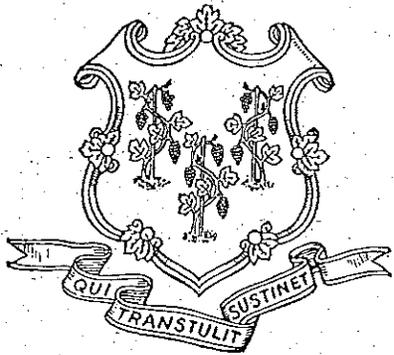


REGULATION OF EMERGENCY MEDICAL SERVICES: PHASE 2

Connecticut

General Assembly



LEGISLATIVE
PROGRAM REVIEW
AND
INVESTIGATIONS
COMMITTEE

December 1999

**CONNECTICUT GENERAL ASSEMBLY
LEGISLATIVE PROGRAM REVIEW AND INVESTIGATIONS COMMITTEE**

The Legislative Program Review and Investigations Committee is a joint, bipartisan, statutory committee of the Connecticut General Assembly. It was established in 1972 to evaluate the efficiency, effectiveness, and statutory compliance of selected state agencies and programs, recommending remedies where needed. In 1975, the General Assembly expanded the committee's function to include investigations, and during the 1977 session added responsibility for "sunset" (automatic program termination) performance reviews. The committee was given authority to raise and report bills in 1985.

The program review committee is composed of 12 members. The president pro tempore of the senate, the senate minority leader, the speaker of the house, and the house minority leader each appoint three members.

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LEGISLATIVE PROGRAM REVIEW
& INVESTIGATIONS COMMITTEE

**REGULATION
OF
EMERGENCY MEDICAL SERVICES**

Phase Two

DECEMBER 1999



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Key Points

REGULATION OF EMERGENCY MEDICAL SERVICES: PHASE TWO

- Ambulance calls are considered a reimbursable health care expense; third party payers, including government, already determine rates they will pay for ambulance service
 - Setting of rates by the health department has not had a great impact on keeping overall EMS costs down; between 1994 and 1998 they rose at double the rate of increases in the consumer price index for health care and transportation
 - There is an incentive for providers to ask for rate increases if they have to file detailed financial information annually
 - Medicaid reimbursement is currently \$99.25 for basic life support (BLS); it has not been increased in more than 10 years, and is significantly lower than the Medicare rate for BLS
 - Standards used by DPH to make decisions on the need for ambulances are unclear and the process is cumbersome and time consuming
 - Evaluation of what number of vehicles are needed is mostly based on a prospective estimation of what service needs will be or a demonstration of poor or inadequate service
 - Traditional government cost containment functions are increasingly being replaced by managed care organizations
 - Since 1975, the statutes have required an EMS data system be put in place; 25 years later there is still no data collection system
 - Lack of consensus within EMS community appears to have stymied system implementation
 - Emergency medical dispatch (EMD) is a proven technique used to save lives and promote optimal allocation of limited EMS resources
 - EMD serves as an important link in the chain of survival for those needing emergency medical assistance
 - EMD is not currently available to all Connecticut residents – only about half of the state's 9-1-1 communications centers provide or have access to EMD
 - DPH is not in compliance with certain legal requirements and has not discharged its administrative and oversight duties in an appropriate manner
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Executive Summary

REGULATION OF EMERGENCY MEDICAL SERVICES: PHASE TWO

The committee authorized a scope of study regarding the regulation of emergency medical services on March 9, 1999. The focus of the examination targeted the three cornerstones of business regulation of emergency medical services:

- assignment of exclusive service areas for emergency ambulance providers – called primary service areas (PSAs);
- setting of maximum rates providers are allowed to charge; and
- determination of need for license and certification.

The scope called for an identification of areas in need of change and proposed legislation that could be acted upon in the 1999 legislative session. Subsequently, phase one of this report was issued in May 1999 and focused primarily on the designation of PSAs. The committee found there was need for some corrections in the system, but concluded radical alternatives would be more disruptive than remedial to a system in place for more than 20 years.

