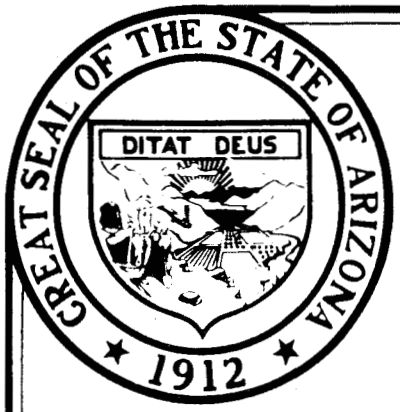


PERFORMANCE AUDIT

# DEPARTMENT OF HEALTH SERVICES

## OFFICE OF EMERGENCY MEDICAL SERVICES

Report to the Arizona Legislature
By the Auditor General
December 1988
88-12

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December 22, 1988

Members of the Arizona Legislature
The Honorable Rose Mofford, Governor
Mr. Ted Williams, Director
Department of Health Services

Transmitted herewith is a report of the Auditor General, A Performance Audit of the Department of Health Services, Office of Emergency Medical Services. This report is in response to a June 2, 1987, resolution of the Joint Legislative Oversight Committee. The performance audit was conducted as a part of the Sunset Review set forth in Arizona Revised Statutes §§41-2351 through 41-2379.

This is the second in a series of reports to be issued on the Department of Health Services. This report addresses serious problems in the regulation of ambulance companies and their personnel. Complaints have been lost and mishandled, and the Department has failed to take action on even the most serious complaints.

My staff and I will be pleased to discuss or clarify items in the report.

Sincerely,

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# SUMMARY

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Health Services, Office of Emergency Medical Services, in response to a June 2, 1987, resolution of the Joint Legislative Oversight Committee. This performance audit was conducted as part of the Sunset Review set forth in Arizona Revised Statutes (A.R.S.) §§41-2351 through 41-2379.

This is the second in a series of reports to be issued on the Arizona Department of Health Services (DHS). The report focuses on the functions of the Office of Emergency Medical Services under the Division of Emergency Medical Services/Health Care Facilities.

Although this report identifies serious problems which need attention, DHS management has recognized the need for improvement in the Office of Emergency Medical Services and made several changes since August 1987. These include a new emphasis on regulation, major reorganizations of the EMS office and its regional system administration, and several operational changes to improve effectiveness and efficiency.

**The Office of Emergency Medical Services Has Lost and Mishandled Complaints** (see pages 7 - 10)

In November 1986, DHS received a complaint alleging that a patient died due to inadequate treatment and unusable equipment. The complaint was not logged-in until almost two years later, and it was never acted upon. No file was created, and no one was assigned to investigate the complaint. Instead, this complaint only came to light when we discovered it in July 1988. DHS' treatment of this complaint is not an isolated incident. DHS' handling of complaints against individual emergency medical technicians and companies has been so poor in the past two years that it cannot tell how many complaints it has received nor what actions it has taken. These conditions have arisen in part because DHS' previous complaint-handling procedures were dismantled and not replaced with an adequate system.

Although DHS recognized the severity of this problem early in the audit, its actions to resolve the situation were not adequate. DHS has not yet

implemented adequate policies and procedures regarding complaint handling, even though these policies and procedures have been planned since at least July 1988.

**DHS Has Not Acted on Serious Complaints Against Emergency Medical Technicians and Ambulance Companies** (see pages 11 - 16)

In addition to mishandling the complaints, DHS has allowed the majority of the complaints discussed above to go uninvestigated and unresolved. Although it has broad statutory authority to take action regarding complaints, even very serious complaints have been ignored. Complaints such as the following have not been adequately investigated or resolved:

- A complaint alleged that inadequate treatment and unusable equipment contributed to a patient's death. The complainant alleges that the ambulance crew was slow in arriving, they would not take over CPR begun by the victim's neighbor, and they did not appear to know how to clear the airway. Once the airway was cleared, the EMTs attempted to administer oxygen but discovered the oxygen tank was empty. The complainant further alleges the ambulance took an indirect route to the hospital. The patient ultimately died.

- A funeral home director alleged that an ambulance transported an autopsied, leaking body infected with the AIDS virus to the mortuary using little or no precaution in the handling of the bodily fluids and blood. The complainant stated that no disinfectant was used to clean the ambulance cot which carried the body, and that the ambulance was used for transport immediately thereafter without adequate sanitation safeguards taken to protect either personnel or the next patient being transported.

The Department has also failed to act in cases where some ambulance companies have accumulated repeated complaints.

The need for DHS to take much greater action on complaints is shown by the following figures. Of the 157 complaints we could document that DHS received from July 1, 1986 through June 30, 1988, 92 (59 percent) were not investigated. Of the remaining 65 that were investigated, 44 received no action even though at least five of these were substantiated by DHS' investigations. In fact, DHS had taken no formal disciplinary actions against any EMTs or ambulance companies during the two-year period of our review.

DHS offers a number of reasons for its inaction including: other priorities, a lack of standards governing quality of care, a lack of

intermediate sanctions and a lack of trained investigators. While we agree there is a need for investigative training, we believe DHS' apparent lack of a strong enforcement philosophy is the underlying reason for inaction.

**OEMS Needs to Institute a Mandatory Reporting Requirement for All Instances of EMT Incompetence and Unprofessional Conduct** (see pages 17 - 19)

A mandatory reporting requirement is needed to ensure that DHS is aware of all incidents of EMT incompetence and unprofessional conduct which could threaten public health and safety. Hospitals responsible for supervising EMTs generally discipline the EMTs via their own mechanisms without informing DHS, which is the agency responsible for certifying EMTs. As a result, an incompetent EMT may be able to transfer from one hospital's control to another without any intervention by the Statewide enforcement body. In contrast to DHS' situation, several medical licensing boards in Arizona have statutory provisions requiring that incidents of incompetence and unprofessional conduct be reported. If such a requirement were enacted, DHS could enforce the statute through its routine review of ambulance transport records.

**The State Examination for Basic Emergency Medical Technicians Has Not Been Validated and Is Not Adequately Secured** (see pages 21 - 26)

The State certifying examination for Basic EMTs has not been validated as required by statute and does not meet national standards governing test development. As a result, DHS cannot adequately assure that the Basic EMT examination assesses knowledge and skills needed for safe practice.

Additionally, DHS has not ensured that the examination is adequately secured. The Department has administered the same version of the 150-question, multiple-choice test repeatedly for almost three years, giving applicants retaking the test additional opportunities to see and memorize examination questions. (According to DHS staff, one applicant took the examination seven times before passing.) Further, test copies are not locked away, and DHS staff have stated that anyone could obtain access to a copy of the test. Staff believe that at least one provider has a copy of the examination.

To resolve its test validation and security weaknesses, DHS should consider using a validated Basic EMT written examination developed by a national organization. DHS should also consider implementing a fee schedule to cover test administration costs.

