do; rather it is to present the strategy of behavioral objectives as one way of focusing on the scope and competency of the activity of the EMT. It would be futile to have every EMT instructor write objectives. A pool of standardized, realizable objectives should be developed from which each instructor may select those which tailor training to community needs. With the proliferation of categories of health care professionals and paraprofessionals, it is imperative that there be definitions of the unique competencies of each. The techniques of mastery through training and practice must be incorporated in their educational programs. Evaluation and certification must embrace the complete realm of attitude-behaviors, problem-solving, psychomotor, and interpersonal skills inherent in providing health care to people.[6,7]

All EMT trainers have some objectives in their minds. Now is the time to make them explicit.

REFERENCES

1. Mager R: *Preparing Instructional Objectives.* San Francisco, Fearson Publishers, 1962.

2. Swanout C: Attention in the college lecture. *Academics. The Practice of Higher Education,* 1970-71, pp 2-5.

3. Spear N: Verbal learning and retention, in D'Amato M: *Experimental Psychology,* New York, McGraw-Hill, 1970, pp 622-23.

4. Norman D: *Memory and Attention: An Introduction to Human Information Processing,* New York, John Wiley and Sons, 1969.

5 Duchastel PC, Merrill PF: The effects of behavioral objectives on learning: A review of empirical studies. *Review of Educational Research,* 43:1, 1973.

6. National Board of Medical Examiners: *Evaluation In the Continuum of Medical Education,* Report of the Committee on Goals and Priorities of the National Board of Medical Examiners, Philadelphia, June 1973, pp 23, 46, 57, 59.

7. Chase A: New paramedical skills for new concepts of health care. *The Biological Imperatives Health, Politics, and Human Survival,* New York, Holt Rinehart & Winston, 1971, pp 303-27.

CONCEPTS, COMPONENTS AND CONFIGURATIONS

State Laws for Ambulance Attendants and Advanced Emergency Medical Technicians

M. Clagett Collins, MD†
Rockville, Maryland

The establishment of ambulance personnel licensing standards is studied. Since 1970, 18 states have enacted or amended statutes regulating ambulance services and 25 have set requirements for attendants. Another 13 states have recently developed regulations pertaining to Advanced Emergency Medical Technicians (EMT-A). Various levels of EMT training are described. It is noted that recertification or refresher training is being made a statutory requirement in most recently enacted laws. Standards for training, certification and activities of EMT-As are discussed, as are the functions which may be performed. Medical-legal questions pertaining to civil liability are examined, as are the needs for licensing reciprocity arrangements to permit geographic mobility. Activities of EMTs are discussed with special attention given to restrictions under various state laws, and the delegation of medical tasks as well as the question of immunity from liability are considered.

One of the most active areas in the regulation of health manpower is in the enactment of state laws to license ambulance personnel. Surveys of emergency health manpower indicate that, in 1973, 70% of the more than 206,000 ambulance attendants in this country were trained at least to the level of the advanced first aid course sponsored by the American National Red Cross; about 20% were trained to a level below that of advanced first aid; and 10% had no training in first aid (unpublished data, U.S. Department of Transportation, National Highway Traffic Safety Administration, May 1973).

With the growing interest at federal, state, and local levels in the provision of adequate emergency medical services, more attention is being given to the establishment of both standards and training programs for ambulance personnel. The enactment of state legislation is one activity that reflects this attention. Of the statutes in 29 states* which regulate ambulance services, 18 have been enacted or amended since the beginning of 1970, and 25 have established training standards and other requirements for ambulance attendants (Table 1). Much of this interest and activity has been in response to the implementation of the National Highway Safety Act of 1966. The Act had as one of its objectives the reduction of accidents, injuries, and deaths. It requires that each state, in the implementation of its highway safety program, improve emergency medical services within its borders.[1]

Another recent development has

†National Center for Health Services Research and Development, Department of Health, Education and Welfare, Rockville, Maryland

Address for reprints: M. Clagett Collins, MD, 12106 Otis Drive, Rockville, Maryland 20852.