The recommendations contained in the previous report maintained the current regulatory system and the assignment of PSAs, but proposed policy enhancements to improve the ability of both local and state government to perform oversight functions of emergency medical services. The committee's eight recommendations were incorporated in sHB 6662 but did not pass during the last session. The committee also authorized a second phase of the EMS study to examine areas the regulatory components it was unable to fully consider during phase one because of its abbreviated time frame.

This report, phase two, addresses the two other regulatory components of the EMS system -- rate setting and determination of need. In addition, this report describes emergency medical dispatch and examines the need for basic data collection.

Overall, the committee found the state's regulatory mechanisms have not kept pace with the changes in the health care marketplace or the emergency medical services field. Specifically, some of the committee findings include:

- rate setting by DPH has not been very effective in keeping overall ambulance costs down - between 1994 and 1998 they rose at double the rate of increases in the consumer price index for either health care or transportation;
- setting maximum rates does not appear to have standardized costs - rates charged among top commercial providers vary by 20 to 25 percent;
- the current rate-setting process is based on a cost-plus system, providing no incentive to keep costs down;

Executive Summary

- DPH does not evaluate the needs of the entire EMS system but only reviews the needs of individual providers;
- very few other states have a determination of need process and DPH does not engage in any retrospective review of the market or how well need is being met;
- standards used by DPH to make need decisions are unclear and inconsistent;
- there is no basic descriptive information on the state's EMS system and no data are collected to evaluate the system, even though statutes have required a data system be in place since 1975; and
- less than half of the state's 9-1-1 communication centers have access to emergency medical dispatch - a proven technique used to save lives and promote the optimal allocation of EMS resources.

At its December 16, 1999, meeting the committee adopted eight recommendations. The recommendations serve to: streamline the current regulatory requirements for rate setting and determination of need; raise the level of Medicaid reimbursement for ambulance transports; improve the collection of essential performance data; and expand the availability of emergency medical dispatch throughout Connecticut. In addition, the report addresses concerns about how the Department of Public Health (DPH) has discharged EMS regulatory duties. The approved recommendations are listed below.

RECOMMENDATIONS

1. Rates currently filed and approved by the Department of Public Health would remain in effect. Effective July 1, 2000, regulations concerning rate filing (Sec. 19a-179-21(f)) shall be modified to require only charging providers who wish to increase rates to submit complete financial information currently required by regulation. Rate increase requests could be filed at any time, but no more than annually. Detailed financial and operational information supporting the request would have to be filed for the time period from the provider's last rate review.

Charging providers willing to stay at current rates would be required to file, by July 15 of each year, an audited summary financial statement, including total revenue, total expenses, emergency and non-emergency call volume, and a written declaration that no change in the current maximum rates has occurred.

2. By January 1, 2001, the financial summary forms and the full rate request filings shall be on forms issued by the Department of Public Health. Further, if the department needs additional information pursuant to Sec. 19a-179-21(f)(2) of EMS regulations, DPH must specify the additional the financial and operational information it wants.

Executive Summary

The regulations review subcommittee established by DPH to examine the rate-setting process shall review the regulations concerning rates and issue its report to the Department of Public Health by July 1, 2000. The health department shall seek to have the regulations revised through the normal regulation review process.

3. The Medicaid rate for ambulance services should be raised.

4. The determination of need process shall be streamlined by allowing providers the opportunity to operate any number of vehicles (i.e., ambulances, invalid coaches, and non-transport emergency vehicles) and any number of branches they believe is necessary to render adequate ambulance or invalid coach service. New services (for ambulance and invalid coach) and services requesting to charge would still be required to go through an initial DON process to prove a need exists before operating.

Providers shall continue to notify DPH of the number of vehicles they have in service each year and receive a permit for each vehicle in use. The department may consider the appropriateness of the number of vehicles when analyzing any application for a rate increase. If, during the normal course of a rate review, the department finds an excessive number of vehicles and branch offices, it may revoke authorization for those vehicles and disallow the expenses related to those vehicles and branch operations for rate determination purposes.

5. By January 1, 2001, the Department of Public Health shall collect and maintain data from the ambulance run form. Data points required to be submitted to DPH shall be uniform by all EMS providers. Providers shall submit copies of the run form information monthly via a method that accommodates needs of both providers and the department. The trauma reporting requirements shall be consolidated on this run form to satisfy both general EMS and specific trauma data fields.

