
- —Papillary muscles
- —Chordae tendinae

4.2.3 Describe the function of each structure listed in Objective 4.2.2.

4.2.4 Describe the distribution of the coronary arteries and the parts of the heart supplied by each artery.

4.2.5 Differentiate the structural and functional aspects of arterial and venous blood vessels

4.2.6 Name and describe the location of 5 major arteries and 5 major veins.

4.2.7 Describe the structure and function of capillaries.

4.2.8 Describe the course of blood flow through the normal heart and lungs.

4.2.9 Describe the cardiac cycle in terms of mechanical function and relative position of heart valve.

4.2.10 Describe the effects of increased heart rate on the contraction and relaxation phases of the cardiac cycle.

4.2.11 Describe the functional differences between the right heart and left heart pumps.

4.2.12 Define the following terms that refer to cardiac physiology:

- —Stroke volume
- —Starling's law
- —Preload
- —Afterload
- —Cardiac output
- —Blood pressure

4.2.13 Describe nerve innervation of the heart.

4.2.14 Name the chemical mediator of the parasympathetic nervous system and describe its primary effect on the heart.

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

4.2.16 Name major electrolytes that affect cardiac function

4.2.17 Describe the electrical properties of the heart.

4.2.18 Describe the normal sequence of electrical conduction through the heart and state the purpose of this conduction system.

4.2.19 Describe the location and function of the following structures of the electrical conduction system:

—SA Node
—Internodal and interatrial tracts
—AV Node
—Bundle of His
—Bundle branches
—Purkinje fibers

4.2.20 Define cardiac depolarization and repolarization and describe the major electrolyte changes that occur in each process.

4.2.21 Name three areas of the heart possessing pacemaking capabilities and state the intrinsic (inherent) rates of each area.

4.2.22 Describe an ECG.

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 intercal
—ST segment
—Absolute and relative
—Refractory period

4.2.24 Describe how electrical activity of the heart is affected by:

—Sympathetic stimulation
  —Alpha receptors
  —Beta receptors
—Parasympathetic stimulation

4.2.25 Name the common chief complaints of cardiac patients.

4.2.26 Describe why the following occur in patients with cardiac problems:

—Chest pain or discomfort
—Shoulder, arm, neck, or jaw pain/discomfort
—Syspnea
—Syncope
—Palpitations/abormal heart beat

4.2.27 Describe those questions to be asked during history taking for each of the common cardiac chief complaints.

4.2.28 Describe the four most pertinent aspects of the past medical history in a patient with a suspected cardiac problem.

4.2.29 Identify, in a list of common prescription drugs, those that a patient may be taking for cardiovascular problems.

4.2.30 Describe those aspects of the physical examination that should be given special attention in the patient with suspected cardiac problems.

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

4.2.32 Describe the pathophysiology of atherosclerosis.

4.2.33 List the three major modifiable risk factors for atherosclerosis.

4.2.34 Describe the common characteristics of the pain/discomfort that occurs in angina pectoris and acute myocardial infarction.

4.2.35 Describe the pathophysiology, signs and symptoms, and prehospital management (including drug therapy) 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

4.2.36 Describe 3 causes of cardiac arrest other than ASHD and describe how medical management of these situations differs.

4.2.37 Describe and contrast the etiology of cardiac arrest in infants and children from that of adult patients.

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. Isoproternol
8. Dopamine
9. Sodium bicarbonate
10. Calcium chloride
11. Oxygen
12. Nitrous oxide
13. Nitroglycerin
14. Morphine sulfate
15. Furosemide
16. Aminophylline
17. Diazepam

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. Propanolol

4.2.40 Describe the basic concept of ECG monitoring.

4.2.41 Define a monitoring lead and describe how it differs from a 12-lead ECG.

4.2.42 Describe what type of information can and cannot be obtained from a monitoring lead.

4.2.43 Describe information obtained from the vertical and horizontal axes of the ECG graph paper.

4.2.44 State the numerical values assigned to each small and each large box on the ECG graph paper for each axis.

4.2.45 Define ECG artifact and name the causes.

4.2.46 State the steps in the analysis format of ECG rhythm strips.

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

4.2.48 Describe two common methods for calculating heart rate on an ECG rhythm strip and the indications for using each method.

4.2.49 Name 8 causes of dysrhythmias.

4.2.50 Describe the mechanisms of electrical impulses formation.

4.2.51 Describe the etiology, Lead II ECG characteristics, clinical significance, and emergency treatment of each of the following dysrhythmias:

—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 II
—Third degree AV block
—Bundle branch block/aberrant ventricular conduction

*4.2.52 Describe the indications for use of rotating tourniquets.

4.2.53 Describe the indications for use of a precordial thump.

4.2.54 Describe the indications for use of synchronized cardioversion.

4.2.55 Describe energy recommendations for defibrillation of adult and pediatric patients.

*S4.2.56 Describe the indications and complications of intracardiac injections.

S4.2.57 Demonstrate the correct procedure for obtaining a history and performing a physical exam for cardiac-related problems.

S4.2.58 Demonstrate assessment techniques and emergency management of patients with any of the conditions listed in Objective 4.2.35.

S4.2.59 Demonstrate preparation and proper administration of a prescribed dose of any of the cardiac drugs listed in Objective 4.2.38.

S4.2.60 Identify the following on any rhythm strip:

—P waves
—QRS complexes
—P-P intervals
—R-R intervals
—PR intervals
—ST segments
—T waves
—Isoelectric line

S4.2.61 Recognize each of the dysrhythmias listed in Objective 4.2.51 on Lead II rhythm strips or ECG monitor.

S4.2.62 Demonstrate appropriate clinical assessment and management of a cardiac patient having any of the dysrhythmias listed in Objective 4.2.51.

S4.2.63 Demonstrate on an adult mannequin, the techniques for single and two-person CPR according to American Heart Association standards.

S4.2.64 Demonstrate on an infant mannequin, the technique for infant CPR according to American Heart Association standards.

S4.2.65 Demonstrate proper application of ECG chest electrodes and obtain a sample Lead II or MCL1 rhythm strip.

S4.2.66 Demonstrate the proper use of the defibrillator paddle electrodes to obtain a sample Lead II rhythm strip.

S4.2.67 Demonstrate how to properly assess the cause of poor ECG tracing.

*S4.2.68 Demonstrate the proper application of rotating tourniquets.

S4.2.69 Demonstrate the proper technique for administering a precordial thump.

S4.2.70 Demonstrate correct operation of a monitor-defibrillator to perform defibrillation on an adult and infant.

S4.2.71 Demonstrate the correct technique for performing synchronized cardioversion.

*S4.2.72 Demonstrate on a mannequin the proper procedure for patient assessment and performance of cartoid massage.

S4.2.73 Demonstrate the correct technique for performing non-invasive (external) cardiac pacing.

*S4.2.74 Demonstrate correct preparation and administration of an intracardiac injection.

*S4.2.75 Demonstrate proper application and operation of mechanical CPR adjunctive device.

(S) Indicates Skill Objective

(*) Indicates an optional objective to be addressed according to the local protocol

Section 3. Endocrine Emergencies

Objectives

At the end of this section, the student will be able 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

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

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. Intravenous therapy
   c. Drug therapy
   d. Circulation

4.3.31 Discuss the general management of the ketoacidotic patient who is unconscious, including:

a. Airway management
b. Intravenous therapy
c. Drug therapy
d. Circulation

Section 4. Nervous System

Objectives

Upon completion of this section, the student will be able 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.

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.

S4.4.23 Demonstrate the ability to obtain an appropriate history when evaluating patients with nervous system disorders.

S4.4.24 Demonstrate the ability to perform an appropriate assessment when evaluating patients with nervous system disorders.

S4.4.25 Demonstrate a complete neurologic examination.

S4.4.26 Demonstrate the ability to appropriately evaluate a patient utilizing the Glasgow Coma Scale.

S4.4.27 Demonstrate the ability to appropriately administer the following drugs for the adult and pediatric patient.

a. Dextrose 50%
b. Naloxone
c. Diazepam

S4.4.28 Demonstrate the ability to appropriately manage a patient with a nervous system disorder.

(S) Indicates Skill Objective

Section 5. Acute Abdomen

Objectives

At the end of this section, the student will be able 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.

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 gastrointestial 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.

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.

S4.5.30 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

S4.5.31 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

S4.5.32 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.

(S) Indicates Skill Objective

Section 6. Anaphylaxis

Objectives

At the completion of this section, the student will be able 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.

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 (Benedryl)
- d. Aminophylline.

S4.6.9 Demonstrate the ability to take a relevant history from the patient with anaphylaxis.

S4.6.10 Demonstrate competency in effective assessment and management of the patient with anaphylaxis, including drug therapy.

(S) Indicates Skill Objective

Section 7. Toxicology, Alcoholism and Drug Abuse

Objectives

At the completion of this section, the student will be able to:

4.7.1 Discuss the relative importance of toxicologic emergencies in pre-hospital 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.

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, cooperhead or cotton-mouth water mocassin.
f. Coral snake
g. Marine animals.

4.7.12 Describe the general principles of management of a patient with a surface absorbed poison.

4.7.13 Describe the signs, symptoms and management of the following specific cases of surface absorbed poison:

a. Organophosphate chemicals
b. Cyanide

4.7.14 Describe the general principles of management of a patient with an overdose.

4.7.15 Describe the signs, symptoms and management of the following specific cases of overdose:

a. Narcotics
b. Sedatives/depressants
c. Aspirin
d. Acetaminophen.

4.7.16 Discuss the incidence of drug abuse in the U.S.

4.7.17 Define the following terms:

a. Substance or drug abuse
b. Substance or drug dependence
c. Tolerance
d. Withdrawal
e. Addiction.

4.7.18 List the most commonly abused drugs (both by chemical name and "street names") and describe their physiological and psychological effects.

4.7.19 Describe the management of emergencies stemming from the use of the following

a. Hallucinogens (LSD, mescaline, DMT, psilocibin)
b. Phencyclidine (PCP)
c. Cocaine
d. Cannabis (marijuana)
e. Amphetamine.

4.7.20 Discuss the incidence of alcoholism in the U.S.

4.7.21 Discuss the signs, symptoms and management of acute alcohol overdose.

4.7.22 Discuss the signs and symptoms of chronic alcohol use.

4.7.23 Discuss the signs, symptoms and management of alcoholic withdrawal (delirium tremens or "DT's").

S4.7.24 Demonstrate the application of a constricting band.

S4.7.25 Demonstrate the procedures for incising a snake bite wound.

(S) Indicates Skill Objective

Section 8. Infectious Diseases

Objectives

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

4.8.1 Define virus.
4.8.2 Define bacteria.
4.8.3 Define fungus.
4.8.4 Briefly discuss the body's immune system.
4.8.5 Define antigen.
4.8.6 Define antibody.
4.8.7 Define antigenic determinants.
4.8.8 Define clone cells.
4.8.9 Define leukocyte.
4.8.10 Discuss the major components of the immune system.
4.8.11 Define lymph.
4.8.12 Define interstitial fluid.
4.8.13 Discuss composition of lymph and interstitial fluid.
4.8.14 Discuss the lymphatic system.
4.8.15 Discuss lymph circulation.
4.8.16 Discuss the function of:
  a. Lymph
  b. Antibody
  c. Thymus
  d. Spleen.
4.8.17 Discuss the formation and types of lymphocytes.
4.8.18 Discuss the development, activation and function of B cells.
4.8.19 Discuss the development, activation and function of T cells.
4.8.20 Identify and discuss the location of lymphocytes.
4.8.21 Describe the structure and types of antibodies.
4.8.22 Discuss agammaglobulinemia.
4.8.23 Define autoimmune diseases.
4.8.24 Define infectious disease and the general cause.
4.8.25 List 3 examples of infectious diseases and the general cause.
4.8.26 Discuss how infectious diseases are transmitted.
4.8.27 Define communicable disease.
4.8.28 Give an example of a highly communicable disease caused by a virus.
4.8.29 Give an example of a communicable disease caused by bacteria.
4.8.30 Give an example of a communicable disease caused by fungi.
4.8.31 Discuss how stress may be related and affect disease.

4.8.32 Refer also to anatomy and physiology of specific body systems, which are affected by specific diseases.

4.8.33 Identify the pertinent history-related questions to be asked when evaluating the patient with an infectious disease.

4.8.34 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.

4.8.35 Define tuberculosis.

4.8.36 Discuss the pathophysiology of tuberculosis, including:

a. Acute generalized form
b. Chronic localized form.

4.8.37 Discuss the body systems commonly affected by tuberculosis.

4.8.38 Discuss signs and symptoms related to the patient with tuberculosis.

4.8.39 Discuss assessment and management of the patient with tuberculosis.

4.8.40 Discuss EMT safety as related to handling the patient with tuberculosis.

4.8.41 Define hepatitis.

4.8.42 Discuss the pathophysiology of hepatitis.

4.8.43 Discuss the body systems commonly affected by hepatitis.

4.8.44 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

4.8.45 Discuss assessment and management of the patient with hepatitis.

4.8.46 Discuss EMT safety as related to handling the patient with hepatitis.

4.8.47 Define meningitis.

4.8.48 Discuss the causes of meningitis.

4.8.49 Discuss the pathophysiology of meningitis.

4.8.50 Discuss the body systems commonly affected by meningitis.

4.8.51 Discuss signs and symptoms related to the patient with meningitis

4.8.52 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.