*Alabama, Arizona, California, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Kentucky, Louisiana, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Oregon, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington.

been the legislation or promulgation of administrative regulations in 13 states to legalize and control the functions of the Advanced Emergency Medical Technician (Advanced EMT), a relatively new type of allied health professional (Table 2). Advanced EMTs are highly trained personnel who function in an emergency situation in the treatment of trauma and acute illness, such as myocardial infarction and cardiac arrest. They are capable of performing such tasks as endotracheal intubation, cardiac defibrillation, and the administration of certain drugs and intravenous fluids under the direction of a physician. In one version of the Advanced EMT program, firemen have been trained through the Los Angeles County Fire Department[2] and their medical activities popularized by a network television program. Because Advanced EMTs work primarily with specially equipped vehicles or ambulances, in many of the state statutes these individuals are called "mobile intensive care paramedics," though they are capable of working in other settings such as hospital emergency departments. In their provision of emergency medical services, Advanced EMTs perform some of the tasks carried out by nurses and physician assistants in the emergency department.

The recent passage of laws to regulate physician assistants[3] is probably the only other development in health manpower law to rival the proliferation of statutes covering ambulance attendants and Advanced EMTs. Furthermore, in the 1973 sessions of state legislatures, there were bills in 13 states** to regulate ambulance attendants, or to strengthen existing laws regulating ambulance attendants. In addition, Kansas, Montana, New Jersey, Ohio and Texas have introduced bills to regulate Advanced EMTs. Some of these have failed to pass, while others are still being considered. One can anticipate that there will be significant legislative activity in this area for several more years.

A Professional Career

Many of those involved in the training of ambulance personnel envision a professional career for them in emergency medical services. In the past, in sheer numbers of personnel certified, the advanced first aid course of the American National Red Cross served as the basic level of training for ambulance personnel. Many states and organizations hope to elevate the basic level training to that of the Emergency Medical Technician — Ambulance, an 81 hour course developed and supported by the Department of Transportation (DOT).[4] As of May 1973, 42,000 ambulance attendants were trained to this level.[1]

The next level would be that of the Advanced EMT, trained through a course of approximately 480 hours which has been developed by DOT. The advanced course follows guidelines of the Committee on Emergency Medical Services of the National Academy of Sciences — National Research Council.[5] The course is being tested in a pilot program by selected institutions across the nation before its publication. And finally, the Commission on Emergency Medical Services of the American Medical Association has developed a two-year college level Associate's Degree Program that would qualify emergency medical technicians at a level comparable with certified x-ray, inhalation therapy, or other allied health technicians.[6]

State Laws for Ambulance Attendants

Of the 25 states with laws pertaining to ambulance attendants, all but one vest regulatory authority in some state body, usually the State Board or Department of Health. The exception is South Dakota which authorizes counties or municipalities to license and regulate persons providing ambulance services (South Dakota Compiled Laws, 34-11-1). In the 25 states which set training standards, 18 do so through mandatory certification of licensure of ambulance attendants and drivers, while seven set the standards through their authority to license ambulance services.

In the strict sense, *licensure* of manpower means the process by which an *agency of government* grants permission to persons to engage in a given profession or occupation by certifying that those licensed have attained the minimal degree of competency necessary to ensure that the public health, safety, and welfare will be reasonably well protected. By contrast, *certification* is the process of a *nongovernmental agency* or association which grants recognition to an individual who has met certain educational qualifications.[7] In most of the statutes the term certification is used in a situation that amounts to licensure by these definitions, while in others the term licensure is used. In further discussion, direct mandatory certification and licensure are regarded as synonymous.