## Table of Contents


| | Page |
|---|---|
| INTRODUCTION AND BACKGROUND | 1 |
| FINDING I: The Office of Emergency Medical Services Has Lost and Mishandled Complaints | 7 |
| DHS Has Not Kept Track of EMS Complaints | 7 |
| Previous Complaint-Handling Process Dismantled | 8 |
| DHS' Actions Regarding Complaint Handling Have Been Insufficient | 9 |
| Recommendations | 10 |
| FINDING II: DHS Has Not Acted on Serious Complaints Against Emergency Medical Technicians and Ambulance Companies | 11 |
| OEMS Has Broad Authority to Enforce Complaint Actions Against Companies and Personnel | 11 |
| DHS Has Failed to Resolve Complaints Alleging Poor Treatment or Negligence | 11 |
| DHS Has Not Acted on Repeated Complaints Against Ambulance Companies | 13 |
| Performance on All Complaints Is Similar | 13 |
| DHS Reasons for Inaction Are Not Sufficient | 14 |
| Recommendations | 16 |
| FINDING III: OEMS Needs to Institute a Mandatory Reporting Requirement for All Instances of EMT Incompetence and Unprofessional Conduct | 17 |
| Providers Do Not Currently Report to OEMS | 17 |
| Other Boards Have Mandatory Reporting Requirement | 18 |
| Recommendation | 19 |

TABLE OF CONTENTS


Page

FINDING IV: The State Examination for Basic Emergency Medical Technicians Has Not Been Validated and Is Not Adequately Secured . . . . . 21

Testing Is Intended to Insure Competence . . . . . 21

EMT Exam Has Not Been Validated. . . . . 22

Exam Is Not Adequately Secured . . . . . 23

National Exam Should Be Considered . . . . . 24

Recommendations. . . . . 26

AREAS FOR FURTHER AUDIT WORK . . . . . 27

AGENCY RESPONSE. . . . . .

# INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a performance audit of the Arizona Department of Health Services, Office of Emergency Medical Services, in response to a June 2, 1987 resolution of the Joint Legislative Oversight Committee. This performance audit was conducted as part of the Sunset Review set forth in Arizona Revised Statutes (A.R.S.) §41-2351 through 41-2379.

This is the second in a series of reports to be issued on the Arizona Department of Health Services. This report focuses on the function of the Office of Emergency Medical Services under the Division of Emergency Medical Services/Health Care Facilities.

## Background

The modern era of Emergency Medical Services (EMS) began in 1966 with a report by the National Academy of Science which led to the passage of the Highway Safety Act. This Federal law helped to improve the national EMS system by requiring all states to have a highway safety program which included standards for the pre-hospital phase of emergency medical treatment. However, Arizona did not have one entity responsible for administration of all phases of EMS until the Office of Emergency Medical Services within the Department of Health Services was given this authority in 1982.

A recently published article estimates that one in two Arizonans will need emergency trauma care at some time in his or her life. It is DHS' responsibility to plan and coordinate the system components to ensure adequate and high-quality emergency medical care. To achieve this, DHS must overcome the difficulty of providing quality services in the State's many rural areas. The major components of an EMS system - personnel, training, communications systems, transportation, and emergency receiving/specialized facilities - generally are available in the metropolitan areas of Arizona with populations of 100,000 or more. In the communities of rural Arizona, with their diverse geography and sparse populations, less extensive systems exist. In fact, there are three

counties which do not have any certified paramedics, the highest skilled level of emergency medical technician.

**Functions and Organization** - The Office of Emergency Medical Services (OEMS) is responsible for regulating the activities of all EMS personnel, base hospital facilities and ambulance services in the Statewide EMS system. OEMS is currently organized into three regional units responsible for the northwest, central and southeast areas of the State. Each regional unit handles all administrative and regulatory functions for the EMS personnel, ambulance services and base hospitals in the region. There is also a separate unit responsible for administering the Certificate of Necessity program for ambulance services on a Statewide basis. OEMS currently has 20 authorized positions [1] and a fiscal year 1988-89 general fund appropriation of $547,113, with additional funding coming from the EMS Operating Fund.[2]

The Statewide EMS system developed by OEMS contains varying levels or certifications for EMS personnel and hospitals. It also includes regulation of a variety of ambulance services.

**Emergency Medical Technicians** - OEMS currently certifies five levels of Emergency Medical Technician (EMT), each of which requires a different level of training and skill proficiency.

- **Basic level** - Applicants are required to complete the 110-hour U.S. Department of Transportation approved curriculum. Some Basic-level EMT (BEMT) skills include: the ability to recognize emergencies, obtain and interpret diagnostic symptoms, perform basic cardiac life support (cardio-pulmonary resuscitation or CPR), control hemorrhage and bandage wounds and stabilize and splint fractures. BEMTs are not certified to administer any drugs, nor to perform any advanced cardiac skills. As of July 1988, there were 6,635 certified BEMTs.

- **Basic IV level** - In 1983, an optional four-hour BEMT course was initiated for those involved in the transport of stabilized patients

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(1) OEMS also has one limited position which lasts until June 30, 1989.

(2) The EMS Operating Fund is a statutorily-authorized revolving fund, from which approximately $2 million is spent annually.

with intravenous (IV) fluid therapy. This extra training only allows BEMTs to monitor the IV during transport. They are not authorized to perform any other IV skills. As of July 1988, there were 458 BEMTs certified at this level.[1]

- **Intermediate level** - Certified BEMTs wishing to achieve this level are required to complete a curriculum 259 hours in length. Intermediate level EMTs (IEMTs) are certified to start IVs and administer drugs through them, and also to administer drugs through injection. Other skills include the ability to insert tubes in the trachea to establish an airway and remove stomach contents through suction. All skills performed and drugs administered must be done under the medical control of a certified base hospital. IEMTs are not able to perform advanced cardiac skills, nor are they able to start IVs in the central veins (veins with more direct access to the heart). As of July 1988, there were 296 IEMTs certified.

- **Intermediate-Cardiac level** - Certified IEMTs must complete an additional 164-hour cardiac care course and pass a certifying examination.[2] Successful completion of this course allows an IEMT-Cardiac to perform advanced cardiac skills (primarily defibrillation, or electrically shocking the heart) as well as administer cardiac drugs under the medical control of a certified base hospital. However, as with IEMTs, IEMT-Cardiacs are also unable to establish IVs in the central veins. As of July 1988, there are 55 IEMT-Cardiacs certified.

- **Paramedic level** - Certification at this level requires completion of a 674-hour curriculum. Any EMT can transition to this level, with additional training hours needed (up to the 674 required) varying

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(1) The Basic IV monitoring certification level is not authorized by statute.

(2) In 1983, this new classification of IEMT was developed in response to rural community needs for improved advanced cardiac life support services. This classification is also not authorized by statute.

based on present certification level. The only difference in skills from an IEMT-Cardiac is that a Paramedic can start an IV in a central vein. Like the IEMTs and IEMT-Cardiacs, paramedic skills and drug administration must be done under the medical control of a certified base hospital. As of July 1988, there are 874 Paramedics certified.

**Base Hospitals** - There are three categories of hospitals able to provide pre-hospital consultation and receive emergency patients.

- **ALS hospitals** - There are 41 hospitals which serve as advanced life-support (ALS) base hospitals and provide medical control to three levels of emergency advanced life support pre-hospital personnel: Paramedics, IEMTs and IEMT-Cardiacs. These hospitals must have 24-hour in-hospital availability of ALS trained physician and nursing staff, plus programs in quality assurance and teaching for the pre-hospital personnel.

- **IEMT hospitals** - There are two hospitals which provide ALS medical control only to IEMT and IEMT-Cardiac personnel, and which are required to have 24-hour in-hospital physicians.

- **System hospitals** - There are four rural hospitals which can receive patients under ALS care, but only as directed by an ALS base hospital physician.

All categories of emergency-receiving hospitals are certified by the Department and recertified every two years, according to established rules and regulations. Included in the evaluation of the certification process for each hospital are quality assurance reviews of pre-hospital clinical performance by each category of EMT.

**Ambulance Services** - Prior to 1982, ambulance services were considered common transportation carriers and were regulated by the Arizona Corporation Commission. However, in November of 1980, Proposition 101 was passed which deregulated the entire transportation industry including ambulance services. This deregulation took effect in July 1982. New legislation was immediately enacted to provide public health and safety

regulation of ambulances and ambulance services by DHS. In November of 1982, Proposition 100 passed which would allow for economic regulation of ambulances and ambulance services through control of area served, response times and rates charged. Legislation giving DHS this additional regulatory authority was enacted in May of 1983.