4.8.53 Discuss assessment and management of the patient with meningitis.

4.8.54 Discuss EMT safety as related to handling the patient with meningitis.

4.8.55 Define syphilis.

4.8.56 Discuss the types of syphilis.

4.8.57 Discuss the pathophysiology of syphilis.

4.8.58 Discuss the body systems commonly affected by syphilis.

4.8.59 Discuss the signs and symptoms related to the patient with syphilis.

4.8.60 Define gonorrhea.

4.8.61 Discuss the pathophysiology of gonorrhea.

4.8.62 Discuss the body systems commonly affected by gonorrhea.

4.8.63 Discuss the signs and symptoms related to the patient with gonorrhea.

4.8.64 List two types of herpes simplex

4.8.65 Discuss the pathophysiology of herpes simplex type 2.

4.8.66 Discuss the body systems commonly affected and incubation period of herpes simplex type 2.

4.8.67 Discuss the signs and symptoms related to the patient with herpes simplex type 2.

4.8.68 Define Acquired Immune Deficiency Syndrome (AIDS).

4.8.69 Discuss the pathophysiology of AIDS.

4.8.70 Discuss the body systems commonly affected and incubation period of AIDS.

4.8.71 Discuss the signs and symptoms related to the patient with AIDS.

4.8.72 Discuss assessment and management of the patient with a sexually transmitted disease.

4.8.73 Discuss EMT safety as related to handling the patient with a sexually transmitted disease.

4.8.74 Define and discuss the pathophysiology of scabies.

4.8.75 Define and discuss the pathophysiology of lice.

4.8.76 Discuss the body systems commonly affected by scabies/lice.

4.8.77 Discuss the signs and symptoms related to the patient with scabies/lice.

4.8.78 Discuss assessment and management of the patient with scabies/lice.

4.8.79 Discuss EMT safety as related to handling the patient with scabies/lice.

4.8.80 Define measles.

4.8.81 Discuss the pathophysiology of measles.

4.8.82 Discuss the signs and symptoms related to the patient with measles.

4.8.83 Define mumps.

4.8.84 Discuss the pathophysiology of mumps.

4.8.85 Discuss the signs and symptoms related to the patient with mumps.

4.8.86 Define chickenpox.

4.8.87 Discuss the pathophysiology of chickenpox.

4.8.88 Discuss the signs and symptoms related to the patient with chickenpox.

4.8.89 Discuss the assessment and management of the patient with a childhood disease.

4.8.90 Discuss EMT safety as related to handling the patient with a childhood disease.

4.8.91 Discuss follow-up after exposure

a. Notification procedures by hospital

b. Notification procedures by EMT

4.8.92 Discuss EMT personnel hygiene.

4.8.93 Discuss vehicle cleaning procedures.

S4.8.94 Demonstrate the ability to take a history from the patient with an infectious disease.

S4.8.95 Demonstrate the ability to perform a complete physical assessment on the patient with an infectious disease.

(S) Indicates Skill Objective

Section 9. Environmental Injuries

Objectives

At the completion of this section, the student will be able 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.

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.

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 resusciation 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.

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.

Section 10. Geriatrics/Gerontology

Objectives

At the completion of this section, the student will be able 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.

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.

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.

Discuss the following as related to the geriatric patient:

4.10.26 Aortic dissection.

4.10.27 Abdominal aortic aneurysm.

4.10.28 Peripheral arterial and venous conditions.

4.10.29 General management. (See also Cardiovascular Section)

a. As related to general management, list 4 conditions which may cause the physician to alter cardiac drug therapy

b. Discuss precautions as related to administration of fluids.

Refer to Respiratory Section for pathophysiology and management.

4.10.30 As related to the elderly patient, list 6 conditions that may be associated with respiratory distress.

4.10.31 Discuss findings which may be specific to the geriatric patient suffering from pulmonary embolism.

4.10.32 Discuss findings that may be specific to the geriatric patient suffering from respiratory tract infection.

4.10.33 Discuss chronic bronchitis with reference to the geriatric.

4.10.34 Discuss management of respiratory distress.

4.10.35 Discuss the pathophysiology of carcinoma, in general.

4.10.36 List 4 kinds of cancer directly attributable to high mortality rate.

4.10.37 List 6 signs/symptoms of carcinoma.

4.10.38 Discuss general management of the cancer patient.

4.10.39 Discuss GI bleed as related to geriatric patients.

4.10.40 Discuss 2 causes of upper intestinal hemorrhage.

4.10.41 Discuss 4 causes of massive lower intestinal hemorrhage.

4.10.42 Discuss 6 significant signs of blood loss.

4.10.43 Discuss cholecystitis/biliary disease as related to the elderly patient.

4.10.44 Discuss small bowel obstruction and 2 causes.

4.10.45 Discuss large bowel obstruction, including:

a. Main cause

b. Main signs/symptoms

4.10.46 Discuss diverticulitis, including signs/symptoms.

4.10.47 Discuss appendicitis, including:

a. Signs/symptoms

b. Complications

4.10.48 Discuss pancreatitis, including common cause and symptoms.

4.10.49 Discuss peptic ulcer disease/perforation, including:

a. Common cause

b. Signs/symptoms

4.10.50 As related to the elderly, list related signs and symptoms as associated with gastrointestinal disorders.

4.10.51 Discuss the general management of critical GI bleed in the elderly.

4.10.52 Refer to Environmental Emergencies Section. Discuss tolerance of temperatures.

4.10.53 Discuss 6 predisposing factors for hypothermia common in geriatric patients.

4.10.54 Discuss 3 predisposing factors for hyperthermia common in geriatric patients.

4.10.55 Discuss general management of environmental emergencies.

4.10.56 List at least 6 reasons that the elderly are more prone to falls.

4.10.57 List 3 reasons that the elderly are more prone to head injuries.

4.10.58 List 3 reasons that the elderly are more prone tp cervical spine injuries.

4.10.59 Prehospital priorities of care for trauma in elderly are similar to those for all trauma patients; list 2 considerations.

4.10.60 Discuss trauma management considerations in the elderly for the following systems:

a. Cardiovascular system

b. Respiratory system

c. Renal system

4.10.61 Discuss positioning, immobilization and packaging of the elderly trauma patient (with consideration of physical deformities).

4.10.62 List at least 6 factors which contribute to adverse drug reactions in the elderly.

4.10.63 List at least 10 drugs which commonly cause toxicity in the geriatric patient.

4.10.64 As related to digitalis intoxication, discuss:
- a. Symptoms
- b. Drug interactions
- c. Management

4.10.65 As related to diuretic use, discuss:
- a. Symptoms of adverse reaction
- b. Drug interaction
- c. Management.

4.10.66 As related to antihypertensive drug use, discuss:
- a. Symptoms of adverse reaction
- b. Drug interaction
- c. Management.

4.10.67 As related to antiarrhythmic drug use, discuss:
- a. Symptoms of adverse reaction
- b. Drug interaction
- c. Management.

4.10.68 As related to psychotropic drug use, discuss:
- a. Symptoms of adverse reaction
- b. Drug interaction
- c. Management.

4.10.69 As related to antidepressant use, discuss:
- a. Symptoms of adverse reaction
- b. Drug interaction
- c. Management.

4.10.70 As related to salicylate use, discuss:
- a. Symptoms of adverse reaction
- b. Drug interaction
- c. Management.

4.10.71 Discuss geriatric abuse and factors which precipitate abuse.

4.10.72 Discuss signs and symptoms as related to geriatric abuse.

4.10.73 Discuss the profile of a potential geriatric abuser.

4.10.74 Discuss at least 2 considerations as related to obtaining a history from the abused geriatric.

4.10.75 Discuss, in general gerontology program services, including objectives of the program.

4.10.76 Discuss the following components of a gerontology program:
- a. In-home assessment
- b. Family conference.

Section 11. Pediatrics

Objectives

Upon the completion of this section, the student will be able 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.

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 accord ing 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

4.11.25 Using AHA ACLS Standards, identify the correct pediatric dosage for the following:

a. Atropine sulfate
b. Calcium chloride
c. Dopamine
d. Epinephrine
e. Epinephrine infusion
f. Furosemide
g. Isoproterenol
h. Lidocaine
i. Lidocaine infusion
j. Naloxone
k. Sodium bicarbonate

4.11.26 Describe the technique for endotracheal intubation in the pediatric patient.

4.11.27 Identify appropriate blade sizes and endotracheal tube sizes for the pediatric patient.

4.11.28 Describe the site selection for intravenous infusions in the pediatric patient.

4.11.29 Describe the equipment selection for intravenous therapy in the pediatric patient.

S4.11.30 Demonstrate the ability to assess vital signs in the pediatric patient utilizing the appropriate equipment.

S4.11.31 Demonstrate the ability to obtain an appropriate history when evaluating the pediatric patient.

S4.11.32 Demonstrate the ability to perform an appropriate assessment when evaluating the pediatric patient.

S4.11.33 Demonstrate the ability to manage airway obstruction in the infant and child.

S4.11.34 Demonstrate the ability to perform CPR on the pediatric patient according to American Heart Association standards.

S4.11.35 Demonstrate the ability to perform endotracheal intubation in the pediatric patient.

S4.11.36 Demonstrate the ability to perform intravenous therapy on the pediatric patient including selection of appropriate equipment, solutions and anatomical sites.

(S) Indicates Skill Objective

Section 1. OB/GYN/Neonatal

Objectives

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

5.1.1 Identify and describe the location and functions of the following:
- a. Ovaries
- b. Fallopian tubes
- c. Uterus
- d. Vagina
- e. Cervix
- f. Perineum
- g. Labia
- 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 Identify the normal site of:
- a. Ovum fertilization
- b. Ovum implantation

5.1.12 Identify and describe the functions of the following:
- a. Placenta
- b. Umbilical cord
- c. Amniotic sac and fluid

5.1.13 Describe fetal development and circulation.

5.1.14 Define the following terms:
- a. Antepartum
- b. Postpartum
- c. Natal
- d. Prenatal
- e. Primigravida
- f. Primipara
- g. Multigravida
- h. Multipara

5.1.15 Identify specific details of history that should be obtained in the obstetric patient.

5.1.16 Identify specific physical findings that should be assessed in the obstetric patient.

5.1.17 List early signs and symptoms of pregnancy.

5.1.18 Discuss the possible effects of trauma on both mother and fetus.

5.1.19 Discuss the effect of pregnancy on the following pre-existing diseases:
- a. Diabetes
- b. Essential hypertension
- c. Neuromuscular disorders
- d. Cardiac disorders

5.1.20 Define the following terms:
- a. Spontaneous abortion
- b. Criminal abortion
- c. Therapeutic abortion

5.1.21 Describe the pathophysiology, assessment and management of the patient who has had, or is having an abortion.

5.1.22 Describe the pathophysiology, assessment and management of the following:
- a. Ectopic pregnancy
- b. Abruptio placenta
- c. Placenta previa

5.1.23 Describe Braxton-Hicks contractions and their significance.

5.1.24 Describe the pathophysiology, assessment and management of eclampsia and preeclampsia

5.1.25 Describe the signs, symptoms and management of supine hypotensive syndrome.

5.1.26 Define the stages of labor and the length of each.

5.1.27 Describe the progression of labor.

5.1.28 Define the following terms:
- a. Effacement
- b. Cervical dilatation
- c. Crowning
- d. Presenting part

5.1.29 Discuss factors that influence transport decisions for the patient in labor.

5.1.30 List and describe steps for a normal delivery.

5.1.31 Describe the management during delivery when the cord is wrapped around the baby's neck.

5.1.32 Describe the pathophysiology, assessment and management of cephalopelvic disproportion (CPD).

5.1.33 List factors that may cause a large fetus.

5.1.34 List and describe 5 abnormal positions or presentations of the fetus during delivery and the general management principles.

5.1.35 Describe the pathology and management of a prolapsed umbilical cord.

5.1.36 Describe the management of the multiple birth delivery.

5.1.37 Describe the occurrence, complications and management of a precipitate labor.

5.1.38 Describe the pathophysiology, assessment and management of postpartum hemorrhage.

5.1.39 Discuss the indications for and technique of fundal massage.

5.1.40 Describe the pharmacology and actions, indications, precautions, administration and side effects of oxytocin.

5.1.41 Describe the pathophysiology, assessment and management of uterine rupture.

5.1.42 Identify the pathophysiology, assessment and management of uterine inversion.

5.1.43 Identify the pathophysiology, assessment and management of pulmonary embolism during the antepartum or postpartum period.

5.1.44 Describe the routine care of the newborn.

5.1.45 List 4 means by which heat loss occurs in infants.

5.1.46 Describe methods of heat conservation in the newborn.

5.1.47 Discuss the effects of hypothermia on the newborn infant.

5.1.48 Define the parameters of Apgar scoring and the numerical values utilized.

5.1.49 Describe resuscitation for the distressed infant.

5.1.50 Describe 2 methods of stimulating the distressed infant.

5.1.51 Describe the appropriate administration of oxygen to the newborn.

5.1.52 Describe methods of ventilatory assistance for the newborn infant.

5.1.53 Identify the rate of ventilation to be used in the nonbreathing newborn.

5.1.54 Describe the technique for cardiac compressions on the newborn.

5.1.55 Identify the significance of meconium staining.

5.1.56 Identify the major problems that occur during transport of the neonate.

5.1.57 Identify heat sources that may and may *not* be utilized to warm the neonate.

S5.1.58 Demonstrate the ability to properly assess the patient with a possible gynecologic disorder.

S5.1.59 Demonstrate the ability to properly assess the pregnant patient.

S5.1.60 Demonstrate the ability to obtain an appropriate history when evaluating the patient with an obstetric chief complaint.

S5.1.61 Demonstrate the ability to perform an appropriate assessment when evaluating an obstetric patient.

S5.1.62 Demonstrate the ability to appropriately administer oxytocin.

S5.1.63 Demonstrate the technique of fundal massage.

S5.1.64 Demonstrate the ability to use bulb syringe suction, and DeLee suction.

S5.1.65 Demonstrate the ability to clamp and cut an umbilical cord.

S5.1.66 Demonstrate the ability to calculate an accurate Apgar score.

S5.1.67 Demonstrate the ability to appropriately manage a newborn infant.

S5.1.68 Demonstrate the ability to perform infant CPR according to AHA standards.

(S) Indicates Skill Objective

Division 6: Behavioral

Section 1. Behavioral Emergencies

Objectives

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

6.1.1 Define the term "Behavioral Emergency."

6.1.2 List factors that may alter the emotional status of the ill or injured.

6.1.3 List those factors specific to the pediatric patient experiencing emotional crisis.

6.1.4 List the techniques of management of all children who are emotional.

6.1.5 List those factors specific to the elderly patient experiencing crisis.

6.1.6 Define the following terms:

a. Anxiety
b. Confusion
c. Anger
d. Emotional crisis
e. Conversion reaction
f. Fear
g. Depression.