The level of training required by state laws is entering a period of change. In 1973 at least 13 states required advanced first aid training Arizona requires a 20 hour course (Arizona Corp. Comm: MC-14, Sec 16) and New York requires a 55 hour course (Chap. VI, Title 10, State Ambulance Code, Sec. 800/3 and 820.1)

Seven states now have statutes which require the DOT EMT-Ambulance course as the basic training standard for the future.*** This standard will be mandatory in Utah, Florida, and Tennessee in 1974, in Georgia and Kentucky in 1975, in Washington in 1976, in Nevada in 1978,[15-21] and in Minnesota in "the future." It is significant that these eight states have passed EMS legislation within the last two years for it may foreshadow a trend in basic requirements. In 22 states the DOT EMT-Ambulance course is now offered. These are issuing certificates on a voluntary basis and more states are expected to do so.[9]

In about half of the 25 states' statutes, the minimal training standards are explicitly stated in the legislation itself, whereas in the other half the standards are established in rules and regulations of the responsible state agency. The establishment of training standards through administrative regulation may be preferred in many states because it allows the standards to be revised without recourse to the sometimes

**Arkansas, Illinois, Indiana, Iowa, Massachusetts, Mississippi, Oregon, Pennsylvania, Rhode Island, Texas, West Virginia, Wisconsin, Wyoming.

***Utah Senate Bill 66, enacted 3/16/73, Florida House Bill 124, enacted 6/7/73, Tennessee House Bill 1444, enacted 4/19/72; Georgia Department of Human Resources Rules 290-5-30.08; Kentucky Regulations — Emergency Care-Ambulance Services, KRS 216.425; HFHS-16-1; State of Washington, Chap 208, Laws of 1973; Nevada Senate Bill 454, Chapter 649, 1973.

lengthy legislative process of amendment of the statutes.

Other provisions in the state laws pertain to the number of personnel that must serve on the ambulance, and the requirement for their recertification and refresher training. In 13 states two crewmen are required per ambulance on an emergency run. Nine require that the driver be trained to the same level as the attendant.

Most of the state laws require recertification or refresher training. States which require advanced first aid or EMT-Ambulance certification are assured of continuing education requirements since refresher training is part of the procedure to maintain valid certification in these programs. Refresher courses or re-examination for recertification are required in the statutes or regulations of Arizona, Connecticut, Delaware, Florida, Georgia, Kentucky, Minnesota, New Mexico, New York, North Carolina, Tennessee, Virginia, and Washington. Such statutory requirements for continued competency are part of a national trend in recently enacted or amended state licensure laws.[8]

State Laws for Advanced EMTs

As of May 1973, 13 states**** have passed legislation or written rules to regulate and legalize the function of Advanced EMT s. The laws generally contain the same basic elements though there is variation.

Standards

Each of the laws gives some regulatory body or agent authority to set standards for the training, certification, and activities of Advanced EMTs. In most of the states this body is the State Department of Health (Table 2). In Idaho and Maryland, the Board of Medicine has this responsibility while in Minnesota the State Board of Health or the Board of Medical Examiners may certify training programs. In West Virginia the Medical Licensing Board shares the responsibility with the Department of Health in that the Department of Health accredits and supervises the training programs while the Medical Licensing Board certifies or licenses the Advanced EMTs. The responsibility to certify the Advanced EMTs is assumed by county officials under California and Washington laws, though in Washington the University of Washington School of Medicine may also act as the certification agent.

Five of the statutes require the regulatory agency to recertify the Advanced EMTs at regular intervals. Florida and Nevada require the Advanced EMT to participate in continuing education in order to be recertified. The California and Minnesota laws apply only to certain county or city areas.

The situation is a little different in the State of New York in that no new legislation has been passed specifically for Advanced EMTs. It was felt by the Office of the Counsel for the Public Health Department that provisions in the existing ambulance service law were broad enough to give the Commissioner of Health authority to write regulations governing the qualifications of Advanced EMTs.[9] The specific section cited — Laws of New York, Chapter 949, Article 30, Section 3004.5 reads in part as follows:

> *The Commissioner shall prescribe minimum qualifications for medical emergency technicians in all phases of medical emergency technology including but not limited to, communications, first aid, equipment maintenance, emergency room techniques and procedures, patient handling and positioning, and knowledge of procedures and equipment used for obstetrical, respiratory, and cardiac emergencies.*

Under the New York law, the level of training of an Advanced EMT is viewed as a phase of emergency medical technology with particular knowledge of procedures and equipment used for respiratory and cardiac emergencies.