According to OEMS staff, as of August 1988, there were 69 ambulance services licensed to operate in Arizona with 313 registered ambulance vehicles. There are also four air ambulance services with eight helicopters and ten fixed-wing aircraft registered. These services are primarily run by private companies, municipal fire departments, and fire districts but can also be run by counties, hospitals and other volunteer and non-profit entities.

OEMS regulates these services by requiring all ambulance vehicles to be registered, and all services to be licensed. Each ground transport service is also required to obtain a Certificate of Necessity which states its geographic operating area as well as its rates and response times.

## Recent Attempts to Improve OEMS

Management has recognized the need for improvement in the Office of Emergency Medical Services and made several changes since August 1987. OEMS underwent a major reorganization, designed to consolidate three separate offices and coordinate operations between the three functions. Office staff designed and implemented an automated system to manage the EMT certification process - the function which had required most of staff's time. According to DHS, this system is now approximately 75 percent complete. OEMS reports that it has also 1) developed a policies and procedures manual addressing all major tasks, and 2) centralized its files to avoid file duplication.

Another major change has involved the regional administration of the statewide EMS system. OEMS requested and obtained financial audits of the regional councils, with whom OEMS contracted to perform several EMS functions. The audit results contributed to the elimination of the operations contracts with the regional councils. Staffing of the councils will now be performed by State OEMS personnel. Management

reports that these changes will eliminate duplication and reduce expenses.

The DHS Director indicated that perhaps the biggest change to take place is a philosophical one. According to the Director, DHS did not previously view itself as a regulatory agency. He stated he has changed this philosophy and clearly informed his staff of the new emphasis on regulation and enforcement.

## Audit Scope and Purpose

This audit was conducted to evaluate the adequacy of regulation by the Department of Health Services Office of Emergency Medical Services, focusing on these specific areas.

- The adequacy of the complaint-processing system used by the Office of Emergency Medical Services.

- The adequacy of DHS' action on complaints received.

- The need to require all members of the emergency medical services field to report instances of incompetence and unprofessional conduct exhibited by certified personnel or licensed entities to DHS.

- The quality of the written examination used for certification at the Basic EMT level.

The section Areas For Further Audit Work addresses issues we identified during the course of our audit work, but were unable to research due to time constraints.

This audit was conducted in accordance with generally accepted governmental auditing standards.

The Auditor General and staff express appreciation to the Director of the Department of Health Services, and especially the staff of the Office of Emergency Medical Services, for their cooperation and assistance during the course of our audit.

## FINDING I

## DHS' EMERGENCY MEDICAL SERVICES OFFICE HAS LOST AND MISHANDLED COMPLAINTS

In November 1986, DHS received a complaint alleging that a patient died due to inadequate treatment and unusable equipment. The complaint was not logged-in until almost two years later, and it was never acted upon. No file was created, and no one was assigned to investigate the complaint. Instead, this complaint only came to light when we discovered it in July 1988. DHS' treatment of this complaint is not an isolated incident. DHS' handling of complaints against individual EMTs and companies has been so poor in the past two years that it could not tell how many complaints it has received, nor what actions it has taken. These conditions have arisen in part because DHS' previous complaint-handling procedures were dismantled. Although DHS has recognized the severity of this problem, its actions to resolve the problem have not been adequate.

### DHS Has Not Kept Track Of EMS Complaints

For at least the past two years, DHS has not kept track of its complaints concerning ambulance companies and their personnel. Many complaints have not been logged in, files have not been created and complaint status has not been monitored. Some complaints were stored loose and disorganized in a cardboard box. We found five complaint logs which listed several complaints we could not find, and we found still other complaints which were never listed in the logs. Furthermore, when asked to produce all complaints, one DHS supervisor attempted to recreate complaint files and create a log from memory.

OEMS management has been uninformed about the number and type of complaints. When we first asked to review all of the complaints DHS had received, the Office Chief gave us a log listing 53 complaints, but he only gave us four complaint files. Later, after another request, we were given another copy of the log which had grown to 61 complaints, and two boxes containing 42 complaints. Following a written request, we were

provided an additional 182 complaints. When we asked why these complaints had not been provided before, the Office Chief said his staff had not given them to him prior to our request. We further found that it was after our request that one supervisor attempted to reconstruct from memory complaint files and a log for which he had been responsible.

Because of the difficulties described above, neither we nor DHS can tell how many complaints the agency has received in the past two years or what actions have been taken. We do know, however, that this is a serious matter. At least three of the complaints we were able to find alleged that death occurred due to inadequate care or missing equipment.

## Previous Complaint-Handling Process Dismantled

Complaint-handling procedures for two of the three OEMS sections[1] within the Office of Emergency Medical Services were dismantled in late 1985 or early 1986. These two sections had procedures but then abandoned them, leaving no complaint-handling process.

Prior to January 1986 a staff member in the ambulance-licensing and certification section[2] kept a formal log of all complaints he received against ambulance companies. He stated he took action on every complaint and was able to obtain refunds for several parties. However, in January 1986 his supervisor issued a memorandum requiring this staff member and others in the section to turn all complaints over to him. Although the supervisor had indicated that a log would be maintained, we found that the log was not maintained and the complaints were forgotten. When we asked why complaints had been set aside, the supervisor indicated that other duties prevented him from attending to complaints, and that he had notified the Division Assistant Director that he could not handle the complaints. Yet, among the forgotten complaints were several serious ones, including one alleging death due to inadequate treatment.

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(1) The third section, which dealt with base hospitals, apparently never had any complaint procedures to begin with. The staff member responsible for that office said that no procedures had ever been instituted; instead, problems were handled mostly over the telephone.

(2) These sections and the ambulance personnel certification section operated under a previous EMS office organization, but have since been abolished as organizational units.

Another staff member, this one in the Ambulance Personnel Certification section, also maintained complaint files and took action on several cases. However, he stated that in approximately late 1985 or early 1986, he informed the previous Assistant Director that he could no longer handle complaints due to staffing shortages. He stated that his staff had been recently cut, and certification of EMTs was occupying the remaining staff's time.

## DHS' Actions Regarding Complaint Handling Have Been Insufficient

Although current management acknowledges the problem and has made complaints a priority, the Office has not acted sufficiently to alleviate the problem. Planned procedures have not been implemented to control complaint handling.

Though planned, adequate policies and procedures regarding complaints handling have not yet been implemented. In his response to our inquiry regarding newly-proposed complaint-handling procedures, the OEMS Office Chief stated that a final draft of the revised policy and procedure was due ". . . not later than July 26, 1988." The proposed policy and procedure was to require a complaints log[1], an assignment procedure, and a time deadline for completing complaint reviews. However, as of September 22, 1988, the final document had not been finalized.

In addition, management needs to prohibit the creation of multiple files for one complaint. Several of the complaints we reviewed had multiple files, leaving no control over where important case documentation might be placed. For example, one complaint that was still open as of August 1988 had at least four working files.

DHS reports that it has recently addressed its complaints handling problems. As of December 1988, the Agency has developed a policies and procedures manual and centralized its files to avoid duplication. It has also initiated development of an automated complaint tracking system that is planned to be completed in March 1989. Finally, all OEMS

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(1) Management currently has a complaint-logging system; however, it has not been used systematically. At the time of our review, several of the complaints had not been logged.

staff except its support staff are to be trained in January 1989 regarding investigation and file preparation, using a program designed by DHS and the Attorney General's Office.

## RECOMMENDATIONS

1. DHS needs to finalize its policy and procedure regarding complaint handling. The revised policy and procedure should require:

   - Systematic logging of all complaints received; and

   - An adequate tracking system be implemented.