6.1.7 List the proper verbal communication techniques useful in managing the emotionally disturbed patient.

6.1.8 List the reasons for taking appropriate means to insure the safety of the paramedic.

6.1.9 Describe the reason for reassuring the patient experiencing an emotional crisis.

6.1.10 Describe the circumstances when bystanders and relatives should be removed from the scene

6.1.11 List those factors that increase the risk of suicides.

6.1.12 Describe those behaviors that are indirect indicators of an impending suicide attempt.

6.1.13 Describe those overt behavioral modifications associated with:

a. Rage
b. Hostility
c. Suicide
d. Violence
e. Depression
f. Hyperactivity
g. Paranoia.

6.1.14 Define the following terms:

a. Facilitation

b. Confrontation

c. Open-ended questions

d. Affect

e. Posture

f. Mental status.

6.1.15 Describe the techniques that facilitate the systematic gathering of information from the disturbed patient.

5.1.16 Describe the techniques that are useful in managing the effects of crisis situations on the EMT-P.

6.1.17 Define the term "debrieling" as a technique for controlling EMT-P stress following a stress situation.

6.1.18 Describe the techniques that may be useful in redirecting anxiety in relatives and bystanders.

6.1.19 Describe the appropriate action of the EMT-P when confronted by the uncontrollable armed patient.

6.1.20 Describe the appropriate techniques used in restraining the patient.

6.1.21 Describe those techniques useful in protecting the EMT-P when attacked by a violent patient.

6.1.22 List those situations in which the EMT-P is expected to restrain or transport a patient forcibly and against his will.

6.1.23 List the appropriate communications of significant findings to the resource hospital.

6.1.24 Describe the techniques that are useful in managing the effects of crisis situations on the RMT-P.

6.1.25 Define the term "debrieling" as a technique for controlling EMT-P stress following a stress situation.

APPENDIX A

Division 1: Prehospital Environment	Division 2: Preparatory	Division 3: Trauma	Division 4: Medical	Division 5: Ob/Gyn Neonatal	Division 6: Behavioral
1. Roles and Responsibilities 2. EMS Systems 3. Medical/Legal Considerations 4. EMS Communications 5. Rescue 6. Major Incident Response 7. Stress Management	1. Medical Terminology 2. General Patient Assessment and Initial Management 3. Airway and Ventilation 4. Pathophysiology of Shock 5. General Pharmacology	1. Trauma 2. Burns	1. Respiratory Section 2. Cardiovascular Section 3. Endocrine Emergencies 4. Nervous System 5. Acute Abdomen, Genitourinary, Reproductive Systems 6. Anaphylaxis 7. Toxicology, Alcoholism and Drug Abuse 8. Infectious Diseases 9. Environmental Injuries 10. Geriatrics/ Gerontology 11. Pediatrics	1. OB/Gyn/ Neonatal	1. Behavioral Emergencies

APPENDIX B

Division 1: Hours	Division 2: Hours	Division 3: Hours	Division 4: Hours	Division 5: Hours	Division 6: Hours
1.1 : (1)	2.1 : (1)	3.1 : (18)	4.1 : (12)	5.1 : (8)	6.1 : (8)
1.2 : (1)	2.2 : (6)	3.2 : (2)	4.2 : (80)		
1.3 : (1)	2.3 : (8)	(ATLS)	4.3 : (5)		
1.4 : (3)	2.4 : (16)		4.4 : (2)		
1.5 : (4)	2.5 : (6)		4.5 : (3)		
1.6 : (3)			4.6 : (1)		
1.7 : (2)			4.7 : (5)		
			4.8 : (2)		
			4.9 : (6)		
			4.10 : (2)		
			4.11 : (6)		
TOTAL HOURS 15	37	20	124	8	8

The total number of hours of actual didactic lecture time in the above six divisions equals 212 hours. However, it is estimated it will take 300 - 350 total classroom hours to adequately cover the above content areas once reviews, testing, and practical labs are included.

APPENDIX C

CLINICAL AREAS	HOURS
1. Emergency Department	100
2. Intensive Care Unit / Coronary Care Unit	40
3. Operating / Recovery Room	24
4. Intravenous Team (if available)	8
5. Pediatric Unit	24
6. Labor Suite / Delivery Room/ Newborn Nursery	24
7. Psychiatric Unit or Crisis Center	8
8. Morgue	4
	TOTAL 232

EMERGENCY MEDICAL SERVICES

Equipment Usage

Item Number	Description	Item Number	Description
1	Abdominal Pack	46	Gloves (Sterile)
2	Ace Bandage	47	Hot Pack
3	Airway (Oropharyngeal)	48	Hydraulic Rescue Kit (Port-power)
4	Alcohol Prep Sponge	49	I.V. Board
5	Aluminum Foil (Sterile)	50	I.V. Catheter
6	Ambulance Trip Report Forms	51	I.V. Hanger
7	Atropine	52	Incubator
8	Bag Mask Resuscitator	53	Intravenous Administration Set
9	Band Aids	54	Intravenous Fluids (D5W)
10	Beacon	55	Intravenous Fluids (Lactated Ringers)
11	Bed Pan		
12	Bite Stick	56	Irrigation Tray
13	Blankets	57	Jelly (K.Y.)
14	Blood Pressure Cuff	58	Jump Kit
15	Board (Padded)	59	Laryngoscope
16	Board Splint	60	Lidocaine
17	Bulb Syringe	61	Linen
18	Burial Pouch	62	Long Backboard
19	Burn Sheet (Sterile)	63	Maps
20	Butterfly Needle	64	Mouth-to-Mouth Artificial Ventilation Airway
21	C.P.R. Board		
22	Cardiac Monitor	65	Multi-Level Stretcher
23	Cervical Collar	66	Multi-Trauma Dressing
24	"Choke Saver"	67	Nasal Cannulas
25	Cold Pack	68	Nasal Catheter
26	Connecting Tubing (Oxygen)	69	Naso-Gastric Tube
27	Connecting Tubing (Suction)	70	Obstetrical Kit
28	Cotton Swabs	71	Oxygen Mask
29	Defibrillator	72	Oxygen Tank (Portable)
30	Defibrillator Rack	73	Oxygen Tank With Humidifier
31	Distilled Water	74	Paper Bag
32	Doctor's Bag	75	Paper Pad
33	E.K.G. Printout	76	Pen Light
34	Elastic Gauze (Kling)	77	Pencil (or Pen)
35	Electrical Outlet (Inverter)	78	Pillow
36	Electrode Paste	79	Pneumatic Splint
37	Electrodes	80	Poison Antidote Kit
38	Emesis Basin	81	Prep Kit
39	Endo-Tracheal Tube	82	Prep Razor
40	Epinephrine	83	Q-Tips
41	Esophogeal Airway	84	Radio (Two-Way)
42	Extrication Hand Tools	85	Restraints
43	Fire Extinguisher	86	Ring Cutter
44	Flashlight	87	Rope
45	Gauze Pads (Sterile, 4 x 4)	88	Safety Pins

Staff

It is anticipated that the program standards and the program guide developed as a result of this poject will not change present staffing levels and certification requirements because those requirements are set by law.

EMERGENCY MEDICAL SERVICES, Equipment Usage

Item Number	Description	Item Number	Description
89	Sand Bag	132	Tubes
90	Scalpel (Sterile)	133	Granulated Sugar
91	Scissors (Bandage)	134	Ammonia Capsules
92	Scoop Stretcher	135	Sodium Chloride
93	Short Backboard	136	Ladder Splints
94	Shovel	137	Air Chisel
95	Siren	138	Positive Pressure Ventilator
96	Snake Bite Kit	139	Pulse Monitor (Electronic)
97	Sodium Bicarbonate	140	Blood Pressure Monitor (Electronic)
98	Sponge (Quick Clean)	141	Mechanical Resuscitator
99	Stair Chair	142	Air Packs
100	Stethoscope	143	Safety Flairs
101	Stop Watch	144	Dextrose
102	Stretcher (Portable)	145	Normal Saline
103	Stretcher Straps	146	Arm Slings
104	Suction Catheter	147	Aluminum Splints
105	Suction Unit (Manifold Operated)	148	Micro Resuscitator Inhalator
106	Suction Unit (Portable)	149	Electrical Gloves
107	Surgi-Combine Dressing	150	Intercom
108	Surgical Dressing	151	Thermometer
109	Syringe (Sterile)	152	Air Splint
110	Tachograph	153	Sterile Face Mask
111	Tape (Adhesive)	154	Sterile Stomach Tube With 50CC
112	Tongue Depressor	155	Sterile Finger Bandages
113	Tourniquet	156	Reno Wrench
114	Traction Splint	157	Floating Backboard
115	Triangular Bandage	158	Canvas Pack Splint
116	Urinal	159	Electronic Finger Pulse
117	Vaseline Gauze	160	Thomas Splint (Half Ring)
118	Walkie-Talkie	161	Ladder
119	Wash Basin	162	Winch
120	Water (Sterile)	163	Thirty Ton Jack
121	Wood Blocks	164	Flood Lights
122	Hurst Tool	165	Digital Dial Encoder
123	Radio Telemetry	166	Non-Pneumatic Splint
124	Medicuts	167	Dextro Stick
125	Cathlons	168	Blood Lances
126	Lasix	169	Vacutainers
127	Benadryl	170	Disposable Knife Blades
128	Fracture Pak	171	Electronic Respiration Meter
129	K12 Saw	172	Self-Contained Breathing Unit
130	Sterile Eye Pads	173	Burn Dressing Kit
131	Hemostats		

Facilities

The State Technical Committee members, while recognizing the emergency medical services movement toward more technologically advanced life support equipment, did not believe that use of new equipment would necessitate any major facilities changes. Therefore, it is anticipated that very minor modifications in the present Emergency Medical Service program facilitites will be sufficient to implement this program and to keep the program up-to-date.

CODE OF ETHICS OF THE NATIONAL ASSOCIATION OF EMT's

Professional status as an Emergency Medical Technician and Emergency Medical Technician-Paramedic is maintained and enriched by the willingness of the individual practitioner to accept and fulfill obligations to society, other medical professionals, and the profession of Emergency Medical Technician. As an Emergency Medical Technician at the basic level or an Emergency Medical Technician-Paramedic, I solemnly pledge myself to the following code of ethics.

A fundamental responsibility of the Emergency Medical Technician is to conserve life, to alleviate suffering, to promote health, to do no harm, and to encourage the quality and equal availability of emergency medical care.

The Emergency Medical Technician provides services based on human need with respect for human dignity, unrestricted by considerations of nationality, race, creed, color, or status.

The Emergency Medical Technician does not use professional knowledge and skills in any enterprise detrimental to the public well-being.

The Emergency Medical Technician respects and holds in confidence all information of a confidential nature obtained in the course of professional work unless required by law to divulge such information.

The Emergency Medical Technician, as a citizen, understands and upholds the law and performs the duties of citizenship. As a professional, the Emergency Medical Technician has the never ending responsibility to work with concerned citizens and other health care professionals in promoting a high standard of emergency medical care to all people.

The Emergency Medical Technician shall maintain professional competence and demonstrate concern for the competence of other members of the Emergency Medical Services health care team.

An Emergency Medical Technician assumes responsibility for individual professional actions and judgement, both in dependent and independent emergency functions, and knows and upholds the laws which affect the practice of the Emergency Medical Technician.

An Emergency Medical Technician has the responsibility to be aware of and participate in matters of legislation affecting the Emergency Medical Technician and the Emergency Medical Services System.

The Emergency Medical Technician adheres to standards of personal ethics which reflect credit upon the profession.

Emergency Medical Technicians, or groups of Emergency Medical Technicians, who advertise professional services, do so in conformity with the dignity of the profession.

The Emergency Medical Technician has an obligation to protect the public by not delegating to a person, less qualified, any service which requires the professional competence of an Emergency Medical Technician.

The Emergency Medical Technician will work harmoniously with, and sustain confidence in, Emergency Medical Technician associates, the nurse, the physician, and other members of the emergency medical services health care team.

The Emergency Medical Technician refuses to participate in unethical procedures, and assumes the responsibility to expose incompetence or unethical conduct of others to the appropriate authority in a proper and professional manner.

APPENDICES

APPENDIX A

COURSE OUTLINE

Basic Training Program
Emergency Medical Technician - Ambulance

State Board of Postsecondary Vocational Education

UNIT	TOPIC	HOURS
I.	Introduction to Emergency Medical Services	04
	A. Introduction to course: objectives, scope, procedures, and requirements for satisfactory completion.	
	B. Roles and responsibilities of the EMT.	
	C. Medico-Legal aspects of prehospital emergency care.	
	D. Familiarization with an ambulance and ambulance equipment. (Requires on-site ambulance)	
II.	Anatomy and Physiology	10
	A. Topographic anatomy.	
	B. Overview of body systems and functions.	
	C. Introduction to medical terminology.	
III.	Patient Assessment	14
	A. Definition and criticality.	
	B. Problems associated with assessment.	
	C. Sources of information.	
	D. Mechanisms of injury.	
	E. Field assessment.	
	F. Signs verses symptoms.	
	G. Uses in diagnosis.	
	H. Overview of signs.	
	I. Medical I. D. symbols	
	J. Assessment stages.	
	K. Primary patient assessment.	
	L. Secondary patient assessment.	
	M. Practice sessions.	