Functions

Another section common to each of the laws is one which outlines the functions of the Advanced EMT. In the Maryland, Florida, Idaho, and Washington statutes, this section is short, stating in effect that Advanced EMTs may carry out cardiopulmonary resuscitation and, when authorized by a physician or nurse, may administer drugs or intravenous solutions. These four state laws leave the specific drugs and procedures to be set by the state regulatory authority. The other statutes either list the drugs or classes of drugs and procedures (California, Rhode Island, Illinois, Nevada) or list certain drugs and procedures but include a clause allowing for the use of still others. The latter is accomplished by providing that the supervising physician (or the regulatory agency) may designate other drugs or procedures that may be used as in the states of Oklahoma, Tennessee, Minnesota and West Virginia. The sections stating the activities of the Advanced EMT in the Tennessee law serve as an example.

Section 4. *Emergency Medical Technician — Advanced may do any of the following:*

- *a) Render emergency care, rescue and resuscitation services.*
- *b) During training at a hospital, ambulance, or other medical facility and while caring for patients in such hospital or facility administer parenteral medications under the direct supervision of a physician or a registered nurse.*
- *c) Perform cardiopulmonary resuscitation and defibrillation in a pulseless, nonbreathing patient.*

Section 5. *Where voice contact or a telemetered electrocardiogram is monitored by a physician or an authorized registered nurse, and direct communication is maintained, Emergency Medical Technician — Advanced may upon order of such physician or such registered nurse do any of the following:*

1. *Administer intravenous solutions;*
2. *Perform gastric or tracheal suction or intubation;*
3. *Administer parenteral injections of any of the following classes of drugs:*

****California Health and Safety Code, Chap 2.5, Div 2, Art 3, Sec 1480-1485; Washington Senate Bill 188, enacted 5/20/71; Florida Senate Bill 677, enacted 4/14/72; Illinois Senate Bill 1571, enacted 1972; Maryland Senate Bill 899, enacted 5/26/72; Idaho Code Title 36, Sec 131-136; Oklahoma Senate Bill 339, enacted 4/7/72; Statutes of Nevada 1973 Chap 422; Tennessee Senate Bill 191, enacted 5/2/73; West Virginia Senate Bill 281, enacted 1973, Rhode Island Senate Bill 584, enacted 5/5/73, Laws of New York, Chap 949, Art 30, Sec 3004, 5; Minnesota H.F. 1551, Chap 397, enacted 5/19/73.

a. *antiarrhythmic agents*
b. *vagolytic agents*
c. *chronotropic agents*
d. *analgesic agents*
e. *alkalinizing agents*
f. *vasopressor agents*
g. *anti-convulsive agents, or*
h. *other drugs which may be deemed necessary by the ordering physician*

4. *Perform cardiac defibrillation.*

Liability

Nine of the statutes contain a section that extends immunity from civil liability to Advanced EMTs or to physicians or nurses who may order them to perform duties, such as the administration of drugs or intravenous fluids. An example of such a clause, in the Nevada statute (Chapter 649, 1973), reads as follows:

> *Any physician or registered nurse who in good faith gives instruction to a paramedic at the scene of an emergency, and the paramedic who obeys such instruction, shall not be held liable for any civil damages as a result of any act or omission, not amounting to gross negligence, by such persons in rendering such emergency care.*

Five of the laws (West Virginia, Washington, Idaho, Minnesota, and Maryland) have a provision stating that the Advanced EMT, in carrying out his duties, will not violate the Medical Practice Act of the state. The Washington statute (Chapter 208, Laws of 1973) makes the statement in this manner:

> *Any person who shall practice or attempt to practice or hold himself out as practicing medicine and surgery in this state, without having, at the time of so doing, a valid, unrevoked certificate as provided in this chapter shall be guilty of a misdemeanor.* ***Provided,*** *that nothing in this section shall be so construed as to prohibit or penalize emergency life-saving service rendered by a physician's trained mobile intensive care paramedic . . . .*