2. DHS should clearly fix the responsibility for complaint handling, and the individuals responsible should be held accountable for their performance in this area.

## FINDING II

## DHS HAS NOT ACTED ON SERIOUS COMPLAINTS AGAINST EMERGENCY MEDICAL TECHNICIANS AND AMBULANCE COMPANIES

In addition to losing and not keeping track of complaints, DHS has not acted on those complaints of which it has been aware. During the two-year period beginning July 1, 1986, DHS failed to adequately investigate or resolve more than 73 percent of the 157 complaints it received, including several serious cases involving death or deadly disease; furthermore, it has taken no enforcement actions in the past two years. To protect the public from potential harm or injury, DHS must place greater priority on enforcement.

### OEMS Has Broad Authority To Enforce Complaint Actions Against Companies and Personnel

DHS statutes give the agency broad authority to enforce complaint actions against ambulance companies and certified ambulance attendants. According to A.R.S. §36-2211, action can be taken against an EMT for several reasons including unprofessional conduct, gross incompetence or gross negligence in the provision of care and treatment, and use of dangerous drugs or alcohol to the extent that it impairs the EMT's ability to provide care and treatment. The statute allows DHS to discipline EMTs by revocation, suspension, probation and censure. A.R.S. §36-2215 allows DHS to take action against an ambulance or ambulance company if, among other items, the licensee "demonstrated incompetence or has shown himself as otherwise unable to provide emergency medical services which meet minimum standards prescribed by the Director." DHS can suspend or revoke companies' licenses or their authority to operate individual ambulances.

### DHS Has Failed to Resolve Complaints Alleging Poor Treatment or Negligence

DHS has failed to act on even the most serious complaints. The following case examples illustrate the serious nature of some of the complaints DHS has failed to act on.

- An emergency department physician alleged that a cardiac patient died partly as a result of improper treatment by an EMT. The patient had stopped breathing, and the EMT arriving on the scene reportedly created an airway passage to the patient's stomach instead of his lungs.

- A complaint alleged that inadequate treatment and unusable equipment contributed to a patient's death. The complainant alleges that the ambulance crew was slow in arriving, they would not take over CPR begun by the victim's neighbor, and they did not appear to know how to clear the airway. Once the airway was cleared, the EMTs attempted to administer oxygen but discovered that the oxygen tank was empty. The complainant further alleges that the ambulance took an indirect route to the hospital. The patient ultimately died.

- A funeral home director alleged that an ambulance transported an autopsied, leaking body infected with the AIDS virus to the mortuary using little or no precaution in the handling of the bodily fluids and blood. The complainant stated that no disinfectant was used to clean the ambulance cot which carried the body, and that the ambulance was used for transport immediately thereafter without adequate safeguards taken to protect either personnel or the next patient being transported.

- Another complaint alleged that ambulance personnel did not properly treat a fourteen-year-old girl who had been hit by a dump truck. EMTs reportedly failed to stabilize the patient's fractures or properly treat her for shock.

- A local fire department alleged that an ambulance company was operating its ambulances for two months with empty oxygen cylinders.

- One provider allegedly objected to transporting a patient without prior verification of insurance coverage, in defiance of the State requirement to transport all patients regardless of their ability to pay. According to the complainant, the provider also stated that the patient did not appear serious enough to warrant ambulance transport. Proof of insurance was provided and the patient was eventually transported. The patient spent four days in intensive care upon arrival at the hospital, and was given a 50 percent chance of survival.

Despite the severity of these allegations - including cases of death and deadly disease - four of the six had received no action. Investigations concerning the other two were inadequate. In one of these two instances, the respondent was not interviewed for eight months after the incident. In the other case, the respondent was not contacted for at lease two months. Most important, however, DHS never took any formal action to resolve the complaints. Five of the six are still open.

## DHS Has Not Acted on Repeated Complaints Against Ambulance Companies

The Department has also failed to act in cases where ambulance companies have accumulated repeated complaints. The following case examples illustrate this problem:

- COMPANY 1 - During a 24 month period from July 1, 1986 to June 30, 1988, one ambulance company accumulated 14 complaints. Several of those complaints represent concerns for public health and safety involving both the ambulance company's operations and management, and personnel's skills and medical judgment. The complaints involve patient death, inappropriate patient care and handling, and running ambulance operations in an area for which the company did not have a Certificate of Necessity. To date DHS has taken no action against this ambulance company, according to both the DHS files and interviews with OEMS officials.

- COMPANY 2 - Since at least April 1987, another ambulance company has reportedly received numerous complaints in five general areas including: patient treatment, vehicular condition, lack of necessary medical equipment on the vehicles, and insufficient as well as uncertified staff for transports. Although many of these deficiencies could potentially endanger public health and safety, DHS' only enforcement action has been to request that a vehicle be taken out of service.

## Performance on All Complaints Is Similar

The pattern of inaction illustrated in the above case examples is not unusual. Regardless of severity or other factors, complaint action was generally absent. Of the 157 complaints we could document that DHS received, 92 (59 percent) were not investigated.[1] Of the remaining 65 that were investigated, 44 received no further action even though at least five of these were substantiated by DHS' investigations. Only 42 complaints were ever closed and no enforcement actions were taken in any of these cases.

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(1) 21 of the 92 complaints in this category were closed without investigation. For some complaints, investigation is not necessary.

## DHS Reasons for Inaction Are Not Sufficient

DHS has suggested several reasons why it has not acted on complaints against ambulance companies and EMTs. Some of the reasons may not be valid, although we agree that investigative training is needed. However, underlying all other reasons for inaction, DHS appears to lack an aggressive enforcement philosophy.

**Other duties have taken precedence** - One reason that DHS has not acted on complaints is that the Department has stressed other priorities at the cost of enforcement. For example, the OEMS Office Chief stated that the certification process takes up the greatest amount of resources. However, we question the wisdom of devoting disproportionate attention to certifying personnel when DHS is not addressing the potential enforcement problems stemming from those already in the field.

Furthermore, DHS' current plans to attend to complaints appear relatively insignificant. During the next two fiscal years, DHS proposes to more than double its OEMS staff size - adding 25 new FTE positions to its current 21 for a total of 46 FTEs by the end of Fiscal Year 1989-90.[1] However, DHS plans to devote only two FTEs to complaint investigations.

**Quality-of-Care Rules** - Although DHS has taken the position that it needs quality-of-care standards before it can effectively discipline EMTs, authorities say current statutes are sufficient for DHS to act. A.R.S. §36-2202.A.3 requires the Director to "[a]adopt standards and criteria which pertain to the quality of emergency care . . .", and OEMS management has determined that it cannot act effectively without these rules. However, a Legislative Council representative stated that current statutes provide DHS with sufficient authority to act in cases involving improper treatment or unprofessional conduct by EMTs. Furthermore, although an Assistant Attorney General assigned to the Office of Emergency Medical Services advises that these rules be implemented to better equip DHS to act, she agrees that DHS has the statutory authority to discipline EMTs without the rules.

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(1) All 25 new positions will initially be funded through the EMS Operating Fund.

**Lack of intermediate sanctions** - DHS has stated that the lack of statutorily-authorized intermediate sanctions has further prevented it from taking action against EMTs and ambulance companies, but according to the Assistant Attorney General assigned to OEMS it can act without these sanctions. DHS statutes do not authorize, for example, administrative penalties as do the statutes of several other regulatory agencies.[1] However, although such penalties may be advisable, it is difficult to know their importance since DHS has not even investigated most complaints nor attempted to take action. Besides, the absence of sanctions does not prevent DHS from acting. DHS currently has statutory authority to censure EMTs who violate statutes or rules, yet the Department has issued no letters of censure in the past two years. Also, the Assistant Attorney General indicated she feels DHS can use some form of limited suspension of ambulance companies' authority to operate.