UNIT	TOPIC	HOURS
P-1	Practical Exercise #1	03
	(All practical skills to date.)	
W-1	Written Test #1	01
	(All material to date.)	
IV.	Airway Care and Pulmonary Arrest	04
	A. Review of anatomy and physiology of pulmonary system.	
	B. S&S of pulmonary dysfunction.	
	C. Treatment of pulmonary dysfunction.	
	D. Special considerations in resuscitation.	
	1. Laryngectomy patients.	
	2. Tracheostomy patients.	
V.	Basic Cardiac Life Support - CPR	08
	A. Cardio-Pulmonary resusitation.	
	(AHA or ARC standards)	
	1. Adult resusitation.	
	a. One rescuer.	
	b. Two rescuers.	
	c. Obstructed airway.	
	2. Child resusitation.	
	a. One rescuer.	
	b. Two rescuers.	
	c. Obstructed airway.	
	3. Infant resusitation.	
	a. Resusitation.	
	b. Obstructed airway.	
P-2	Practical Exercise #2	03
W-2	Written Test #2	01

UNIT	TOPIC	HOURS
VI.	Airway Adjuncts and Oxgen Administration	08
	A. Equipment and techniques for airway control.	
	1. Oropharyngeal airways.	
	2. Nasopharyngeal airways.	
	3. EOA - See revised lesson guide.	
	B. Equipment and techniques for ventilation.	
	1. Pocket-mask.	
	2. BVM resusitator.	
	3. 02-powered resusitators.	
	C. Equipment and techniques for suctioning.	
	D. Oxgen delivery systems.	
	E. Airway Management Practical (6 hours).	
P-3	Practical Exercise #3	02
W-3	Written Test #3	01
VII.	Wounds and Hemorrhage Control	04
	A. Review of anatomy and physiologyof circulatory system.	
	B. Types and classifications of wounds.	
	C. S&S of internal and external bleeding.	
	D. Bleeding control and wound care.	
	E. Dressing and bandaging techniques.	
	F. Aseptic and sterile technique.	
	G. Bleeding control and wound care practical. (3 hours)	

UNIT	TOPIC	HOURS
VIII.	Shock	04
	A. Definition.	
	B. Mechanisms of shock.	
	C. Types of shock.	
	D. S&S of shock.	
	E. Assessment of shock.	
IX.	MAST	05
	A. Functions.	
	B. Indications for use.	
	C. Contraindications.	
	D. Complications/disadvantages.	
	E. Types of devices.	
	F. Inflation procedure.	
	G. Care and maintenance.	
	H. Practical exercises.	
	(See revised lesson guide)	
X.	IV Therapy	12
	A. Peripheral IV insertion.	
	B. Types of fulids.	
	C. IV equipment and supplies.	
	D. Venipuncture technique.	
	E. Complications.	
	F. Additional factors.	
	G. Practical exercises. (6 hours)	

UNIT	TOPIC	HOURS
P-4	Practical Exercise #4	03
W-4	Written Exercise #4	01
	MID-TERM WRITTEN TEST	02
XI.	Medico - Legal Documentation and Reporting	04
	A. Reasons for complete documentation using the State Ambulance Trip Report.	
	B. Patient care documentation using the S O A P format.	
	C. Use of the State Ambulance Trip Report.	
	D. Trip Report lab. (2 hours)	
XII.	Emergency Vehicle Operations - Operations and Communications	04 *
	A. Overview of statutes governing emergency vehicle operations.	
	B. Phases of an ambulance call.	
	C. Operation of an emergency vehicle.	
	D. Theory of radio operations.	
	E. Overview of relevant statutes.	
	F. Communications systems configuration.	
	G. Economy of communications. Use of codes.	
	H. General operations procedures.	

UNIT	TOPIC	HOURS
XIII.	Injuries to Soft Tissue/Internal Organs	09
	A. A&P of the chest, abdomen, digestive and genitourinary systems. A&P of the genitalia.	
	B. Injury types and classifications.	
	C. Assessment.	
	D. Techniques of care.	
	E. Multi-system trauma management.	
	F. Concept of "Load and Go" in critical trauma.	
	G. Practice session. (4 hours)	
P-5	Practical Test #5	03
W-5	Written Test #5	01
XIV.	Injuries to the Musculoskeletal System	08
	A. A&P of the musculoskeletal system.	
	B. Types of Fx and dislocations.	
	C. S&S of Fx.	
	D. Dislocations, sprains, and strains.	
	E. Assessment.	
	F. Immobilization of M/S injuries.	
	G. Splints and splinting techniques practice session. (4 hours)	
P-6	Practical Exercise #6	03
W-6	Written Test #6	01

XV. Injuries to the Head, Face, Neck, and Spine 08

A. A&P of the nervous system.

B. S&S of spinal injuries.

C. Spinal injury patient care.

D. S&S of other injuries.

E. Techniques of care for other injuries.

F. Practice lab. (4 hours)

P-7 C-Spine/Patient Handling Lab 04

A. Must utilize real vehicle.

B. Practice techniques of packaging, lifting, and moving patients to prevent further injury and to minimze discomfort.

XVI - P-8 Communications Lab 04

Theory and concepts of radio communications to include: A standard or structured format for receiving or sending patient information.

Students will practice simulated radio communications using audio-tape play back, emphasis will be placed upon content, organization, and format.

"Live" radio communications using low power portable equipment may be used.

Students shall become familiar with line radio equipment.

XVII. Medical Emergencies 09

a. Review of relevant A&P as related to the various medical emergencies.

B. To include:

1. S&S
2. Assessment
3. Management/techniques of care.

NOTE: See National Standard Curriculum for specific medical conditions.

W-7	Written Test #7	01
P-8	Practical Exercise #8	03
XVIII.	OB/GYN Emergencies	05

A. Female reproductive A&P.

B. Pre-delivery emergencies.

C. Delivery and care of the mother/infant during normal and abnormal births.

D. Resuscitation of the newborn.

E. Care of the premature infant.

F. GYN emergencies.

G. Practice in simulated deliveries (2 hours). To include: equipment and supplies used in a prehospital delivery.

XIX.	Pediatric Emergencies	04

A. Conditions, principles, signs and symptoms of care for pediatric patients.

B. P L S approach to the pediatric patient is to be incorporated

W-8	Written Test #8	01

To include OB and Pediatrics

XX.	Enviromental Emergencies	04

A. Burn patient care.

B. Special dangers of different burn sources. (thermal, electrical, radiation)

C. Identification and recognition of HAZ/MAT situations and precautionary procedures.

D. S&S and management of heat, cold, and water related emergencies.

UNIT	TOPIC	HOURS
XXI.	Multi-Casuality/Disaster Operations	02
	A. Triage concepts and responsibilities.	
	B. Overview of the role of the EMT in MCI cr disaster operations.	
XXII.	Special Patients	02
	A. Dealing with special patients. To include: elderly, impaired, disturbed, abnormal behavior, substance abuse patients.	
	B. Death and dying and the emotional aspects of providing care as an EMT.	
XXIII.	Extrication	08
	A. Principles and considerations involved in gaining access to and removing patients from inaccessable situations.	
	B. Provision of general emergency care.	
	C. Packaging and removal of patients with proper immobilization.	
	D. Use of powered and non-powered equipment for extrication with emphasis on "hands-on" student participation.	
	NOTE: Extrication requires a minimum of one car for practice of patient care and mechanical skills.	
	Practical (6 hours)	
W-9	Written Test #9	01
P-9	Practical Exercise #9	03

XXIII. EMS/Hospital Clinical Rotation 32

A. A minimum of 8 hours must be spent in an approved hospital emergency department site. Additional ED hours may be scheduled at the option of the local instructor.

B. Remaining hours are to be spent in rotation with an approved EMS.

C. A student must make a minimum of 10 documented ambulance runs; five of which must be emergency responses.

D. A student must complete a supplemental Trip Report on the 5 emergency responses to be turned in to the course instructor.

E. A standard skill check sheet should be made available to the site proctor for each student in current rotation.

FINAL PRACTICAL TEST 08

FINAL WRITTEN TEST 03

Total hours: 220

APPENDIX B

James G. Ledbetter, Ph.D./Commissioner

GEORGIA DEPARTMENT OF HUMAN RESOURCES

878 PEACHTREE STREET, N.E. / ATLANTA, GEORGIA 30309

January 17, 1989

M E M O R A N D U M

TO: Paramedic Instructors

FROM: Dallas P. Jankowski
Director
Emergency Health Section

RE: Cardiac Technician and Paramedic Course Hours

As you are aware, the new standards for paramedic courses are now in effect. These new standards contain a minimum hour requirement of 750 hours for paramedic courses and 460 hours for cardiac technician courses. The paramedic course will have a minimum didactic requirement of 400 hours and minimum clinical requirement of 350 hours. The CT course will have a minimum didactic requirement of 260 hours and a clinical requirement of 200 hours. The breakout of the required minimum hours will be as follows:

CLINICAL	PARAMEDIC	CT
Emergency Dept.	100	60
ICU/CCU	80	40
OR/Recovery	36	36
IV Team	24	24
Pediatrics	24	--
Nursery	10	--
Labor/Delivery	24	--
Crisis Intervention	8	--
Morgue	4	--
Ambulance	40	40
Total	**350**	**200**

DIDACTIC	PARAMEDIC	CT
Division 1	20	20
Section 1	1	1
Section 2	1	1
Section 3	2	2
Section 4	2	2
Section 5	8	8
Section 6	2	2
Section 7	2	2
Review/Testing	2	2

DIDACTIC	PARAMEDIC	CT
Division 2	80	80
Section 1	4	4
Section 2	12	12
Section 3	16	16
Section 4	24	24
Section 5	20	20
Review/Testing	4	4
Division 3	40	--
Section 1	30	
Section 2	6	
Review/Testing	4	
Division 4	200	140
Section 1	28	28
Section 2	96	96
Section 3	8	8
Section 4	12	--
Section 5	4	--
Section 6	2	--
Section 7	8	--
Section 8	6	--
Section 9	6	--
Section 10	2	--
Section 11	20	--
Review/Testing	8	4
Division 5	12	--
Division 6	8	--
Elective hours*	40	20
TOTAL DIDACTIC	400	260

*Note: Elective hours may be used for skill practice, review, or may be added to sections in which the instructor determines additional hours will be necessary. They must, however, be included in the course. All courses must meet the minimum requirements as outlined in order to be approved.

I have enclosed a copy of the approved rules and regulations entitled "Standards for the Approval of Training Courses for Paramedics and Cardiac Technicians" effective January 1, 1989.

If you have any questions, please call (404)894-6507.

DPJ/lm

cc: EMS Coordinators
Training Institutions

RULES
OF
DEPARTMENT OF HUMAN RESOURCES
PUBLIC HEALTH

CHAPTER 290-5-40
STANDARDS FOR APPROVAL OF TRAINING COURSES FOR PARAMEDICS AND CARDIAC TECHNICIANS

TABLE OF CONTENTS

290-5-40-.01 **Definitions.** The following definitions shall apply in the interpretation of these standards:

(a) "Approved" means acceptable to the Department of Human Resources based on its determination as to conformance with these standards.

(b) "Department" means the Department of Human Resources.

(c) "Board" means the Composite State Board of Medical Examiners.

(d) "Paramedic" means a person who has been certified by the Composite State Board of Medical Examiners after having been trained in emergency care techniques in a Paramedic training course approved by the Department.

(e) "Cardiac Technician" means a person who, having been trained and certified as an EMT and having completed additional training in advanced cardiac life support techniques in a training course approved by the Department is so certified by the Composite State Board of Medical Examiners.

(f) "Paramedic Instructor" is an individual who has met all qualifications and has been certified by the Department.

(g) "Active Paramedic Instructor" is a certified instructor who has met the annual instructor recertification requirements.

(h) "Inactive Paramedic Instructor" is a certified instructor who has not met the annual requirements and has been placed in this status.

Authority O.C.G.A. 31-11-5 and 31-11-52(b).
Administrative History. Original Rule entitled "Definitions" was filed on November 4, 1982, as specified by the Agency.

290-5-40-.02 General.

(1) A complete course application must be submitted by an institution, hospital or other sponsoring agency to the Department at least four weeks in advance of the actual starting date of the proposed course. The sponsoring institution of an EMT-Paramedic program of education and training shall be an accredited post-

secondary education institution, such as a university medical center, senior college, community college, or vocational school, or a JCAHO accredited medical center, hospital or other institution which meets comparable standards for education in this field. All institutions must be affiliated with an accredited medical center or hospital which in turn is capable of supporting EMT Paramedic education and training with sufficient supervised practice experience. The course must receive written approval from the Department prior to the actual starting date in order for its graduates to be eligible for Board examination and certification. Any course accredited by the American Medical Association is exempt from the Department approval, as long as accreditation is maintained. This exemption does not apply to the submission of the final student roster as required in Rule 290-5-40-.09(4).

(2) Cardiac Technician and Paramedic Courses shall be designed for instruction in the classroom and clinical environment and not as independent study or correspondence courses.

(3) A minimum of 460 clock hours of instruction including didactic and clinical shall be required for the Cardiac Technician program. A minimum of 750 clock hours of instruction shall be required for the Paramedic program.

(4) Representatives of the Department may monitor all courses with on-site visits and other methods as deemed necessary.

Authority O.C.G.A. 31-11-5 and 31-11-52(b). Administrative History. Original Rule entitled "General" was filed on November 4, 1982; effective December 6, 1982, as specified by the Agency.

290-5-40-.03 Faculty.

(1) Each Cardiac Technician and Paramedic course must have a designated medical director who is licensed to practice medicine in the State of Georgia.

(2) Each course application must designate a lead instructor who must be an Active Paramedic Instructor.

(3) The lead instructor shall be responsible for general administration of the course including the submission of the complete course application to the Department.

(4) The lead instructor shall be responsible for instruction of the course curriculum. Courses may have assistant instructors or guest lecturers who are not necessarily active paramedic instructors, but who are professionals possessing certain knowledge, experience, and skill deemed by the lead instructor to be of value to the course.

Authority O.C.G.A. 31-11-5 and 31-11-52(b). Administrative History. Original Rule entitled "Faculty" was filed on November 4, 1982; effective December 6, 1987, as specified by the Agency.

290-5-40-.04 Eligibility for Paramedic Instructor Certification.

All applicants for certification will adhere to the following requirements:

(1) be sponsored as an applicant by the Regional Medical Director or by an approved area vocational technical school;

(2) possess a current and valid Georgia certification, licensure, or registration as a Paramedic, RN, physician assistant, MD or DO, or as an allied health educator, or educator in a related field;

(3) have completed at least two years of post-secondary education;

(4) exhibit proficiency in a battery of advanced level skills and instructional technique through successful completion of skills testing;

(5) possess current certification as an Advanced Cardiac Life Support Instructor.

Authority O.C.G.A. 31-11-5 and 31-11-52(b).