Geographic Mobility

As previously noted, by May of 1973 approximately 20% of the 206,000 ambulance attendants in the country had been trained as EMTs at the basic 81 hour level and the percentage continues to grow. This has come about through training programs in 44 states which have been funded largely by DOT under the National Highway Safety Act of 1966. Personnel trained in one state may, for one reason or another, move to other states. Certainly many will want to continue working as EMTs. As more states require licensure or certification of their personnel, and as more require graduation from an accredited program for licensure, reciprocity arrangements will be necessary to permit geographic mobility. These arrangements will be based partially upon the comparability of EMT-A training programs. The efforts of the Registry of Emergency Medical Technicians, a national private organization which has already tested and registered EMTs in approximately 18 states, may provide a mechanism to facilitate reciprocity as long as the states can be assured that adequate uniform standards are maintained.

The problem of geographic mobility and comparability of training programs for Advanced EMTs requires further attention. The content of training programs may vary significantly from state to state. For example, the previously cited Nevada statute requires "at least 500 hours of training, including but not limited to 300 hours of didactic and 200 hours of clinical instruction . . . ." and the West Virginia regulations require completion of an 87 hour EMT — Ambulance course followed by an additional 96 hour course. A step which might contribute to the uniformity of the training programs is the 480 hour Advanced EMT training program developed under contract for DOT. The course is presently undergoing pilot testing in 10 to 15 selected cities and should be available as a national standard by early 1974.[5]

Activities of Advanced EMTs

Though there is general uniformity among the laws to regulate the activities of Advanced EMTs there is some difference in the breadth of activities among several states. The West Virginia statute is perhaps the most narrowly drawn.[6] It states that the Advanced EMT may render emergency care and perform cardiopulmonary resuscitation and defibrillation as in the Tennessee law (vide supra). However, it mentions no procedures other than the administration of parenteral or intravenous solutions, and it lists only three drugs, lidocaine, atropine, and pentazocine, though there is a clause stating that the Department of Health may approve other drugs and solutions. In contrast, the Nevada statute contains all the provisions of the Tennessee Act plus these: needle aspiration of the chest, surgical exposure of a vein or artery, phlebotomy for analysis of blood specimens, and the administration of diuretics, narcotic antagonists, volume expanding agents, topical ophthalmic solutions, intravenous glucose, antihistaminics, steroids, and bronchodilators. This clearly allows the Advanced EMT in Nevada to care for patients with a broader range of emergencies. Among the conditions that could be accommodated are anaphylaxis, insulin shock, seizures, asthma, tension pneumothorax, as well as arrhythmias, myocardial infarction, cardiac arrest, and hypovolemic shock. This broader range of activities will enable the Advanced EMT not only to do more at the site of an emergency but to be of greater help in the emergency department between emergency calls. On the other hand, such manpower will require greater time and expenditure in training and supervision. It may be more cost-productive in some states to utilize Advanced EMTs who are not this highly trained. Nevertheless, such high level training and activities as are possible in Nevada may be desirable to many who want to pursue emergency medical technology as a career.

The new emergency care standards established by the American Heart Association[10] which are applicable to the activities of Advanced EMTs, particularly with respect to cardiopulmonary resuscitation, may contribute to more uniform recognition of the drugs to be used and procedures to be performed by these personnel.

Delegated Medical Tasks

States have authority to regulate medical practice within their borders. State medical practice acts, in contrast to those for other health manpower, are the broadest of the various

state practice acts. For example, the Code of Virginia, 54-273, defines the practice of medicine as "the treatment of human ailments, diseases, or infirmities by any means or method." Other practice acts allow other personnel to perform tasks without violating the medical practice act. Registered nurses, for instance, under the nursing practice act, are allowed to administer medication under a physician's orders as well as to perform other duties. Also, numerous tasks once considered to be medical tasks only, are customarily performed in many states by personnel who are not necessarily covered by a practice act. To illustrate, phlebotomy performed by laboratory technicians, and endotracheal intubation performed by inhalation therapists, would lie in this category. Thus, by law and by tradition, allied health professionals perform "medical" tasks.