By March 2002, and annually thereafter, DPH shall report on the following information which shall include, but not limited to:

- total number of EMS calls;
- number of calls requiring each level of service;
- number of refused calls and number requiring mutual aid response;
- names of service provider for each level of service; and

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- **fractile response times for each level of the EMS system -- dispatch, first response, basic life support, and advanced life support – using common definitions of response times established by the Department of Public Health. Data may be subject to audit by DPH, as the department deems necessary.**

The report shall compile the information and report it in an aggregated format by town – with towns grouped according to urban, suburban, and rural categories – and make the information publicly available, including through DPH’s web site. The department shall notify the Public Health Committee of the report’s availability.

If a provider does not comply with the submission of required data for a period of six months, or if DPH has cause to believe the provider knowingly and intentionally submitted incomplete or false information, DPH shall notify the provider and the towns served by the provider that compliance is mandatory. If full compliance is not achieved within the following quarter, DPH shall hold a hearing at which the provider would be required to demonstrate why the PSA assignment should not be removed.

In addition to EMS providers, each public safety answering point (PSAP) shall, beginning January 1, 2001, submit quarterly aggregated data on its EMS calls to the Office of Statewide Emergency Telecommunications (OSET), within the Department of Public Safety. The data submitted from PSAPS shall include all 9-1-1 calls where a medical emergency is involved. The aggregated data shall report elapsed time for dispatch -- from the time the call was received to the time the call was dispatched or transferred -- and shall be reported in fractile response times.

6. Beginning July 1, 2000, an allocation of no more than \$250,000 annually from the surcharge on phone lines that cover the 9-1-1 system be made to finance data collection, maintenance and reporting for the emergency medical system.

7. All Public Safety Answering Points (PSAPs) be required to provide emergency medical dispatch (EMD) or arrange for EMD services to be provided to all callers requiring emergency medical services. Each PSAP or other entity performing EMD functions shall maintain an EMD program. The Office of Statewide Emergency Telecommunications shall provide oversight of EMD implementation.

Each EMD program shall have, at a minimum, the following characteristics: 1) use only trained EMDs to provide medical interrogation, prioritization, and pre-arrival instructions; 2) use a medically approved emergency medical dispatch priority reference system; 3) provide a continuing medical dispatch education program; 4) implement a quality assurance program that, at a minimum, includes the monitoring of