290-5-40-.05 Paramedic Instructor Recertification

(1) In order to maintain Active Paramedic Instructor status, the instructor must comply with the following:

(a) serve as the lead instructor for a Paramedic or Cardiac Technician certification or recertification course or attend an annual Paramedic instructor inservice training approved by the Department;

(b) maintain current certification, registration, or licensure as a Paramedic, RN, physician assistant, MD or DO, or as an allied health educator or educator in a related field;

(c) maintain current ACLS Instructor certification and certification in other specialized training as deemed necessary by the Department.

(d) submit proof of the above to the Department by December 31 annually.

(2) Any instructor who is monitored by the Department in accordance with Rule 290-5-40-.02(4) and received an unfavorable evaluation must be reevaluated within a three month period. The instructor has the right to request reevaluation by another evaluator. If the reevaluation is also unfavorable, the instructor will be placed in an inactive status.

(3) Any instructor who does not meet the requirements for instructor recertification will be placed in an inactive status.

(4) Any instructor whose certification has been placed in an inactive status may be reinstated to an active status only upon meeting initial requirements for certification and attending an annual inservice training approved by the Department. Any instructor placed in inactive status due to unfavorable evaluation in addition to meeting initial certification requirements must be monitored and evaluated at least once prior to being reinstated, and must receive a favorable evaluation within two months of initiating the first course subsequent to reinstatement.

Authority O.C.G.A. 31-11-5 and 31-11-52(b).

290-5-40-.06 Paramedic Instructor Revocation.

(1) The Department may refuse to issue a certificate to any applicant or may take disciplinary action including revocation or suspension of a certificate issued to an EMT Instructor, after notice and opportunity for hearing pursuant to the Georgia Administrative Procedure Act, as amended, if the Department finds such applicant or such EMT Instructor has committed any of the following acts:

(a) failure to obtain prior Department approval before beginning a Paramedic or Cardiac Technician Course;

(b) failure to adhere to the Department's Rules and Regulations or policies;

(c) failure to maintain student records;

(d) falsification of course or student records;

(e) revocation of certification for cause of failure to meet recertification requirements, or disciplinary action by the Composite State Board of Medical Examiners or the Department of Human Resources;

(f) conviction (past or present) in any court of any felony or other criminal offense involving moral turpitude or violation of the Georgia Controlled Substance Act.

Authority O.C.G.A. 31-11-5 and 31-11-52(b).

290-5-40-.07 Clinical Facility.

Clinical facility information must be submitted to the Department as a part of the original course application and must reflect resources sufficient in number and variety to achieve the goals and objectives of the Cardiac Technician and Paramedic training programs as determined by the Department. Facility information must be updated periodically upon request of the Department and whenever significant changes affecting a facility's resources are made.

Authority O.C.G.A. 31-11-5 and 31-11-52(b). Administrative History. Original Rule entitled "Clinical Facility" was filed on November 4, 1982; effective December 6, 1982, as specified by the Agency.

290-5-40-.08 Curriculum.

(1) To be approved, a Cardiac Technician Course must include as a minimum, instruction of Division I - Section 1-7, Division 2 - Section 1-5, Division 4 - Section 1-3 of the National Training Course, EMT-Paramedic, U.S. Department of Transportation, National Highway Traffic Safety Administration, Division series, and the Advanced Cardiac Life Support Course from the American Heart Association and meet other procedural requirements set out in these standards.

(2) To be approved, a Paramedic Course must include as a minimum, instruction of Division 1-6 and all sections therein of the National Training Course, EMT-Paramedic and ACLS course from the American Heart Association and meet other procedural requirements set out in these standards.

Authority O.C.G.A. 31-11-5 and 31-11-52(b). Administrative History. Original Rule entitled "Curriculum" was filed on November 4, 1982; effective December 6, 1982, as specified by the Agency.

290-5-40-.09 Course Submission Requirements.

All courses submitted for approval following adoption of these Rules and Regulations must apply for approval. The course application submitted to the Department shall include:

(1) a signed statement from the medical director for the course stating intent to serve as such for the Cardiac Technician or Paramedic course;

(2) a completed application form distributed by the Department;

(3) faculty vitae on assistant instructors who are not active Paramedic Instructors;

(4) a student roster, signed by the lead instructor giving the names and addresses of all students enrolled in the course. The student roster may be submitted following initiation of the course. Course approval is not contingent upon receipt of the student roster. However, the roster must be submitted within two weeks after the starting date of the course for approval to be continued. A final roster of all students successfully completing the course is required immediately upon completion of a course. The final roster must also be signed by the lead instructor. No application for Board examination will be signed by the Department until the final roster is received;

(5) a copy of the contractual agreement(s) with hospital(s) and training sites to be used for direct patient care clinical experience in all areas of the training program requiring such experience;

(6) a didactic course outline to include dates of class, subjects being taught, number of classroom hours per topic and the instructor for each topic;

(7) a letter of support from the District Health Director in the EMS region where the course is being held.

Authority O.C.G.A. 31-11-5 and 31-11-52(b). Administrative History.
Original Rule entitled "Submission Requirements" was filed on November 4, 1982; effective December 6, 1982, as specified by the Agency.

290-5-40-.10 Reapproval of Courses.

(1) Approval of courses is continuing for ongoing or repeat courses. The following information must be provided the Department prior to initiating a previously approved course:

(a) dates of the course;

(b) student rosters, beginning and ending;

(c) faculty vitae on new assistant instructors.

(2) Courses which have been revised from original course approval are asked to submit the course as a new course.

Authority O.C.G.A. 31-11-5 and 31-11-52(b). Administrative History. Original Rule entitled "Reapproval of Courses" was filed on November 4, 1982; effective December 6, 1982, as specified by the Agency.

APPLICATION FOR APPROVAL OF PARAMEDIC/CARDIAC TECHNICIAN COURSE

INSTITUTION _____ (Please attach the letter of agreement from the sponsoring institution.)

ADDRESS _____

_____

_____

COURSE COORDINATOR _____

ADDRESS _____

_____

_____

LEAD INSTRUCTOR _____

ADDRESS _____

_____

_____

MEDICAL DIRECTOR _____ (Please attach letter of agreement)

DATES OF COURSE: _____ to _____ meets _____ times weekly

from ____:____ to ____:____.

ASSISTANT INSTRUCTORS _____

_____

_____

_____

_____

GUEST LECTURERS _____

_____

_____

_____

_____

PRIMARY TEXTS _____

_____

_____

_____

_____

_____

CLINICAL AFFILIATES _____

_____

_____

_____

_____

_____

PATIENT LOAD _____

_____

_____

_____

_____

_____

****

This application whould be completed and submitted with a copy of the course outline to include dates of classes, topics, number of hours and instructor/lecturer primarily responsible. In addition, other documents required for approval should be submitted.

CLINICAL ROTATIONS AND FACILITY DATA:

DEPARTMENT	# HOURS	CLINICAL INSTRUCTOR	FACILITY	AVG. PT. LOAD
Emergency Dept.				
ICU/CCU				
OR/Recovery				
'V Therapy				
Labor & Delivery				
Nurse				
Pediatrics				
Crisis Intervention				
Morgue				
Ambulance				

Curriculum:

	Required	Actual	Instructor
Division 1	20		
Section 1	1		
Section 2	1		
Section 3	2		
Section 4	2		
Section 5	8		
Section 6	2		
Section 7	2		
Review	2		
Division 2	80		
Section 1	4		
Section 2	12		
Section 3	16		
Section 4	24		
Section 5	20		
Review	4		
Division 3	40		
Section 1	30		
Section 2	6		
Review	4		
Division 4	200		
Section 1	28		
Section 2	96		
Section 3	8		
Section 4	12		
Section 5	4		
Section 6	2		
Section 7	8		
Section 8	6		
Section 9	6		
Section 10	2		
Section 11	20		
Review	8		
Division 5	12		
Division 6	8		
Elective Hours	40		
TOTAL	400		

APPENDIX C

ED 264 423 CE 043 144

Werner, Claire

Employability Competencies for Entry Level Emergency Medical Aides.

Los Angeles Unified School District, Calif.

Pub Date—29 Jan 86

Note—165p.; Portions of document are printed on colored paper.

Pub Type— Guides - Non-Classroom (055)

EDRS Price - MF01/PC07 Plus Postage.

Descriptors—Adult Education, *Allied Health Occupations Education, *Behavioral Objectives, *Competence, Competency Based Education, *Emergency Medical Technicians, Entry Workers, *First Aid, Medical Assistants, Medical Services, Postsecondary Education, Secondary Education, Vocational Education

This document describes competencies needed by persons who complete the Los Angeles Schools' emergency medical aide competency-based program, which is designed to enhance their ability to obtain certification as an Emergency Medical Technician (EMT). The overall competency statement ('goal") of the program heads each page and is defined by one or more "indicator" statements. Indicator statements are performance objectives, which, upon attainment, will establish competency for the stated goal. Indicator statements are further qualified by a series of "benchmark" statements. A benchmark is an observable behavior. Benchmarks describe what trainees will do to prove that they are demonstrating achievement of the performance objective. There may be one or more benchmarks (behaviors) for each indicator statement (performance objective). Benchmark statements are followed by an "assessment" statement that describes how the observer determines that the benchmark is achieved. The program includes 10 mastery tests with answers, a survey of prior occupational knowledge, and a checklist for the instructor. Topics covered by the competencies include the emergency medical system; anatomy, signs, triage; cardiorespiratory system; musculoskeletal system; nervous system; gastrointestinal-genitourinary systems; common medical emergencies; childbirth and common pediatric emergencies; drug and alcohol abuse; and common environmental injuries. (KC)

ED 264 432 CE 043 157

Emergency Medical Technician-Ambulance: National Standard Curriculum. Course Guide (Third Edition).

National Highway Traffic Safety Administration (DOT), Washington, D. C.

Report No.—DOT-HS-900-075

Pub Date—84

Note—27p.; For related documents, see CE 043 158-159.

Available from—Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Pub Type— Guides - Classroom - Teacher (052)

EDRS Price - MF01/PC02 Plus Postage.

Descriptors—*Allied Health Occupations Education, Behavioral Objectives, *Emergency Medical Technicians, *First Aid, Medical Assistants, Medical Evaluation, *Medical Services, Postsecondary Education, Rescue, Student Evaluation

This course guide is intended to assist course coordinators in planning and managing a course to train emergency medical technicians to work with ambulance or other specialized rescue services. Materials are presented to enable students to perform the following functions: recognize the nature and seriousness of the patient's condition or extent of his injuries to assess requirement for emergency care; administer appropriate emergency care to stabilize the patient's condition; and lift, move, position, and otherwise handle the patient in such a way as to minimize discomfort and further injury. The guide is divided into the following sections: the instructional program (course goals, skills of the competent emergency medical technician-ambulance, student qualifications, course scope and objectives, and course design); course planning considerations (course scheduling, class size, instructor qualifications, materials and equipment, facilities, and course costs); and program management and evaluation (maintaining records, assessing student achievement, and program evaluation). (MN)

ED 264 433 CE 043 158

Emergency Medical Technician-Ambulance: National Standard Curriculum. Instructor's Lesson Plans (Third Edition).

National Highway Traffic Safety Administration (DOT), Washington, D. C.

Report No.—DOT-HS-900-073

Pub Date—84

Note—343p.; For related documents, see CE 043 157-159.

Available from—Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Pub Type— Guides - Classroom - Teacher (052)

EDRS Price - MF01/PC14 Plus Postage.

Descriptors—*Allied Health Occupations Education, Behavioral Objectives, Classroom Techniques, Course Content, Course Descriptions, *Emergency Medical Technicians, *First Aid, *Injuries, Lesson Plans, Medical Assistants, *Medical Services, Postsecondary Education, Rescue, Teaching Methods, Units of Study

This set of instructor's lesson plans is one of three documents prepared for the Emergency Medical Technician (EMT) National Standard Curriculum. It contains detailed outlines of course content and guidance for teaching each course lesson. The training course contains 33 lessons covering all emergency medical techniques currently considered to be within the responsibilities of the EMT providing emergency care with an ambulance service. Each lesson consists of the following parts: (1) title page and objectives, total lesson time, and student performance objectives for the lesson; (2) requirements for equipment, materials, illustrations, instructors, and facilities; (3) instructor tasks needed to prepare for teaching the lesson; and (4) a detailed lesson outline and suggested instructional strategy. For the evaluation lessons, aids for developing evaluation checklists are included. A synopsis of the 33 lessons appears in the introduction to the lesson plans. Appendixes to the lesson plans include the American Heart Association cardiopulmonary resuscitation guidelines, a bibliography, and in-hospital clinical guidelines. (KC)

ED 264 434 CE 043 159

Emergency Medical Technician-Ambulance: National Standard Curriculum. Student Study Guide (Third Edition).

National Highway Traffic Safety Administration (DOT), Washington, D. C.

Report No.—DOT-HS-900-074

Pub Date—84

Note—118p.; For related documents, see CE 043 157-158.

Available from—Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Pub Type— Guides - Classroom - Learner (051)

EDRS Price - MF01/PC05 Plus Postage.

Descriptors—*Allied Health Occupations Education, Behavioral Objectives, Course Content, Course Descriptions, *Emergency Medical Technicians, *First Aid, *Injuries, Lesson Plans, Medical Assistants, *Medical Services, Postsecondary Education, Rescue, Study Guides, Units of Study

This student study guide is one of three documents prepared for the Emergency Medical Technician (EMT), National Standard Curriculum. The course is designed to develop skills in symptom recognition and in all emergency care procedures and techniques currently considered to be within the responsibilities of an EMT providing emergency medical care with an ambulance service. The study guide provides an overview of the objectives and content of each course lesson and includes study suggestions to aid trainees in achieving course objectives. The study guide includes a section for each of the 33 course lessons. For lessons in which new skills and knowledge are taught, the following are included: (1) an introductory paragraph describing the purpose and need for the lesson; (2) objectives that students should be able to achieve upon completion of the lesson; (3) an overview of lesson contents, with emphasis on sign and symptom recognition and emergency care procedures; and (4) study suggestions directed largely toward simulation of performance required on the job. A synopsis of the 33 lessons appears in the introduction to the study guide. Appendixes to the guide include the American Heart Association cardiopulmonary resuscitation guidelines, a bibliography, and in-hospital clinical guidelines. (KC)

ED 269 604 CE 044 408

Cockrum, Jim

EMS Course Coordinator's Implementation Guide.