Two activities, diagnosis and treatment, have been generally reserved for physicians. It is for this reason that many states have passed physician assistant laws[3] and have amended their nursing practice acts[11] in order to legalize the delegation of medical tasks, especially certain diagnostic and treatment functions, to physician assistants and nurse practitioners.

A number of procedures performed by Advanced EMTs, and all of the tasks involving administration of drugs, are traditionally medical tasks and are covered by state medical practice acts. Advanced EMTs must perform a number of rather sophisticated diagnositc tasks, a prime example of which is the identification of arrhythmias. Of the Advanced EMT statutes, only the Illinois law requires both voice communication *and* a telemetered electrocardiogram (ECG) in order for the Advanced EMT to give drugs. Six other statutes — California, Minnesota, Nevada, Oklahoma, Rhode Island and Tennessee — require voice *or* telemetry contact only. In most states, therefore, the supervising physician must rely to some degree on the Advanced EMT's ability to properly diagnose the arrhythmia in order to order the correct drug. This is particularly true in those states not requiring ECG telemetry or in event that the telemetry link malfunctions. Furthermore, in the interest of saving lives, an Advanced EMT, with his considerable knowledge of the recognition and treatment of arrhythmias, may in some instances treat an arrhythmia without a physician's order, much as nurses do under standing orders in an intensive care setting.

Since violations of the medical practice act are criminal offenses in most states, for the protection of Advanced EMTs and their supervising physician or nurse (six of the statutes allow specially trained registered nurses to order medication), it is essential to insure that the Advanced EMT statute does not violate the medical practice act of the particular state. Five of the states mentioned above — Washington, Maryland, Idaho, West Virginia and Minnesota — have done this through specific provisions in the Advanced EMT legislation.

Immunity from Liability

Forty-three states have Good Samaritan statutes. None of them, quite properly, covers acts of gross negligence or misconduct on the part of the person rendering help. Twenty-four of the statutes cover gratuitous services only.[12] Ambulance attendants in general, and particularly attendants who work for private companies or for governmental services that have to charge the patient, may be at a disadvantage in the event of a law suit if they are not clearly covered by a law limiting their liability.

As noted, nine of the laws for Advanced EMTs have a section detailing immunity from liability. Though most extend the immunity to the Advanced EMT and his supervising physician or nurse, two — California and Rhode Island — do not mention the "paramedic." Two other laws — Washington and Idaho — are more broadly written to include "any hospital or . . . federal, state, county or other governmental unit or . . . employees of such governmental unit."

Summary

It is clear that there is significant activity toward the development and passage of state laws to regulate emergency ambulance personnel and Advanced EMTs. With the potential of a career for ambulance personnel, continued attention should be given to a number of matters. These include the development of generally uniform training and certification standards to insure high quality services and to facilitate geographic mobility of personnel, the prevention of potential problems involving violations of medical practice acts, and the assurance of equal protection for all emergency medical care personnel under laws limiting civil liability.

REFERENCES

1. Smith LR: From Ambulance Driver to EMT. *Hospitals* 47:105-08, May 1973.

2. Page JO: Why fire fighters? — a discussion concerning the use of fire fighters as mobile intensive care paramedics. *Fire Command,* August 1972, p 28-31.

3. Dean WJ: State legislation for physician's assistants — a review and analysis. *Health Serv Rep* 88:3-12, January 1973.

4. *Basic Training Program for Emergency Medical Technician-Ambulance.* US Department of Transportation. National Highway Traffic Safety Administration. US Government Printing Office, 1970.

5. *Advanced Training Program for Emergency Medical Technicians-Ambulance.* Committee on Emergency Medical Services, Division of Medical Services. National Academy of Sciences — National Research Council, September 1970.

6. West Virginia State Department of Health, Emergency Medical Services Division: Guidelines for Mobile Intensive Care Paramedics. Charleston, West Virginia. 1973.