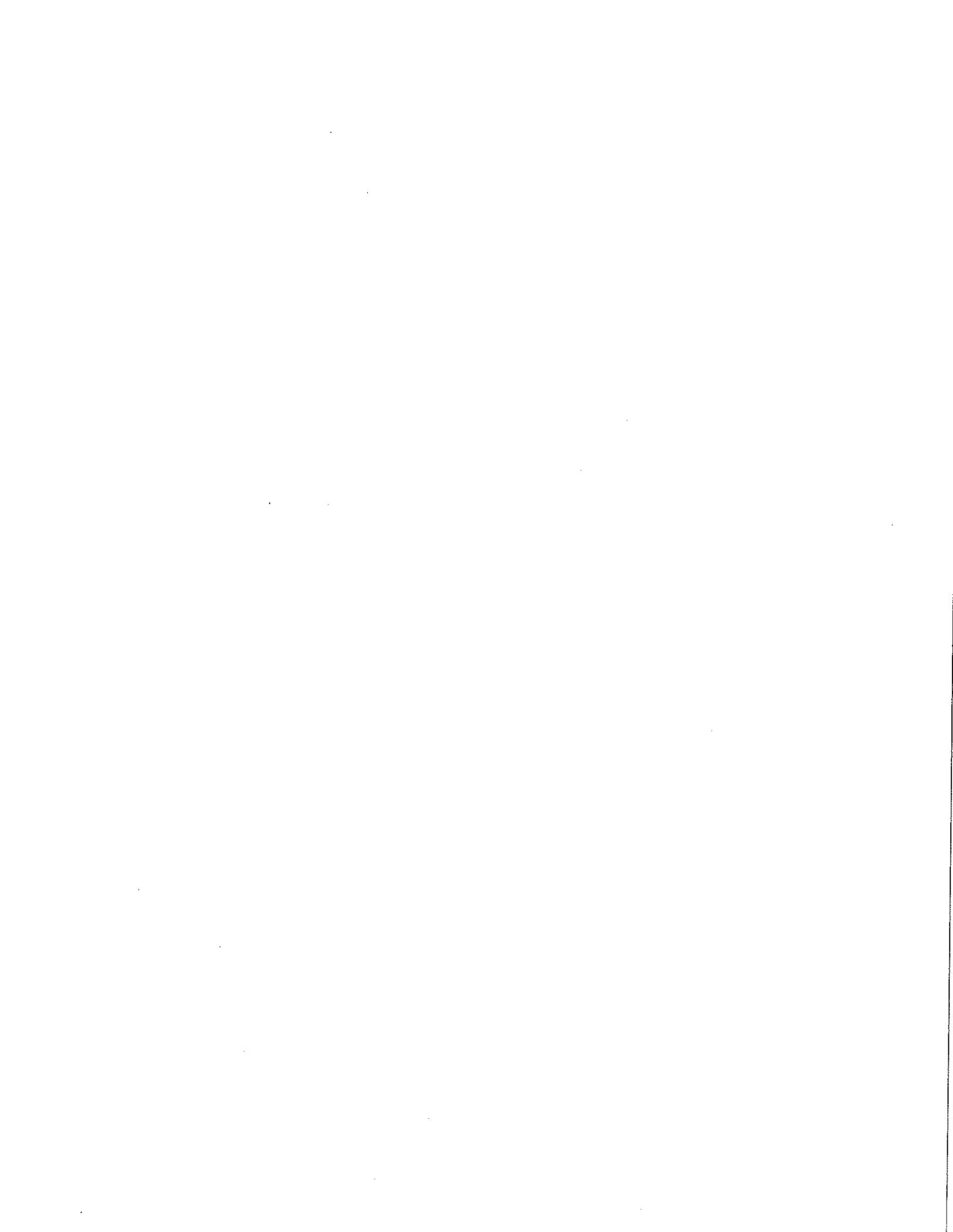
Executive Summary

EMD time intervals, utilization of EMD program components, and appropriateness of EMD instructions and EMD dispatch protocols; 5) employ a mechanism to detect and correct discrepancies between established protocols and actual EMD practice; and 6) provide for EMS physician medical direction.

In recognition of the initial start-up costs in providing EMD, program review staff recommends OSET reimburse PSAPs for the costs related to the initial training of dispatchers and for purchasing an emergency medical dispatch priority reference system. Funding shall be allocated from the surcharge on phone lines that support the 9-1-1 system. Regional communication centers (i.e., Consolidated Medical Emergency Dispatch – CMEDs) shall also be reimbursed for the initial training and card sets for EMD if they are providing this service for a PSAP. OSET shall approve for use in Connecticut any national or locally developed EMD course that meets the requirements of NHTSA National Standard EMD Curriculum.

A four-year phase-in for this requirement is recommended. This will allow OSET at least one year to select appropriate training providers and establish an administrative mechanism to oversee the training. PSAPs would also decide whether to provide EMD themselves or establish a system where callers could be transferred to an EMD provider. In addition, committee staff recommends all PSAP dispatchers performing EMD be trained over a three-year period. PSAPs must provide an affirmative statement to OSET that they either have in place all the elements of an EMD program identified above or transfer to a provider who does within that four-year time frame. This affirmation must be received before any reimbursement from OSET takes place.

8. Department of Public Health leadership communicate to department employees and the regulated EMS community the department's intention to discharge its regulatory and administrative responsibilities in the EMS area diligently and uniformly.



Regulation of Emergency Medical Services: Phase Two

Earlier this year, newspaper accounts reported situations where ambulances took too long to respond to calls, or did not come at all. Also, issues concerning reimbursement for ambulance transport services were raised. Thus, the program review committee called for a study of the regulation of emergency medical services.