Texas Univ., Austin. Extension Instruction and Materials Center.

Spons Agency—Texas Education Agency, Austin. Dept. of Occupational Education and Technology.

Pub Date—85

Note—106p.; For related documents, see CE 044 409-410. Some forms contain small, broken type.

Available from—Extension Instruction and Materials Center, P.O. Box 7218, University of Texas at Austin, Austin, TX 78713-7218 (Stock Number PS 217).

Pub Type— Guides - Non-Classroom (055)

EDRS Price - MF01 Plus Postage. PC Not Available from EDRS.

Descriptors—Accidents, *Allied Health Occupations Education, Cooperative Education, Cooperative Planning, *Coordination, *Emergency Medical Technicians, *Emergency Squad Personnel, Evaluation Criteria, First Aid, Instructional Materials, *Instructor Coordinators, Medical Services, Performance Contracts, Postsecondary Education, Professional Associations, Program Administration, Records (Forms), Rescue, Secondary Education, State Agencies, Student Certification, Student Evaluation, Study Skills, Teacher Evaluation, *Teacher Role

This handbook is intended to clarify the responsibilities of an instructor-coordinator responsible for coordinating an emergency medical services (EMS) training program and to describe many of the materials now available for use in coordinating EMS training. Addressed in the individual chapters of the guide are the nature and scope of the coordinator's job; curriculum and instruction; facilities, equipment, and materials; and other administrative responsibilities. Appendixes to the handbook include the following: regulatory authorities and professional associations concerned with EMS training, lists of available instructional materials and instructions for obtaining them (including sources of audiovisual and print materials, basic and advanced life support publications, and readability scores for selected publications); materials for instructors or coordinators (books on supervision, instruction, and instructional design and development and national EMS-related periodicals); and samples of forms used in EMS training (formats for scheduling training, student contracts and enrollment documents, instructor contracts, training affiliation agreements, student and instructor course evaluation forms, and student's clinical training reports). (MN)

ED 269 605 CE 044 409

Cockrum, Jim

EMS Instructor's Handbook.

Texas Univ., Austin. Extension Instruction and Materials Center.

Spons Agency—Texas Education Agency, Austin. Dept. of Occupational Education and Technology.

Pub Date—85

Note—80p.; For related documents, see CE 044 408-410.

Available from—Extension Instruction and Materials Center, P.O. Box 7218, University of Texas at Austin, Austin, TX 78713-7218 (Stock Number PS 218).

Pub Type— Guides - Classroom - Teacher (052)

EDRS Price - MF01 Plus Postage. PC Not Available from EDRS.

Descriptors—Accidents, *Allied Health Occupations Education, Behavioral Objectives, Classroom Techniques, *Emergency Medical Technicians, *Emergency Squad Personnel, Evaluation Criteria, First Aid, Learning Activities, *Learning Processes, Medical Services, Postsecondary Education, Records (Forms), Rescue, Secondary Education, Student Certification, *Student Evaluation, *Teaching Methods

Identifiers—*Related Subjects Instruction

This handbook is intended to assist instructors of courses in emergency medical services (EMS). Discussed first are the role of the EMS instructor and EMS training. The second chapter deals with three learning principles (the principles of effect, exercise, and readiness) and four teaching steps (preparing the learner, presenting the information, applying the information, and evaluating the results). Examined in the next two chapters are ways of using the first three steps of instruction to teach a skills lesson and related information. The fifth chapter describes procedures for evaluating students' mastery of skills and related information, and the sixth chapter covers initiating and operating a course. Concluding the guide is a list of 121 useful insights and recommendations. Appendixes to the handbook include various forms for copying and lists of materials and sources of materials for EMS training. (MN)

ED 269 606 CE 044 410

Ogle, Patrick

EMS Student Handbook.

Texas Univ., Austin. Extension Instruction and Materials Center.

Spons Agency—Texas Education Agency, Austin. Dept. of Occupational Education and Technology.

Pub Date—84

Note—21p.; For related documents, see CE 044 408-409.

Available from—Extension Instruction and Materials Center, P.O. Box 7218, University of Texas at Austin, Austin, TX 78713-7218 (Stock Number PS 219 S).

Pub Type— Guides - General (050)

EDRS Price - MF01 Plus Postage. PC Not Available from EDRS.

Descriptors—Accidents, *Allied Health Occupations Education, *Emergency Medical Technicians, *Emergency Squad Personnel, Evaluation Criteria, *First Aid, *Medical Services, Postsecondary Education, Reading Skills, *Rescue, Secondary Education, Student Certification, Student Evaluation, Study Skills, Test Wiseness

This student guide is one of a series of self-contained materials for students enrolled in an emergency medical services (EMS) training program. Discussed in the individual sections of the guide are the following topics: the purpose and history of EMS professionals; EMS training, certification and examinations (national and state certification and exams and general exam information); learning skills (effective listening and note taking, techniques for reading a textbook more effectively, and test taking); and national and Texas organizations for emergency medical technicians. Sample multiple-choice exam questions are appended to the guide. (MN)

ED 272 134 IR 012 184

Whitney, Marcia A. Strub, Philip M.

The Development and Use of Interactive Videodisc Instruction for Navy Medical Corpsmen.

Pub Date—Dec 85

Note—7p.; Paper presented at the 1985 Videodisc, Optical Disk, and CD-ROM Conference (Philadelphia, PA, December 9-12, 1985).

Pub Type— Reports - Descriptive (141) — Speeches/Meeting Papers (150)

EDRS Price - MF01/PC01 Plus Postage.

Descriptors—Armed Forces, *Computer Assisted Instruction, *Emergency Medical Technicians, *Instructional Development, *Interactive Video, Microcomputers, *Military Personnel, Training Methods, *Videodisks, Video Equipment

Identifiers—Naval Training

The University of Maryland's Center for Instructional Development and Evaluation has developed interactive video material for the Navy Medical Department to teach Navy medical corpsmen appropriate response procedures for each of seven emergency medical conditions: angina pectoris, acute myocardial infarction, congestive heart failure, stroke, diabetic coma, insulin shock, and epileptic seizure. An underlying philosophy of the design team and the subject matter expert was that the student could best master the process tasks by practicing them; the properties of computer-based interactive videodisc (CBIV) make it uniquely suited to implement this instructional principle. The videodisc simulation can include both patient attributes and environmental attributes that compare realistically with actual settings. A total of 15 emergency settings were developed to account for specific variations of the seven medical conditions; since the material is to be used for evaluative as well as instructional purposes, a second set of parallel lessons was developed for each setting, making a final total of 30 lessons in the system. Background information provided for the learner includes a glossary, reference lessons, and an introduction to the hardware and software. This paper briefly describes the system design and a representative lesson. (JB)

ED 273 825 CE 045 062

Emergency Medical Services Instructor Training Program. A National Standard Curriculum. Course Guide. First Edition.

National Highway Traffic Safety Administration (DOT), Washington, D. C.

Pub Date—86

Note—23p.; For related lesson plans and student study guide, see CE 045 063-064.

Available from—Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Pub Type— Guides - Classroom - Teacher (052)

EDRS Price - MF01/PC01 Plus Postage.

Descriptors—Adult Education, *Adult Educators, *Allied Health Occupations Education, Course Content, *Curriculum Development, *Emergency Squad Personnel, First Aid, Medical Services, Program Evaluation, Student Evaluation, Vocational Education

This course guide is designed to aid the course administrator and coordinator in understanding, developing, and implementing all phases of an Emergency Medical Services (EMS) instructor training course. An introduction provides an overview of the training program and the administrator's and coordinator's responsibilities in the organization and management of the program. The second section, The Instructional Program, covers work performance addressed by the course, student qualifications, student performance objectives, course structure, and instructional strategy. It includes a brief description of each course lesson. The third section, Course Planning Considerations, provides suggestions for scheduling course lessons, determining class size and instructor qualifications, and specifying required materials, equipment, and facilities. It includes considerations involved in estimating course costs. The final section, Program Management and Evaluation, offers suggestions for managing and evaluating student achievement in the course and program evaluation processes. Appendixes include sample course schedules, evaluation forms, and a 45-item list of selected references on instruction and learning. (YLB)

ED 276 957 CG 019 574

Health Care: States Assume Leadership Role in Providing Emergency Medical Services. Report to Congressional Requesters.

General Accounting Office, Washington, D.C. Div. of Human Resources.

Report No.—GAO/HRD-86-132

Pub Date—30 Sep 86

Note—63p.

Available from—U.S. General Accounting Office, P.O. Box 6015, Gaithersburg, Maryland 20877 (1-5 copies, free, 6-99 copies, $2.00/copy; 100 or more, 25% discount).

Pub Type— Reports - Descriptive (141)

EDRS Price - MF01/PC03 Plus Postage.

Descriptors—Block Grants, *Delivery Systems, Emergency Squad Personnel, *Federal State Relationship, *Health Needs, *Health Services, *Medical Services, Rescue

Identifiers—*Emergency Medical Services

This document contains a report on state and local emergency medical services programs. It discusses the effect of the transition from federal to state leadership under the block grant and identifies the key issues affecting local delivery of services. The report includes an executive summary and five chapters.

Chapter 1 discusses emergency medical services (EMS); the evolving federal role in EMS; and the objectives, scope, and methodology of the report. Chapter 2 examines how states use block grant funds to build on federal categorical initiatives. Chapter 3 concerns EMS access and dispatch and notes that a systematic, area-wide approach eludes many areas. Chapter 4 examines EMS systems seeking greater advanced life support coverage. Chapter 5 looks at cardiac and trauma care and notes that more systematic routing of trauma victims is needed. To avert a potentially negative federal effect on the development of specialized trauma care, the report recommends that the Department of Health and Human Services determine whether federal Medicare and state Medicaid reimbursement rates have an adverse financial impact on trauma centers. Further federal actions that could enhance state and local EMS programs are suggested. An annotated bibliography, seven tables, and eight figures are included. (NB)

ED 283 548 JC 870 287

Young, Derrick P.

An Introduction to Emergency Medical Services (EMS). Pre-Hospital Phase. Emergency Medical Services Orientation, Lesson Plan No. 9.

Hawaii Univ., Manoa. Western Curriculum Coordination Center.

Pub Date—86

Note—37p.

Pub Type— Guides - Classroom - Teacher (052)

EDRS Price - MF01/PC02 Plus Postage.

Descriptors—*Allied Health Occupations Education, Career Choice, Community Colleges, *Emergency Medical Technicians, *Emergency Squad Personnel, High Schools, Instructional Materials, Lesson Plans, Rescue, Student Recruitment, Teacher Developed Materials, Teaching Guides, Technical Education, Two Year Colleges

Identifiers—*Emergency Medical Services

Designed for use with interested students at high schools, community colleges, and four-year colleges, this lesson plan was developed to provide an introduction to the pre-hospital phase of Emergency Medical Services (EMS) and to serve as a recruitment tool for the EMS Program at Kapiolani Community College (KCC) in Hawaii. The objectives of the 50-minute lesson are to enable students to: (1) define EMS; (2) describe the three most important components of EMS (i.e., manpower, communications, and equipment); (3) describe the three levels of training in the prehospital setting (first responder, Emergency Medical Technician, Mobile Intensive Care Technician); (4) understand the difference between Basic Life Support and Advanced Life Support; (5) understand the 911 emergency communications network; (6) describe briefly the types of equipment and the working conditions involved with emergency care; and (7) understand the shortage of trained paramedics in Hawaii and consider a viable career change. The lesson plan begins with information on the course for which the lesson was designed; equipment and audiovisual aids needed; requirements for student materials; course objectives; bibliographic references; and special remarks for the instructor. Next, a step-by-step outline of the instructor's presentation is provided in a format indicating the length of time and the equipment or other aids necessary for each step of the lesson. Transparency masters, sample program coursework, a lesson posttest, and information on KCC's EMS program are included. (PAA)

APPENDIX D

EMERGENCY MEDICAL SERVICES OCCUPATIONAL ANALYSIS

General Instructions:

This occupational analysis will contribute to the development of a program which prepares students for occupations in the Emergency Medical Services field. The analysis check sheet consists of two sections: a duty analysis and a task analysis.

Instructions for Section One:

Section One contains a listing of job duties. Check each duty as either not performed or performed. The number to the right of each duty refers to the page on which the task for that duty are listed.