7. *Guide for program planning: Emergency Medical Technicians.* Chicago, American Medical Association, 1972.

8. *Report on Licensure and Related Health Personnel Credentialing* Department of Health, Education, and Welfare. US Government Printing Office, June 1971, p 7.

9. Miike LH: Developments in Licensure: An Attempted Synopsis. Read to American Nurses' Association Legislative Conference, Washington, DC 1973.

10. New York State Public Health Department, Albany, New York. Personal Communication.

11. *Standards for Cardiopulmonary Resuscitation and Emergency Cardiac Care.* Committee on Cardiopulmonary Resuscitation and Emergency Cardiac Care, American Heart Association, *JAMA* 227 (suppl): 833-68, Feb 1974.

12. Collins MC, Miike LH: *Changing Nursing Practice Acts to Legalize the Extended Role of Nurses as Nurse Practitioners.* Rockville, Maryland: DHEW, National Center for Health Services Research and Development, March 1973.

13. *State Statutes on Emergency Medical Services.* DHEW, Division of Emergency Health Services, Rockville, Maryland, May 1972.

TABLE ONE. STATE LAWS FOR AMBULANCE ATTENDANTS

State and Year of Recent Passage	Regulatory Agency	Title of Manpower	Direct Mandatory Certification or Licensure	Standards thru Cert. of Ambulance Service	Certification Renewal	Approval of Ed. Program (Type of Prog.)	# of Attendants/Amb.	# of Certified Att./Amb.	States Offering DOT-EMT Basic Course and Issuing Certificates on Voluntary basis in 1973.
Alabama 1971	State Board of Health	Amb Att	Yes		—	Yes	—	—	Yes
Alaska									Yes
Arizona 1972	State Corporation Comm Board and Dept of Health	Amb Att	Yes	—	every 2 yrs	20 hour course	1	1	—
California 1972	State Dept of Health Comm of Highway Patrol	Amb Att	—	—	every 3 yrs	Adv First Aid (to be updated)	2	2	Yes
Colorado									Yes
Connecticut 1970	State Amb Comm Comm of Health	Amb Technician	Yes	—	Ann	Yes	No unlicensed Personnel		Yes
Delaware 1971	State Fire Prevention Comm	Amb Att	Yes	—	every 3 yrs	Yes	—	1	—
Florida 1973	State Dept of Health & Rehab Service	EMT	Yes	—	every 3 yrs	DOT-EMT in 1974	2	1	Yes
Georgia 1972	State Dept of Human Resources	Amb Att	—	Yes	—	Adv First Aid DOT-EMT in 1975	2	1	Yes
Hawaii									Yes
Kentucky 1972	State Cert of Need & Lic Board St Dept of Health	Amb Att	Yes	—	Yes	Adv First Aid DOT-EMT in 1975	2	1	Yes
Louisiana	State Dept of Hospitals	Amb Att	Yes	—	every 3 yrs	Adv First Aid	2	2	—
Massachusetts	Dept of Public Health	Qualified Amb Att	—	Yes	every 3 yrs	Adv First Aid	2	2	Yes
Michigan 1969	State Dept of Health	Amb Att	Yes	—	Ann	Adv First Aid	—	1	Yes
Minnesota 1973	State Board of Health	Amb Att	—	Yes	every 3 yrs	Adv First Aid DOT-EMT in future	2	2	Yes
Missouri									
Montana 1971	State Board of Health	Amb Att	—	Yes	every 3 yrs	Adv First Aid	2	2	Yes
Nevada 1973	State Board of Health Dept of Health Wel & Rehab	Amb Att	Yes	—	3 yrs 2 yrs	Adv First Aid DOT-EMT in 1978	2	2	Yes
New Hampshire 1971	Division of Public Health	Amb Att	Yes	—	every 3 yrs	Adv First Aid	—	—	Yes
New Mexico	State Corporation Commission	Amb Att	—	Yes	Ann	Adv First Aid Plus 16 hours	2	1	—
New York	Public Health Dept	Medical Emergency Tech	Yes	—	every 3 yrs	55 hour course	2	2	—
North Carolina 1971	State Board of Health	Amb Att	Yes	—	every 2 yrs	Yes	—	1	Yes
South Carolina 1971	State Board of Health	Amb Att	Yes	—	Ann	Adv First Aid	—	—	Yes
South Dakota	Counties & Municipalities	—	—	—	—	—	—	—	Yes
Tennessee 1972	State Dept of Health	EMT	Yes	—	Ann	DOT-EMT in Jan 1974	—	1	Yes
Texas	State Board of Health	Amb Att	Yes	—	every 3 yrs	Adv First aid	—	1	Yes
Utah 1973	State Board of Health Div of Health	Amb Technician	Yes	—	—	DOT-EMT in Jan 1974	2	2	Yes
Virginia 1972	State Board of Health	Emergency Medical Care Att	Yes	—	every 2 yrs	Yes	2	1	Yes
Washington 1973	State Dept of Social & Health Services	EMT	Yes	—	every 3 yrs	DOT-EMT in 1976	—	1	Yes