**DHS has not provided investigative training for staff** - DHS has not provided investigative training for its staff even though management has been aware of the need. DHS has chosen in the past to use its regular staff to conduct investigations, instead of designating special investigative staff. However, while this can be a workable arrangement, DHS has not provided its regular staff with pertinent investigative training. Management told us of only one effort to seek training for its staff, which allegedly failed for reasons beyond DHS' control. In addition, the Office Chief said he had conducted a search in State government for information on complaint investigation procedures, but he admitted his search had been limited. He apparently did not contact most of the State regulatory boards, some of which have been conducting complaint investigations for many years.

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(1) Six Arizona health regulatory boards we reviewed have statutory provision for administrative penalties. We reviewed the statutes governing Arizona optometrists, nurses, chiropractors, osteopaths, pharmacists, and medical doctors. The penalty amounts authorized for these boards range from $300 to $10,000 per violation ($10,000 being the maximum penalty that can be applied against medical doctors). In addition, we contacted the EMS agencies in the states of Washington, Oregon, Colorado and New Mexico. Of these, however, only Washington allowed for administrative penalties against EMTs of $100 per day per violation.

As a result, the investigations that have been conducted have been inadequate. The Assistant Attorney General assigned to OEMS reported she returned one complaint to DHS because she was given insufficient information.[1] In addition, during our complaint file review we found several cases in which investigations were begun but not carried to their logical conclusion. In some of these cases, the respondent was never even contacted.

**Further indication of enforcement's low priority** - Underlying all other reasons for inaction, DHS appears to lack an aggressive enforcement philosophy. This conclusion is supported by intra-office communication and staff comments. For example, one employee wrote a memorandum on May 4, 1988 expressing concern that the Office had not acted against a company that was violating its authority. The memorandum stated, in part:

> "From all indications, there is clear, convincing, and substantial evidence of [violation by ambulance company]. If we do not take decisive action against [ambulance company], then the Department/ Division/EMS Office has (1) ignored a serious problem, (2) acquiesced to what [ambulance company] is doing, (3) opened the door to similar problems/complaints, (4) made it difficult for us to enforce similar problems/complaints involving other ambulance services, and (5) ignored its regulatory enforcement role."

## RECOMMENDATIONS

DHS should enforce its regulatory statutes and rules. To accomplish this, DHS should:

1. Give complaint investigation and follow-up higher priority, rearranging other priorities if necessary.

2. Expedite complaint investigations, providing staff training if necessary.

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(1) The Assistant Attorney General stated she has been given only two complaints to review for formal action during her three years as OEMS' legal representative. As mentioned, one was returned to OEMS for further investigation, and the other was handled by OEMS informally.

## FINDING III

## OEMS NEEDS TO INSTITUTE A MANDATORY REPORTING REQUIREMENT FOR ALL INSTANCES OF EMT INCOMPETENCE AND UNPROFESSIONAL CONDUCT

A mandatory reporting requirement is needed to ensure that OEMS is aware of all incidents of EMT incompetence and unprofessional conduct which could threaten public health and safety. Currently, most base hospitals discipline EMTs under their medical control without OEMS involvement. However, other health regulatory boards in Arizona have such a requirement to increase their ability to review, discipline and make a matter of public record cases of alleged incompetence or unprofessional conduct.

### Providers Do Not Currently Report To OEMS

Most base hospitals have not reported incidents of EMT incompetence and unprofessional conduct to OEMS. Instead, the hospitals resolve these incidents internally through their own mechanisms, yet only OEMS is empowered to take action against an EMT's certification.

**Internal resolution** - Seven of the twelve base hospitals[1] we contacted have not reported incidents of potentially dangerous EMT behavior to OEMS. Instead, most incidents are resolved internally through informal discussion between the base hospital paramedic coordinator (who monitors all EMT activities) and the EMT involved. These incidents may occur several times a month, but are usually not of a serious nature. Typical examples may be failure to follow communication protocols, or not properly completing relevant paperwork. The EMTs' employer or the base hospital medical director can be involved if the matter is serious, or if resolution is not reached informally.

Most paramedic coordinators stated that they may only take formal disciplinary action a few times per year. A common cause of disciplinary action is when a patient's condition is improperly assessed in the field

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(1) There are currently 41 advanced life support base hospitals Statewide.

and arrives at the hospital in much more serious condition than reported by the EMT. Disciplinary action can also result when the EMT has an unprofessional attitude and refuses additional training to improve deficient skills. Even though these deficiencies may potentially endanger the patient, hospitals still prefer to rely on internal resolution procedures. Also, some paramedic coordinators feel that OEMS has an unclear regulatory role.

**OEMS authority** - Since there is no reporting requirement, DHS may not be aware of all incidents where formal disciplinary action has been taken by a hospital against an EMT. As a result, DHS may not be able to take action against the EMT's certification to keep the EMT from practicing.

Both IEMTs and paramedics must have a base hospital willing to supervise their work (provide medical control). According to OEMS staff, the most severe disciplinary action a hospital can take is to remove an EMT's medical control since only DHS can suspend or revoke their certification. Consequently, it is possible that an EMT who has had medical control withdrawn can reestablish it at another hospital as long as his certification is valid. Most paramedic coordinators stated that they must rely on an informal communication system where they contact a new EMT's previous hospital prior to hiring, but also agreed that this is no guarantee that potentially dangerous EMTs will be kept from practicing.

## Other Boards Have Mandatory Reporting Requirement

There are several medical licensing boards in Arizona which have statutory provisions requiring that incidents of incompetence and unprofessional conduct be reported. If OEMS were able to implement such a requirement, it could enforce it through review of ambulance transport records.

**Relevant statutes** - The Board of Medical Examiners and the Board of Osteopathic Examiners, through A.R.S §§32-1451, subsection A and 32-1855 subsection A, respectively, require physicians and medical institutions and associations to report any instances of doctors or osteopathic

physicians displaying unprofessional conduct or incompetence, alleged or otherwise to the Board. The Board of Nursing, the Board of Physical Therapy Examiners, and the Joint Board on the Regulation of Physician's Assistants also have similar statutory provisions.

Statutes for the Board of Medical Examiners, the Board of Nursing, and the Board of Osteopathic Examiners each contain a provision which makes it an act of unprofessional conduct for a member of the profession to fail to provide such information, and that institutions which fail to provide shall be reported to their licensing agency. The reporting statutes for each Board mentioned above also state that any person or institution providing information in good faith shall not be held liable for an action for civil damages as a result.

Enforcement - If OEMS were able to implement a reporting requirement, a possible means of enforcement is already available. Base hospital paramedic coordinators routinely review all ambulance transport records to ensure that the EMTs provided adequate treatment and that recognized procedures were followed. It is from this review that problematic cases are identified.

Although OEMS staff currently do review these records, this may only occur once every two years in conjunction with the review done prior to renewing the base hospital's certification. More frequent review of these same records could ensure that these cases are reported.

**RECOMMENDATION**

The Legislature should consider amending the OEMS statutes to include a provision that would require all medical facility and EMS personnel to report all instances of EMT incompetence and unprofessional conduct to OEMS.

## FINDING IV

## THE STATE EXAMINATION FOR BASIC EMERGENCY MEDICAL TECHNICIANS HAS NOT BEEN VALIDATED AND IS NOT ADEQUATELY SECURED

The State certifying examination for Basic EMT's does not meet national standards governing test development and administration. The examination has not been validated to insure that test items cover the critical knowledge and skill areas necessary for safe practice. Test administration does not meet standards because the same version of the exam is repeatedly given and is not adequately secured. DHS should consider using a validated national test which is available.