Instructions for Section Two:

Section Two lists the tasks within each duty. Please analyze each task as explained below.

a) Identify task performed on the job. Mark through any task that is not performed. If a task has been omitted, please add it at the end of the appropriate list.

b) Check the first column to indicate tasks that are critical to the learning process. Identification of tasks that are critical to the learning process will allow optimal sequencing of instruction. Place a check mark opposite each task that should be sequenced early in duty instruction and that fits the following definition:

> Critical Task: A task that must be learned prior to other tasks in the duty area; a task that is prerequisite to further learning in the duty area.

c) Use the second column to indicate stress levels caused by performance of each task. Identification of stress-producing tasks may allow optimal integration of stress management skills in the curriculum. Use the following statements to determine which rating indicator (letter) to enter:

Stress Level	Rating
Little or no stress	O
Low stress	L
Moderate Stress	M
High stress	H

DUTY LIST

DUTY		Performed	Not Performed	Page
A.	Recording, reporting and supervising			3
B.	Providing Airway Care and Pulmonary Resuscitation			4
C.	Providing Emergency Care of CPR to victims of Heart Attack or Cardiac Arrest			5
D.	Controlling Bleeding			6
E.	Treating Victims of Shock			6
F.	Treating Wounds (open and closed)			7
G.	Immobilizing Fractures and Dislocations of the Upper Extremity			7
H.	Immobilizing Fractures and Dislocations of the Lower Extremity			8
I.	Caring for Injuries of Head, Face and Spine			9
J.	Caring for Eye Injuries			10
K.	Caring for Injuries of Chest, Back, Abdomen, Pelvis and Genitalia			10
L.	Providing Emergency Care to Victims of Poisoning, Bites, and Stings			11
M.	Providing Emergency Care to Stroke or Dyspnea Patients			11
N.	Handling Patients with Communicable Diseases			12
O.	Handling Drugged, Emotionally Disturbed, or Unruly Patients			12
P.	Providing Care in Cases of Epilepsy, convulsions or Unconscious State			13
Q.	Providing Emergency Care to Patients with Diabetic Complications			13
R.	Assisting with Childbirth and Care of Mother			14
S.	Providing Care to Pediatric Patients			14
T.	Lifting and Moving Patients			15
U.	Treating Burns			16
V.	Treating Medical Emergencies			17
W.	Responding to Environmental Emergencies			17
X.	Extricating from Automobile and Other Vehicles			18
Y.	Driving and Maintaining Emergency Vehicle			18
Z,	Responding and Transferring Patient to Emergency Room			19

TASK LIST

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
A. Recording, Reporting and Supervising		
01 Alert other emergency resources when needed		
02 Arrange for service on vehicles		
03 Bill local government for services		
04 Bill patient for services		
05 Decide whether to transport patient or have another purveyor transport		
06 Detect and report accidents or violations		
07 Distribute patients among hospitals		
08 Follow standard procedures for reporting death of patient		
09 Keep personnel records on employees		
10 Maintain supply and equipment levels on vehicles		
11 Observe FCC regulations for operation of two-way radio		
12 Obtain signature of room personnel as evidence of receipt of patients		
13 Obtain signature of individual receiving patients valuables		
14 Participate in area-wide disaster planning		
15 Participate in civil disorder planning		
16 Prepare dispatch forms		
17 Prepare patient care form		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
A. Recording, Reporting and Supervising (continued)		
18 Prepare trip report after each run		
19 Relate patient information by radio		
20 Render necessary reports to emergency room personnel		
21 Request extra personnel as needed		
22 Requisition supplies and equipment		
23 Safeguard homicide weapons for authorities		
24 Safeguard suicide notes		
25 Take statements that may serve as legal testimony		
26 Use secondary method of communicating if primary method fails		
27 Use two-way radio		
28 Prepare Medicaid forms		
29 Prepare Medicare forms		
30 Prepare form on emergency patient for emergency room supervisor		
31 Determine DOA (dead on arrival)		
32 Prepare daily ambulance check forms		
33 Log all calls		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
B. Providing Airway Care and Pulmonary Resuscitation		
01 Acknowledge safety practices when using oxygen		
02 Administer bag-mask resuscitation		
03 Administer oxygen		
04 Attach oxygen to bag-mask unit		
05 Change position during team resuscitation of patient		
06 Check patient for medical emblem which indicate that there are special medical conditions to be considered		
07 Check patient for signs of airway obstruction		
08 Clear patients airway of any foreign matter which is present		
09 Determine when manual methods of pulmonary resuscitation should be used		
10 Determine when oxygen should be administered to patient		
11 Determine whether mechanical aids to resuscitation should be used in preference to direct oronasal methods		
12 Examine the neck of patient for a stoma		
13 Force air out of patients stomach when stomach becomes distended during resuscitation		
14 Insert endo-tracheal airway		
15 Perform mouth-to-mouth technique of pulmonary resuscitation		
16 Perform mouth-to-nose technique of pulmonary resuscitation		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
17 Perform mouth-to-stoma technique of resuscitating the larynegectomee		
18 Position head and jaw of patient to provide an open airway		
19 Position patients head for insertion of endo-tracheal airway		
20 Prepare oxygen equipment for use		
21 Provide proper airway care for the larynegectomee		
22 Select proper oxygen mask to be used on patient		
23 Set up bag-mask for use		
24 Shut down oxygen apparatus after use		
25 Use back-pressure arm-lift method of manual pulmonary resuscitation		
26 Use chest-pressure, arm-lift method of manual pulmonary resuscitation		
27 Use oropharengeal airway during resuscitation		
28 Use suction apparatus on patient with airway difficulties		
29 Remove false teeth or partial plate from victims mouth		
30 Utilize choke saver		
31 Administer blow to back to dislodge material		
32 Place patient on firm surface before resuscitation		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
C. Providing Emergency Care of CPR to Victims of Heart Attack or Cardiac Arrest		
01 Administer cardiopulmonary resuscitation as part of a team using bag-mask technique of ventilation		
02 Administer cardiopulmonary resuscitation as part of a team using oronasal technique of ventilation		
03 Administer drugs to aid in stabilization of heart patient.		
04 Administer precordial blow		
05 Check heart patients pupils for dilation		
06 Check heart patients vital signs		
07 Continue resuscitation while loading and transporting patient.		
08 Decide whether cardiopulmonary resuscitation should be attempted.		
09 Defibrillate patient		
10 Determine how long to continue cardiopulmonary resuscitation once started		
11 Determine whether patient is in state of cardiac arrest.		
12 Examine patient for signs of general circulatory failure.		
13 Examine to determine whether patient is victim of coronary, angina, or heart failure		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
C. Providing Emergency Care of CPR to Victims of Heart Attack or Cardiac Arrest (continued)		
14 Individually administer cardiopulmonary resuscitation using direct oronasal technique of ventilation		
15 Inject sodium bicarbonate into patient through IV after defibrillation		
16 Interpret readout from heart machine (EKG)		
17 Locate the proper area for pressure on the sternum during cardiopulmonary resuscitation.		
18 Observe patient for signs of successful cardiopulmonary resuscitation.		
19 Position heart patient on hard surface if in arrest.		
20 Question observers regarding heart patients symptoms and observable behavior.		
21 Question patient regarding prior heart problems.		
22 Set up heart monitor (EKG)		
23 Stabilize heart patient before transport if possible		
24 Start IV on heart patient.		
25 Use EKG machine in monitoring heart patient.		
26 Send EKG by telemetry.		
27 Administer drugs on doctors orders		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
D. Controlling Bleeding		
01 Administer oxygen to person suffering from blood loss. .		
02 Apply pressure at the brachical artery pressure point to control bleeding of the arm		
03 Apply pressure at the femoral artery pressure point to control bleeding of the upper leg.		
04 Bandage laceration after bleeding is controlled.		
05 Care for patient who has blood or other fluid draining from the ear or nose when a skull fracture is suspected.		
06 Care for patient who is bleeding internally in an extremity.		
07 Care for patient who is bleeding internally in the abdomon.		
08 Care for patient who is bleeding internally in the chest cavity		
09 Check patient for signs and symptoms of internal bleeding		
10 Control external bleeding by applying direct pressure over the wound		
11 Determine when a tourniquet should be used to control bleeding		
12 Elevate body part to stop bleeding		
13 Evaluate situation to see where and how much bleeding is occurring		
14 Examine patient to determine the origin of internal bleeding if possible		
15 Give high priority care to patients with internal bleeding		
16 Mark patient who has a tourniquet applied.		
17 Take blood pressure.		
18 Take pulse		
19 Use inflatable splint to stabilize laceration after bleeding is stopped.		
20 Administer IV to patient suffering blood loss.		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
E. Treating Victims of Shock		
01 Administer IV to victim of shock		
02 Check patient for potential or actual shock.		
03 Examine shock patient for changes in vascular tone . . .		
04 Examine patient for symptoms of anaphylactic shock . . .		
05 Examine patient for symptoms of cardiac shock.		
06 Examine patient for symptoms of hemorrhagic (fluid loss) shock.		
07 Examine patient for symptoms of metabolic shock.		
08 Examine patient for symptoms of neurogenic shock		
09 Examine patient for symptoms of psychogenic shock. . . .		
10 Examine patient for symptoms of respiratory (inadequate breathing) shock		
11 Examine patient for symptoms of septic (severe infection) shock		
12 Give pulmonary or CPR, as required, in cases of shock. .		
13 Provide emergency care to victim of anaphylactic shock.		
14 Provide emergency care to victim of cardiac shock. . . .		
15 Provide emergency care to victim of hemorrhagic shock. .		
16 Provide emergency care to victim of metabolic shock. . .		
17 Provide emergency care to victim of neurogenic shock . .		
18 Provide emergency care to victim of psychogenic shock. .		
19 Provide emergency care to victim of respiratory shock. .		
20 Provide emergency care to victim of septic shock		
21 Stabilize shock victim before transport.		
22 Treat patient to prevent shock		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
F. Treating Wounds (Open & Closed)		
01 Anchor universal bandage or gauze pads on wounds on the extremities.		
02 Apply dressing & bandage to wound on neck.		
03 Apply dressing & bandage to wound on shoulder.		
04 Apply dry, sterile dressing & bandage to wound on forehead or scalp.		
05 Care for patient with abrasions.		
06 Care for patient with avulsions.		
07 Care for patient with contusions with hematoma		
08 Care for patients with foreign bodies in wounds.		
09 Care for patient with lacerations.		
10 Care for patient with punctures.		
11 Control bleeding as the situation dictates		
12 Examine patient for abrasions (open wound)		
13 Examine patient for avulsions (open wound)		
14 Examine patient for contusions with hematoma (closed wound)		
15 Examine patient for lacerations (open wound)		
16 Examine patient for punctures (open wound)		
17 Immobilize body part in event of severe bleeding		
18 Place wet sterile dressing on wound which has exposed internal organ		
19 Recover amputated body part.		
20 Care for amputated body part		
21 Flush wound if toxic liquid is present		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
G. Immobilizing Fractures and Dislocations of the Upper Extremity		
01 Apply inflatable splint.		
02 Apply slight traction while splinting.		
03 Apply supportive traction to fracture or dislocation		
04 Determine when an inflatable splint should be used		
05 Dress wound (open fracture) before splinting		
06 Examine patient for symptoms of dislocation.		
07 Examine patient for symptoms of open or closed fracture.		
08 Examine patient for symptoms of sprain		
09 Immobilize dislocation above and below joint before moving patient		
10 Immobilize fracture above and below break before moving patient.		
11 Pad an unpadded splint		
12 Prevent shock to patient with fracture or dislocation.		
13 Splint tightly, not interfering with circulation, with rigid splint		
14 Stop bleeding of open fracture		
15 Use sand bags in suspected neck injuries		
16 Utilize scoop stretcher to minimize movement of fractured part		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
H. Immobilizing Fractures and Dislocations of the Lower Extremity		
01 Administer drug to relieve pain in case of fracture or dislocation.		
02 Apply cold pack to injury to reduce edema.		
03 Care for patient with a fracture of the foot		
04 Examine patient for fracture of the foot		
05 Examine patient for fracture of the tibia and fibula . .		
06 Examine patient for fracture or dislocation of the knee joint		
07 Examine patient for symptoms of a dislocated hip		
08 Examine patient for symptoms of fracture in hip area . .		
09 Examine patient for symptoms of fracture of the shaft of the femur.		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
H. Immobilizing Fractures and Dislocations of the Lower Extremity (continued)		
10 Immobilize ankle injury by splinting		
11 Immobilize dislocation or fractured hip using method appropriate for type of injury		
12 Immobilize dislocation of knee joint		
13 Immobilize fracture of any part of the femur by tying both legs together		
14 Immobilize fracture of any part of the femur using a long board splint.		
15 Immobilize fracture of any part of the femur using a traction splint.		
16 Immobilize fracture of the knee.		
17 Immobilize fracture of the tibia and fibula.		
18 Apply traction from knee on patient with fracture of femur, fibula, or tibia.		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
I. Caring for Injuries of the Head, Face and Spine		
01 Apply loose dressing & bandage to skull fracture		
02 Arrest bleeding from soft tissue wounds of the scalp, face, or neck by applying direct pressure		
03 Assure that victim of skull fracture has an airway		
04 Attend to penetrating objects		
05 Care for patient in neurogenic shock resulting from complications of broken neck or spinal injury		
06 Check patient for facial fracture		
07 Check patient for soft tissue injuries to the scalp, face, & neck		
08 Control bleeding of the victim of spinal fracture		
09 Examine patient for symptoms of fracture of the neck and spine		
10 Examine patient for symptoms of skull fracture		
11 Examine patient with skull fracture for possible brain damage		
12 Handle victim of diving accident carefully to prevent possible paralysis		
13 Identify symptoms of diaphragmatic breathing resulting from neck or spinal injury		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
I. Caring for Injuries of the Head, Face and Spine (continued)		
14 Immobilize fractured neck		
15 Immobilize lower jaw		
16 Immobilize patient with soft tissue wounds to the scalp, face or neck as if he had spinal or neck injuries		
17 Keep head, neck & body rigid during all phases of emergency care of a spinal fracture		
18 Look for symptoms of neurogenic shock or respiratory shock		
19 Position & protect avulsed parts		
20 Position patient with head injury		
21 Prevent shock in victim of skull fracture		
22 Question conscious patient to help in discovering indications of spinal fracture		
23 Remove victim of diving accident from water		
24 Restore the airway of the victim of neck or spinal fracture when necessary		
25 Splint spinal fracture before moving patient		
26 Assist in neurological examination		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
J. Caring for Eye Injuries		
01 Administer emergency treatment for chemical burns to the eye		
02 Administer emergency treatment for eyes exposed to extremes of heat or light		
03 Arrest hemorrhage of the eye for injury other than laceration		
04 Care for torn eyelids		
05 Check patient for glass eye or contact lens		
06 Cover eyes with bandage (no foreign object protruding)		
07 Dress & bandage eye with foreign object protruding		
08 Examine patient for signs of eye injury		
09 Minimize pressure in case of eye injury		
10 Remove small foreign objects from the eye		
11 Irrigate eyes with saline solution		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
K. Caring for Injuries to the Chest, Back, Abdomen, Pelvis and Genitalia		
01 Care for flail chest		
02 Care for hemothorax		
03 Care for injury to female genitalia		
04 Care for injury to male genitalia		
05 Care for pericardial temponade		
06 Care for pneumothorax resulting from perforation or rupture of lung tissue		
07 Care for rib fracture		
08 Care for sucking chest wounds		
09 Care for tension pneumothorax		
10 Care for victim of traumatic asphyxia		
11 Examine patient for chest injury		
12 Examine patient for injuries to the genitalia		
13 Examine patient for possible abdominal injuries		
14 Examine patient for possible pelvis fracture		
15 Examine patient with chest injury for possible spinal injury		
16 Examine patient with chest injury for signs of internal bleeding or punctured organs		
17 Immobilize patient with pelvis fracture		
18 Observe patient with abdominal injury for vomiting and shock during transport		
19 Provide emergency care in case of pelvic fracture		
20 Provide emergency care to patients with abdominal injury		
21 Administer IV to patient with internal bleeding or hemmorhagic shock		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
L. Providing Emergency Care to Victims of Poisoning, Bites, and Stings		
01 Administer emergency treatment to snake bite victims		
02 Administer emergency treatment to victim of animal bite		
03 Administer emergency treatment to victim of poisonous insect bite or sting		
04 Care for patient with allergic reaction to prevent anaphylactic shock		
05 Carry poison container		
06 Check with poison control center or medical facility for instruction on emergency medical care of poison victim		
07 Determine type of poisoning if possible.		
08 Examine patient for animal bites		
09 Examine patient for signs and symptoms of poisonous insect bites or sting.		
10 Examine patient for signs and symptoms of snake bite		
11 Examine patient for symptoms of allergic reactions		
12 Examine patient for symptoms of poisoning.		
13 Identify type of animal which inflicted bite and contain if possible.		
14 Identify type of insect which inflicted poisoning bite or sting.		
15 Identify type of snake which bit patient		
16 Question patient regarding allergies and medication.		
17 Provide appropriate emergency care to victim of poisoning.		
18 Use stomach evacuator tube in case of poisoning.		
19 Administer IV to victim of poisoning		