TABLE TWO: STATE LAWS FOR ADVANCED EMTs

State and Year of Passage	Regulatory Agency	Title of Manpower	Approval of Ed. Program	Certification Renewal	MD Orders Drugs and Solutions	RN with Special Training May Order Drugs & Solutions	Communication Required for Adv. EMT to give Drugs or Solutions			Covered by Limitation of Liabilities Section			Section Stating that Activities Are Not in Violation of Medical Practice Act
							Voice and EKG Telemetry	Voice or EKG Telemetry	Voice Only	MD	RN	Adv. EMT	
California 1970	County Health Officer or 'Director of Hospitals	Mobile Intensive Care Paramedic	Yes	—	Yes	Yes	—	Yes	—	Yes	Yes	—	—
Florida 1972	Dept of Health and Rehab Ser Div of Health	Mobile Rescue Paramedic	Yes	every 3 years	Yes	—	—	—	Yes	—	—	—	—
Idaho 1972	Board of Medicine	Ambulance Paramedic and Amb Intensive Care Paramedic	Yes	Yes	Yes	—	—	—	Yes	Yes	Yes	Yes	Yes
Illinois 1972	Dept of Public Health	Mobile Intensive Care Personnel	Yes	—	Yes	Yes	Yes	—	—	Yes	Yes	Yes	—
Maryland 1972	Board of Medical Examiners	Cardiac Rescue Technician	Yes	Ann	Yes	—	—	—	Yes	—	—	—	Yes
Minnesota 1973	Board of Health or Board of Medical Examiners	Mobile Intensive Care Paramedic	Yes	—	Yes	—	—	Yes	—	Yes	Yes	Yes	Yes
Nevada 1973	State Board of Health State Health Officer	Paramedic'	Yes	every 2 years	Yes	Yes	—	Yes	—	Yes	Yes	Yes	—
New York	Public Health Dept	Medical Emergency Technician	Yes	—	—	—	—	—	—	—	—	—	—
Oklahoma 1972	State Commissioner of Health	Mobile Intensive Care Paramedic	Yes	—	Yes	Yes	—	Yes	—	—	—	—	—
Rhode Island 1973	State Dept of Health	Advanced Emergency Medical Technician	Yes	—	Yes	Yes	—	Yes	—	Yes	Yes	—	—
Tennessee 1973	Dept of Public Health Div of EMS	Emergency Medical Technician—Advanced	Yes	—	Yes	Yes	—	Yes	—	Yes	Yes	Yes	—
Washington 1971	County Health Officer' Univ of Wash School of Medicine	Physician s Trained Mobile Intensive Care Paramedics	Yes	—	Yes	—	—	—	Yes	Yes	Yes	Yes	Yes
West Virginia 1973	State Dept of Health Medical Licensing Board	Mobile Intensive Care Paramedic	Yes	every 2 years	Yes	—	—	—	Yes	Yes	Yes	Yes	Yes