### Testing Is Intended To Insure Competence

The Office of Emergency Medical Services administers examinations to emergency medical technicians before issuing technicians certificates to work. The purpose of these examinations is to insure that technicians possess the knowledge and skills necessary for safe practice. As noted in Finding II, EMT's can cause serious harm to patients when they do not follow proper procedures or make knowledgeable decisions and judgments. Adequate testing of Basic EMT's is especially important because these personnel, unlike IEMT's and Paramedics, are not subject to supervision (medical control) by base hospital medical staff.

Basic EMT's, which comprise the largest number (6,635) of EMT's practicing in the field, are the only level of EMT's which are tested using a State rather than national exam for initial certification. OEMS anticipates spending almost $41,000 in fiscal year 1988-89 to administer this exam. Intermediate and Paramedic level EMT's take both a written and practical examination prepared by the National Registry, a national organization which has developed EMT examinations in accordance with national standards.

## EMT Exam Has Not Been Validated

DHS cannot adequately assure that the BEMT exam assesses knowledge and skills needed for safe practice. State law mandates the development of a validated testing procedure, yet this has not occurred. Because the exam was not developed in accordance with national standards, DHS lacks evidence supporting the exam's validity.

**State and National Standards** - State law, through A.R.S. §36-2204.2, requires a validated testing procedure for all EMT classifications. Standards for developing, validating, and administering licensing or certifying examinations have been developed by a joint committee of the American Educational Research Association, American Psychological Association, and the National Council on Measurement in Education. These standards are designed to assure that licensing or certifying examinations measure the critical or important knowledge, skills, or abilities needed to perform a job at a minimum level of competence deemed necessary for the public's protection.

Proper development of a certifying examination requires a task analysis prior to test validation. Task analysis identifies the critical skills that characterize a given occupation. Through task analysis, knowledge and skills important to public protection can be identified and test developers can determine exam content, the number of questions needed in a particular area and the relative importance or weight of questions or groups of questions.

Examinations then need to be validated to determine if, in fact, they adequately address and measure the critical areas identified by a task analysis. According to the American Psychological Association, validity is the most important consideration in evaluating a test. An examination which has not been properly validated to determine if it adequately measures critical knowledge and skills could be subject to legal challenge.

**BEMT exam remains out of compliance** - Although OEMS management acknowledges the mandate for validated testing procedures, the Basic EMT exam remains out of statutory compliance. A task analysis was not done during the development process, and exam content was not properly validated. Instead, the exam was developed based on questions derived from the U.S. Department of Transportation's Standard Curriculum for Emergency Medical Technicians, as well as suggestions from training program coordinators and OEMS staff. This failure to follow development standards would put DHS in a weak position to defend the exam's validity.[1]

A DHS intern who reviewed the exam in April of 1986 found numerous question deficiencies. This analysis was due to concern about the high failure rate on a version of the exam which had been in use for five months. Each question was reviewed for its applicability to the learning objectives in the BEMT course curriculum. This review recommended that changes be made on 53 of the exam's 150 questions. These recommendations ranged from simple wording changes to deleting or rewriting whole questions. Per OEMS management, the only changes made were on the ten questions identified as having multiple correct or wrong answers. The other 43 recommended changes were not reviewed or implemented due to a staffing shortage at the time.

## Exam Is Not Adequately Secured

The BEMT exam also lacks proper administration and security. The same version of the exam is administered in each testing session, and controls over exam accessibility and the administration process have been weak.

The current version of the BEMT exam was implemented in December of 1985, and the questions have not been changed since. Many applicants do not

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(1) The BEMT exam is not the only exam given by the Department which has not been validated. DHS administers a pharmacology exam to IEMT's as a supplement to the National Registry exam. Also, since the National Registry Exam is only for initial certification, OEMS has developed its own recertification exam for IEMTS. Neither exam was developed and validated in accordance with standards.

pass on the first attempt, and each retake allows them additional opportunities to see the same exam questions. According to OEMS staff, one applicant took the exam seven times before passing. Also, the exam is easy to memorize, since it is 150 multiple choice questions, and applicants can take the exam numerous times. The OEMS Office Chief cited one instance of a training program instructor reconstructing the exam from questions memorized by students. The instructor could then cover these questions in future classes.

Also, exam security is weak. Exam copies stored in the OEMS office are not locked, and OEMS staff have stated that anyone could obtain access to a copy of the exam. According to OEMS staff, at least one provider has a copy of the exam. This was determined when OEMS staff indirectly obtained a copy of a practice exam which actually was an altered version of the State exam.

Compliance with internally developed exam administration procedures has also been inadequate. Until July 1988 regional council staff assisted OEMS in administering the exam. OEMS staff cited some instances where proper procedures were not followed, however. For example, one procedure states that only applicants with an authorization letter from DHS will be allowed to take the exam, yet one applicant under criminal investigation by DHS was allowed to test without authorization. According to OEMS management, exams are currently only administered by DHS staff, so many of these control problems should be eliminated.

## National Exam Should Be Considered

OEMS should consider using a validated Basic EMT written exam from another source such as the National Registry. This exam is properly developed and validated, and has good security because different versions are available. OEMS should also consider implementing a fee schedule to cover exam administrative costs.

The National Registry exam is a viable option because it is properly developed and validated and is presently available for use. It would also enable OEMS to fulfill its statutory mandate to provide a validated

testing mechanism. This exam is an effective measure of Basic EMT competence, because it is based on the U.S. Department of Transportation curriculum[1] for Basic EMTs which is used by 48 states including Arizona.

A main reason this exam has not been used previously is that EMS providers in Arizona have opposed the $15 fee. Some large EMS providers have stated that DHS should incur all costs associated with the EMT certification process. They feel that the imposition of a fee is unjustified. However, taxpayer subsidies for individuals' certifications may be inappropriate. EMS providers or their employees should bear the costs of certification. This is the usual practice in almost every other instance involving licensing/certification of professionals.

In implementing a fee for taking the National Registry exam, OEMS should establish a fee at least high enough to cover the approximate $6,000 annual cost of administering the written portion of the certification exam.[2] Although applicants pay a $15 fee, this amount is retained by the Registry. No reimbursement is made to the states offering the exam for administrative costs. According to the OEMS Office Chief, the only way the National Registry exam would be a feasible option would be if OEMS did not incur any administrative expense.

## Recommendations

1. The Legislature should provide DHS with statutory authority to impose fees adequate to recover costs of examining and certifying EMT applicants.

2. DHS should adopt the National Registry's examination for Basic EMT's.

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(1) The U.S. Department of Transportation (DOT), through the National Highway Traffic Safety Administration, developed EMT training courses responsive to the standards established by the Highway Safety Act of 1966. These courses were intended to provide national guidelines for EMT training. Currently, the DOT curriculum for Basic EMTs is used by 48 states, including Arizona.

(2) According to OEMS staff, there are approximately 2,000 applicants annually for initial certification, for a per-capita cost of slightly over $3.00. National Registry also requires a practical exam for Basic certification and OEMS should consider this cost as well, though no cost figures are currently available.

3. DHS should develop a fee schedule to cover the cost of test administration.

4. DHS should take steps to insure secure storage for exam copies stored in the OEMS office and should also insure that security procedures are followed when exams are administered in the field.

## AREAS FOR FURTHER AUDIT WORK

### Would alternatives to the current Certificate of Necessity (CON) process be more effective?

Currently, in order to provide ambulance service an ambulance company must obtain a Certificate of Necessity (CON) from DHS. The CON establishes the provider's operation area, allowable rates and charges, and response times. A CON can be, and often is, given to more than one provider for coverage of one area. For example, DHS has granted CONs to two providers in the Tucson area and eight in the Phoenix area. In addition, a CON is renewed periodically, and no competition is introduced into the process.