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DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
M. Providing Emergency Care to Stroke or Dyspnea Patients		
01 Administer emergency care to asthmatic patient during transport to hospital.		
02 Administer injection of epinephrine to victim of respiratory distress		
03 Care for patient with symptoms of emphysema attack		
04 Care for psychological needs of stroke victim.		
05 Examine patient for signs and symptoms of asthmatic attack		
06 Examine patient for symptoms of emphysema attack		
07 Examine patient for symptoms of spontaneous pneumothorax		
08 Examine patient for symptoms of stroke		
09 Question asthma patient regarding prior attacks and medication		
10 Provide emergency care to victim of stroke by treating symptoms		
11 Stabilize stroke or dyspnea patient before transport		
12 Stabilize victim of spontaneous pneumothorax before transport.		

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DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
N. Handling Patients with Communicable Diseases		
01 Notify health department of communicable disease which was not transported to hospital.		
02 Place contaminated clothes and linen in container for special handling		
03 Receive preventative medical care as a precaution against communicable diseases.		
04 Remove unnecessary equipment from ambulance before responding to call if patient has a known communicable disease		
05 Sanitize and decontaminate vehicle and equipment after transporting patient with communicable disease		
06 Shower and dispose of clothes after being exposed to communicable disease		
07 Take medical precautions to protect self after exposure to communicable disease.		
08 Transport patient with communicable disease to the hospital		
09 Use disposable equipment if possible when caring for patient with communicable disease.		
10 Wear mask and smock when caring for patient with known communicable disease		
11 Isolate patient with communicable disease.		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
O. Handling Drugged, Emotionally Disturbed, or Unruly Patients		
01 Determine type of drug taken		
02 Evaluate situation where abnormal behavior is manifested in terms of causes and possible danger		
03 Handle disturbed patient as situation dictates		
04 Observe patient for early signs of abnormal behavior . .		
05 Observe patient for signs of drug abuse.		
06 Provide emergency care to patient with a reaction to drugs or drug overdose (if possible)		
07 Reassure disturbed patient		
08 Request police assistance if needed.		
09 Treat severe emotionally disturbed patient		
10 Use restraints when necessary.		
11 No task written		
12 Place bite-stick in mouth of patient to prevent biting tongue		
13 Transport demented patient		
14 Recommend police transport for severely unruly patient .		
15 Gather information about the drug taken.		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
P. Providing Care in Cases of Epilepsy, Convulsions or Unconscious State		
01 Encourage patient to rest after seizure.		
02 Examine patient for symptoms of grand-mal seizure. . . .		
03 Examine patient for symptoms of petit-mal seizure. . . .		
04 Examine patient to determine whether unconsciousness is due to fainting or coma.		
05 Loosen clothing and prevent convulsing patient from harming self		
06 Make sure victim of seizure does not have an airway obstruction.		
07 Protect convulsive patient from on-lookers		
08 Provide care to prevent victim of seizure from biting tongue		
09 Provide emergency care to unconscious patient.		
10 Determine cause of unconsciousness		
11 Treat injuries resulting from epileptic seizure.		
12 Treat injuries resulting from falls of unconscious patient.		
13 Use orpharengeal airway for airway & tongue protector. .		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
Q. Providing Emergency Care to Patients with Diabetic Complications		
01 Administer sugar to victim of insulin shock.		
02 Check patient for presence of special identification which will confirm the fact of diabetes		
03 Examine patient for symptoms of insulin shock.		
04 Examine unconscious patient for symptoms of diabetic coma		
05 Perform dextrose stick test on patient suspected of diabetic complications		
06 Transport patient in diabetic coma to hospital immediately.		
07 Transport victim of insulin shock to hospital immediately.		
08 Treat patient who is in diabetic coma.		
09 Treat patient who is in insulin shock.		
10 Question to determine when diabetic patient took insulin.		
11 Stabilize patient with diabetic complications.		
12 Take blood pressure of suspected diabetic.		
13 Take blood sugar sample.		
14 Take before & after blood sugar sample to emergency room physician		
15 Question to determine what diabetic patient ate.		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
R. Assisting with Childbirth and Care of Mother		
01 Assist mother in delivering baby when delivery is breech		
02 Assist mother in normal delivery of baby		
03 Care for newborn child		
04 Care for patient who has had an abortion or miscarriage		
05 Conduct baptism of stillborn child upon request		
06 Give emergency care during transport in case of prolapsed cord		
07 Make decision in emergency childbirth case whether or not to transport mother directly to the hospital		
08 Make preparation for delivery of baby		
09 Observe mother after birth for possibility of multiple birth		
10 Observe patient for signs of pre-delivery emergencies		
11 Provide care in case of pre-delivery emergency		
12 Provide special care for premature infant		
13 Resuscitate newborn child in case of failure to breathe normally		
14 Take precautions to prevent excessive bleeding during or after delivery		
15 Transport patient to hospital before delivery/after delivery		
16 Use emergency delivery pack		
17 Alert hospital that premature infant is being brought in		
18 Carry miscarriage or fetus to hospital for examination		
19 Determine stage of labor		
20 Transport premature infant in portable incubator		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
S. Providing Care to Pediatric Patients		
01 Check for signs of child abuse		
02 Examine child for injuries		
03 Obtain parents' help in delivering service to pediatric patients if desirable		
04 Provide emergency care especially geared to pediatric patients		
05 Soothe the fears of child involved in accident		
06 Transport child and parents together when possible and desirable		
07 Transfer pediatric patient to pediatric clinic		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
T. Lifting and Moving Patients		
01 Carry loaded stretcher		
02 Communicate intent to conscious patient before moving		
03 Determine best position for moving patient depending on the injury		
04 Explain special positioning or immobilization to conscious patient		
05 Maintain in-line traction when moving injured patient		
06 Move patient from floor-height surface to stretcher with the help of another person(s)		
07 Move a supine patient from bed-height surface to stretcher with help of another person(s)		
08 Move patient carefully to minimize danger of aggravation or further injury		
09 Move patient from dangerous situation without assistance		
10 Provide patient care before movement unless delay would endanger life of patient or rescuer		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
T. Lifting and Moving Patients (continued)		
11 Secure patient on stretcher		
12 Unload patient from stretcher with help from another person(s)		
13 Use folding stretcher		
14 Use long backboard		
15 Use scoop stretcher		
16 Use stair chair		
17 Use short backboard		
18 Use stokes stretcher		
19 Lower patient from building using ropes		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
U. Treating Burns		
01 Apply the "Rule of Nines" to aid in determining the criticality of heat burns.		
02 Care for chemical burns following irrigation		
03 Communicate with people in vehicle on which electrical wire has fallen		
04 Contact trained personnel to remove patient from electrical source.		
05 Decontaminate self and clothing following exposure to radiation		
06 Decontaminate vehicle and equipment if exposed to radio-active materials		
07 Determine degree of heat burn.		
08 Determine the age of burn patient.		
09 Determine the part of the body burned.		
10 Determine whether burn was caused from heat, chemicals, electricity, or radiation.		
11 Determine whether chemical burn was caused by acids or alkalis		
12 Determine whether burn was caused by radioactive source		
13 Examine burn patient for symptoms of other injuries or illness which might cause complications.		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
U. Treating Burns (continued)		
14 Follow procedures recommended by atomic energy commission if radioactive materials get on clothes of patient or rescuer.		
15 Keep crowd away from danger zone when electrical wire has fallen.		
16 Provide basic care for minor heat burns.		
17 Provide basic care for serious heat burns.		
18 Provide emergency care for victim of electrical burns. .		
19 Provide emergency care to burn victim in case of shock, airway obstruction, or other injuries		
20 Provide emergency care to victim of nuclear burns. . . .		
21 Remove patient quickly from area with hazardous radiation level.		
22 Take precautions to avoid inhaling or swallowing radioactive materials.		
23 Treat solar burns as first or second degree burns. . . .		
24 Use copius irrigation to care for chemical burns		
25 Use Geiger counter to detect Gamma rays.		
26 Administer IV therapy to burn patient.		
27 Administer oxygen therapy to burn patient.		
28 Apply sterile drape and dressing to burn		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
V. Treating Medical Emergencies		
01 Examine patient for symptoms of cold exposure.		
02 Examine patient for symptoms of frostbite.		
03 Examine patient for signs and symptoms of heat cramps. .		
04 Examine patient for signs and symptoms of heat exhaustion		
05 Examine patient for signs and symptoms of heat stroke. .		
06 Examine patient for signs and symptoms of trench foot. .		
07 Provide care to victim of frostbite.		
08 Provide emergency care for general cold exposure		
09 Provide emergency care for patient with heat exhaustion.		
10 Provide emergency care for patient suffering from heat stroke.		
11 Provide emergency care for trench foot		
12 Provide emergency care to patient with heat cramps . . .		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
W. Responding to Environmental Emergencies		
01 Administer oxygen to drowning patient after resuscitation.		
02 Administer pulmonary resuscitation to drowning patient immediately upon recovery.		
03 Assist in rescue missions.		
04 Care for patient suffering from air embolism or bends		
05 Care for victim of oxygen or nitrogen poisoning.		
06 Care for victim of squeeze injuries.		
07 Examine obvious external injuries of patient who was in explosion		
08 Examine patient for possible internal injuries resulting from explosion		
09 Examine patient for symptoms of air embolism		
10 Examine patient for symptoms of oxygen or nitrogen poisoning.		
11 Examine patient for symptoms of squeeze injuries		
12 Move injured patient from site of explosion.		
13 Perform triage duties during emergencies		
14 Take precautions to prevent unconscious patient from drowning in his own secretions		
15 Care for patients who were victims of cave-in.		
16 Remove debris from patient at explosion site		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
X. Extricating from Automobile and Other Vehicles		
01 Administer emergency care to patient after extrication		
02 Administer emergency care to patient before extrication unless delay would endanger life		
03 Advise rescue crew so that their activities do not endanger patient		
04 Assess the situation at the scene of vehicle accident		
05 Attend the needs of patient during extrication		
06 Disentangle patient from wreckage		
07 Extinguish flammable liquids at scene of accident		
08 Operate power equipment during extrication		
09 Perform triage at the scene of vehicle accident		
10 Prepare patient for removal from wreckage		
11 Provide sufficient lighting during extrication		
12 Remove patient from wreckage		
13 Take charge of patient at scene of extrication		
14 Use life support equipment during extrication		
15 Use prying and cutting tools to gain access to patient in vehicle		
16 Use general public in rescue		

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
Y. Driving and Maintaining Emergency Vehicle		
01 Drive appropriately for the current weather condition		
02 Have vehicle serviced on a regular basis		
03 Inspect vehicle and equipment after each run		
04 Keep equipment and supplies in proper place in vehicle		
05 Keep exterior and interior of vehicle clean		
06 Keep vehicle under control		
07 Maintain full complement of equipment and supplies		
08 Maintain safe following distance		
09 Maintain vehicle routinely		
10 Observe speed limit when possible		
11 Observe standard traffic regulations whenever possible		
12 Perform daily inspection of equipment		
13 Perform daily inspection of vehicle		
14 Practice defensive driving		
15 Provide safe and comfortable ride for the patient		
16 Request police assistance at intersections and bridges during emergency transport		
17 Use alternate routes during peak traffic periods		
18 Use audible signals only in true emergency		
19 Use checklist for procedures that must be performed on an emergency basis		
20 Use visual signals to clear right of way for emergencies		

TASK LIST

DUTY/TASK	CRITICAL TASK √	STRESS RATING O,L,M,H
2. Responding & Transferring Patient to Emergency Room		
01 Analyze the situation immediately upon arriving on the scene		
02 Arrange for traffic control		
03 Check vital signs of patient as soon as possible after arriving on scene		
04 Comply with hospital regulations		
05 Control the situation on the scene as necessary		
06 Exchange equipment and supplies with hospitals once patient has been transferred to emergency room		
07 Follow legal procedures in the event of accidental death		
08 Follow legal procedures in the event of suicide, homicide, or other violent cases		
09 Note changes in vital signs during transport		
10 Plan and accomplish loading		

DUTY/TASK (continued)	CRITICAL TASK √	STRESS RATING O,L,M,H
2. Responding & Transferring Patient to Emergency Room		
11 Preplan based on information provided by dispatcher		
12 Remain with patient until emergency room transfer has been effected		
13 Render assistance as needed in emergency room during transfer of patient		
14 Request advice from hospital emergency department		
15 Return to pre-dispatch phase after completing emergency call		
16 Sort patients by priority for transport		
17 Survey for life threatening situation at the scene		
18 Transfer patient physically from emergency		
19 Transport patient to hospital		
20 Give emergency room personnel a full report on case & treatment rendered		
21 Refer coroners cases to undertaker on call		