In some instances, municipalities have contracted for all ambulance service with one of the companies which has a CON for the area. For example, the City of Tempe recently contracted with one of its State-authorized providers for all emergency transports. The City of Phoenix has a similar situation, wherein its own fire department handles over 90 percent of the emergency transports and the other State-authorized providers primarily handle the nonemergency ambulance traffic.

Further, some local systems encourage competition. For example, the cities of San Diego, California and Ft. Wayne, Indiana and at least one county in Florida obtain their ambulance service through a bidding process.

Further audit work is needed to determine whether it is desirable and feasible to allow local governments to regulate at least the economic portion of ambulance service, and whether competition in the process would be beneficial.

### Should the State require that Basic EMTs operate under medical control?

Basic EMTs are not required to be supervised by base hospital physicians, as are Intermediate EMTs and Paramedics. Several base hospital emergency staff expressed concern over this lack of medical supervision. According to hospital as well as OEMS staff, the need may be greater in rural areas

where Basic EMTs provide most of the emergency treatment. Thus, in rural areas, people are being treated by entry-level EMTs who are not closely supervised.

However, although base hospital staff were in favor of medical control over Basic EMTs, OEMS staff stated that base hospitals may be hesitant to provide the control. Currently there are more than 6,000 Basic EMTs Statewide, and the hospitals reportedly may not want to take on this large additional workload.

Further audit work is needed to determine whether medical control for entry-level EMTs is worth the additional resources it would require to provide the supervision. If deemed necessary, further work would also be needed to determine how the supervision should be carried out.

**Should DHS audit ambulance companies' records prior to granting rate increases?**

In the past four years, DHS has granted 46 rate increases to ambulance companies. Companies can receive increases in any one of three categories. Twenty-one of these companies received increases which exceeded ten percent, while 14 of these companies received increases which exceeded 50 percent. (DHS has explained that even the large rate increases can be justified, depending upon the financial condition of the ambulance company and characteristics of the community in which it operates.) However, DHS does not audit the records that providers submit to support the rate requests. As a result, although some of the increases may be appropriate, DHS may be allowing the ambulance companies to charge consumers more than they should have to pay for ambulance transport. The Arizona Corporation Commission (ACC) audits a number of utility companies prior to granting rate increases. In addition, at least one other state's EMS office audits some ambulance companies prior to increasing their rates. Further audit work is needed to determine whether auditing ambulance companies' records is needed and would be beneficial.

**Are ambulance inspections sufficient and adequate?**

Currently DHS annually inspects 313 ambulances as part of the registration process. During our review, we noted some instances where

DHS conducted inspections after the unit's registration renewal date had passed. DHS would simply allow the registration to remain in effect until an inspection could be done. Additional audit work is needed to determine how and to what extent the ambulance inspection program should be improved. Staggering registration renewals may be a workable alternative.

In addition, EMS may not be inspecting ambulances as thoroughly as do some other states. DHS inspectors check to make sure that each ambulance has the required medical equipment on board, and that lights, sirens and batteries are working. However, unlike other states, Arizona does not thoroughly inspect ambulances for proper maintenance, nor does it routinely check the operability of medical equipment kept on the ambulances. At least three other states provide maintenance inspections through their Department of Motor Vehicles, which apparently have the maintenance inspection equipment. Also, at least one state inspects the medical equipment for operability. Additional audit work is needed to determine whether the inspection program should be expanded to include maintenance and medical equipment, who should conduct the vehicle maintenance inspections, and costs of any additional responsibilities.

**Is testing for recertification necessary for the Basic and Intermediate EMT levels?**

The current Rules and Regulations require that BEMTs and IEMTs pass an exam to be recertified. Paramedics are not required to test to recertify. Instead, they must only meet continuing education requirements, have current certification in advanced cardiac life support, and obtain a Letter of Recommendation from their medical director. One reason that paramedics are not required to test is that they are under medical control by their base hospital, so the quality of their work is constantly being reviewed. However, IEMTs are also under medical control and they are required to test. Also, DHS administers approximately 3,000 recertification exams to BEMTs, while 28 other states do not require recertification testing. Also, the National Registry only requires continuing education for recertification at the Basic level. Further audit work is needed to determine the effectiveness of recertification testing for BEMTs and IEMTs.

# ARIZONA DEPARTMENT OF HEALTH SERVICES

*Office of the Director*

ROSE MOFFORD, GOVERNOR
TED WILLIAMS, DIRECTOR


December 16, 1988

Mr. Douglas R. Norton
Auditor General
Office of the Auditor General
2700 North Central Avenue, Suite 700
Phoenix, Arizona 85004

Dear Mr. Norton:

Attached please find the Department of Health Services' response to the performance audit of the Office of Emergency Medical Services.

As we stated in our response we must, unfortunately, agree with your findings. We appreciate your including in the report an acknowledgment of the work we have done since August, 1987 to improve the Office of Emergency Medical Services, and we have emphasized these efforts in our response. We wish to assure the Auditor General and the public that the Department is committed to continuing the work begun to strengthen this Office to ensure safe, affordable pre-hospital care.

We would like to thank the auditors for their cooperation during the time of transition in this Office and for the courtesy shown DHS staff during the course of the audit.

Sincerely,

Ted Williams
Director

TW/bd




State Health Building 1740 West Adams Street Phoenix, Arizona 85007

# ARIZONA DEPARTMENT OF HEALTH SERVICES

*Office of the Director*

ROSE MOFFORD, GOVERNOR
TED WILLIAMS, DIRECTOR


## Response to the Performance Audit on the Office of Emergency Medical Services

### Overview

In general, the Department agrees with the report's conclusions and recommendations and has already taken action to put these recommendations into effect. The Department would like to reiterate the Auditor's statement that "DHS management has recognized the need for improvement in the Office of Emergency Medical Services and made several changes since August 1987." The Department would like to make the following observations in support of that statement and in response to the findings:

1. Most of the audit refers to a system that no longer exists.

2. The Department began a major reorganization of the Office of Emergency Medical Services (EMS) in August, 1987 before the audit began in February, 1988. Emphasis needs to be given to the effects of this reorganization and the concerted efforts being made by this Office to address and correct its own problems.

3. The Office of EMS has functioned from its inception without adequate resources.

### Background

In 1982, the Division of Emergency Medical Services was created by statute and placed into the Department of Health Services. The new Division is a combination of EMS components from the Corporation Commission, the Department of Public Safety and the Department of Health Services. In 1983 The Division of Emergency Medical Services was combined with the Division of Health Resources, creating the Division of Emergency Medical Services and Health Care Facilities.

In early 1987 there were three Offices performing EMS functions in the Division: the Offices of Ambulance Licensure, Training and Certification, and Regional Coordination.

The Office of Ambulance Licensure was staffed by four professional and two support staff. One person inspected and licensed all

ambulances in the state; one person performed the Certificate of Necessity (CON) program; one handled all contracts and Requests for Proposal; and one served as Office Chief.

The Office of Training and Certification was staffed by three professional and four support staff who manually processed all application materials, testing materials, and test scoring and reporting.

The Office of Regional Coordination was established to promote development of EMS systems as well as "fill gaps." Four staff members represented the four regions of the state and were housed in those regions.

In June, 1987 the Department began to identify problems, to identify statutorily mandated functions that were not being performed, and to reorganize the Office into a unit that would look at EMS as a system rather than as separate, unrelated functions. In August, 1987 the new structure was put in place. It consists of one Office of EMS with an Office Chief and three regional teams composed of a member of each of the former functional Offices. It took one full month for staff orientation to the new structure and cross training for all functions.

It is critical to this response to note that the EMS Office has been changed from three independent, isolated offices to a single unified Office of EMS. This Office is dedicated to developing a system of EMS that operates along a continuum from incident detection to the delivery of safe and competent pre-hospital care. The Office has gone from a philosophy of virtually no regulation in 1986 to one of strong regulation in 1988.

The actions taken to facilitate this implementation are:

1. A computer network was designed, developed and implemented to streamline this paper intensive Office. The network is in place and the certification process is almost fully automated, making the process more efficient and effective. Other functions of the Office are now being automated to improve efficiency and utilization of professional staff time.

2. A policies and procedures manual covering all major tasks within the Office has been completed.

3. An audit of the regional councils was performed and the decision was made to utilize state staff to provide support services. Replacement of regional staff will avoid duplication, improve performance of state-wide programs, provide accountability and reduce costs. State personnel will assume the regional council support on January 1, 1989.

4. A task/time analysis was completed and service measurements developed which created a basis for determining staffing requirements and preparing the annual budget. It has clearly demonstrated that the Office was functioning with less than half the staff required.

5. Central files have been created which facilitates uniform record keeping by eliminating duplicate files within the Office and at the regional level.

## Response to Statement of Findings

DHS's Emergency Medical Services Office
Has Lost and Mishandled Complaints

Unfortunately, Division and Office management must agree with this finding. The following action has been taken:

The policy and procedure manual, including the section on complaint handling, is complete and operational. An accurate log book has been maintained since January, 1988. Logging of complaints is handled by one person and distributed to the proper regional manager for investigation and substantiation.

The following will be implemented:

1. A "Compliance Unit" is being developed within the office. The hiring of an investigator has been approved and recruitment has been initiated. The unit will be expanded if hiring of additional personnel is approved in the 1989-1990 budget.

2. Automation of the complaint tracking process is now being developed and should be completed during March, 1989.

3. All professional EMS staff will be trained in investigations and file preparation, using a program designed by DHS and the Attorney General's Office. This training will begin January, 1989. The Assistant Attorney General assigned to represent the EMS office is currently providing advice to staff on investigative procedure and proper preparation of case files.

DHS has not acted on serious complaints against Emergency Medical Technicians and ambulance companies

The Department agrees with this finding. Furthermore, it agrees with both recommendations and has taken steps to implement them. The regional staff and two investigators should be adequate to investigate the substantiated complaints.

OEMS needs to institute a mandatory reporting requirement for all instances of EMT incompetence and unprofessional conduct

The Department agrees with this finding and also agrees that base hospitals should be required to report incompetence and unprofessional conduct to ADHS. ADHS will seek voluntary compliance while proposing statutory authority to implement this recommendation.

The state examination for Basic Emergency Medical Technicians has not been validated and is not adequately secured

The Department agrees with this finding. Corrective action has already been taken.

The Office of EMS has purchased a computer program that contains 1,000 questions covering the entire content of the basic EMT course curriculum. The questions and answers are derived from material in all major textbooks utilizing United States Department of Transportation (DOT) knowledge and skill objectives. Because it is a new program, the questions are now being validated. The program allows the user to create numerous examinations and variations by selecting questions from one section or from any combination of sections. The Office of EMS will have the capability to change the test as often as it is administered. The computer program will be accessible only to selected personnel and, therefore, much more secure. This exam will be in use by January, 1989.

The Department further concurs with the recommendation to use the National Registry Exam, unless the recently purchased exam proves to be superior. Legislation will be introduced to give ADHS the authority to collect a fee for certification. The fee will be set to cover the cost of the National Registry or the current exam as well as the cost of administering the exam.

## Areas Recommended for Further Audit

1. Would alternatives to the current Certificate of Necessity (CON) process be more effective?

The Department does not believe this area needs further audit.

2. Should the State require that Basic EMTs operate under medical control?

The Department takes the position that all EMTs who provide direct patient pre-hospital care should be under medical control. This has been discussed by the EMS Council and will be studied at length by the EMS Medical Director and the Medical Standards Committee of the EMS Council in the coming year.

3. Should DHS audit ambulance companies' records prior to granting rate increases?

This statement contains some misleading misinformation that should be clarified before any recommendation can be made regarding further audit work. The audit states that DHS granted rate increases to 46 ambulance companies, and that of this 46, "14 of these companies received increases which exceeded 50 percent." The report should also show that:

Four companies were run by local governments that increased rates so that a greater portion of the cost of providing ambulance service is paid for by those utilizing the service.

One company asked for a rate increase because a substantial subsidy had been withdrawn and even with the rate increase the company went out of business.

Three companies were sustaining substantial operating losses with rates set initially. These rates were set on projected data, and the increase was based on actual data.

Two ambulance companies went out of business even with substantial rate increases.

One company received the rates of a defunct company and applied for new rates.

Three companies were non-profit corporations (volunteer) that were established based upon initial revenue requests that later proved to be inadequate.

Of these 14 requests, all were justified. Through the annual financial reporting process, the Department can review actual operating data and adjust the rates accordingly. It should be noted that there are situations in which auditing is needed. Additional staff have been requested in the FY 89-90 budget to perform this audit function.

4. Are ambulance inspections sufficient and adequate?

The Department believes that ambulance inspections are sufficient and adequate except for inspection of the mechanical aspects of the vehicle.

The Department currently conducts inspections for health and safety on 76 ambulance services and registers/re-registers 320 ambulances annually. The Office of EMS has developed a computer ambulance re-registration program which generates a re-registration application to each ambulance company 60 days prior to the expiration of the license. The provider is required to identify the location of the vehicle and submit his request for re-registration thirty days prior to the expiration date of the registration of the vehicle to be inspected.

An ambulance inspection handbook, as well as policies and procedures to assist the inspectors in providing a more thorough and consistent inspection, has been developed and is operational.

Although current forms do not reflect that inspectors check the operation of medical equipment and note evidence of poor maintenance, new check lists, in preparation, will more accurately reflect the actual inspection process.

The Department agrees that maintenance inspections of the mechanical aspects of the vehicle should be done. If the Department of Motor Vehicles cannot perform this service, as recommended by the auditors, the other alternative would be to have the Office of EMS assume this responsibility. To adequately do this, maintenance facilities would need to be provided around the state and mechanics trained to do the mechanical inspections of ambulances.

5. Is testing for recertification necessary for the Basic and Intermediate EMT levels?

The Department takes the position that recertification exams are necessary for the basic and intermediate EMT levels.

At the present time, the EMS Council, through its Education Committee, is in the process of developing standards for the recertification of all levels of EMTs. The alternatives being considered are: 1) testing only those EMTs not under medical direction, and 2) testing all levels every two years.

**Summary**

The Department agrees with the findings and recommendations of this report and wishes to reiterate that it has taken action to correct the problems. While it is true that not all the problems have been eliminated, the report justifiably reflects that the Department recognized a need for change and has taken steps to rectify the problems. These steps included hiring a new Assistant Director, reorganizing the Office to consolidate three separate Offices and appointing an Office Chief to be responsible for EMS. The Department developed and implemented new policies and procedures for a central filing system, designed and implemented a computer network system for the certification process which is now approximately 75% complete, and is designing an automated complaint tracking system. The Department performed financial audits of the regional councils amd replaced regional council staff with state staff in order to eliminate duplication and reduce expenses. The Department will open offices in Flagstaff and Havasu in January, 1989 to better serve those regions. Department management designed training programs on investigation and case file preparation and worked with the Assistant Attorney General and the Office of Staff Development and Training to have the program ready for presentation in early January, 1989. Staff transitioned from an Office doing paper reviews to an Office that is in the "field" doing on-site inspections and follow-ups. Finally, the staff now functions as a team. These accomplishments were not made overnight nor without trauma. It was, and continues to be, a difficult project but one to which the Department is fully dedicated.