The committee authorized a scope of study on March 9, 1999. The focus of the examination targeted the three cornerstones of business regulation of emergency medical services:

- assignment of exclusive service areas for emergency ambulance providers – called primary service areas (PSAs);
- setting of maximum rates providers are allowed to charge; and
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The scope called for an identification of areas in need of change and proposed legislation that could be acted upon in the 1999 legislative session. Subsequently, phase one of this report was issued in May 1999 and focused primarily on the designation of PSAs. The committee found there was need for some corrections in the system, but concluded radical alternatives would be more disruptive than remedial to a system in place for more than 20 years.

The recommendations contained in the previous report maintained the current regulatory system and the assignment of PSAs, but proposed policy enhancements to improve the ability of both local and state government to perform oversight functions of emergency medical services. The committee's eight recommendations were incorporated in sHB 6662 but did not pass during the last session. The committee also authorized a second phase of the EMS study to examine areas the regulatory components it was unable to fully consider during phase one because of its abbreviated time frame.

This report, phase two, addresses the two other regulatory components of the EMS system -- rate setting and determination of need. In addition, this report describes emergency medical dispatch and examines the need for basic data collection.

Overall, the committee found the state's regulatory mechanisms have not kept pace with the changes in the health care marketplace or the emergency medical services field. The recommendations approved by the committee serve

to: streamline the current regulatory requirements for rate setting and determination of need; raise the level of Medicaid reimbursement for ambulance transports; improve the collection of essential performance data; and expand the availability of emergency medical dispatch throughout Connecticut. In addition, the report raises some concerns about how the Department of Public Health (DPH) has discharged EMS regulatory duties.

Information for this report was obtained from a number of sources including: interviews with staff of the Department of Public Health and other state agencies; town managers and other municipal officials involved with EMS; certified and commercial EMS service providers; and EMS representative groups. The committee also held a public hearing on September 9, 1999. In addition to DPH, 16 persons testified on various aspects of EMS.

Other states were surveyed to determine how they regulate and monitor EMS services. The survey results are presented in Appendix B. A second survey was distributed to the state's 108 public safety answering points (PSAPs), the centers that handle all 9-1-1 calls in Connecticut. The PSAPs represent an important link in the EMS delivery system and the survey elicited information about their ability to collect data and perform emergency medical dispatch. The results are included in Appendix C.

Report Organization

This report contains five chapters. Chapters I and II present an analysis of the current rate-setting and determination of need processes, as well as recommendations to streamline both these areas. Chapter III provides findings and recommendations related to EMS data collection efforts. Chapter IV describes the components of emergency medical dispatch and contains recommendations for expanding the availability of this service. Chapter V details some management control deficiencies exhibited by DPH in the EMS area, and proposes the new DPH administration raise its level of attention to EMS.

Agency Response

It is the policy of the Legislative Program Review and Investigations Committee to provide agencies subject to a study with an opportunity to review and comment on the recommendations prior to publication of the final report. The response from the Department of Public Health is contained in Appendix A.

Rate Regulation

Process Needs Modification

Findings Summary

- Government agencies pay for about two-thirds of the number of ambulance trips in Connecticut
- Third party payers, including government, already determine what rates they will pay for ambulance services
- The largest government payer, Medicare, is currently re-examining its rate structure for ambulance services, and the results are expected to be implemented in 2001
- There is currently a statutory cap of \$500 on the amount insurance companies must pay for emergency ambulance trips
- Medicaid reimbursement for basic life support transport is currently \$99.25; it has not been increased in more than 10 years and is significantly lower than the Medicare rate for BLS
- DPH rate setting has not had a great impact on keeping overall EMS costs down; between 1994 and 1998 they rose at double the rate of increases in the consumer price index for health care and transportation
- Some providers complain about the cumbersome nature of the annual rate review process
- Setting maximum rates does not appear to have standardized costs. Rates charged among even the top commercial providers vary by 20 to 25 percent
- The current rate-setting process is based on a cost-plus system, so there is no incentive to establish competitive rates or keep costs down
- Connecticut is one of only four states that sets ambulance rates
- Connecticut has moved away from full rate setting in other areas, especially in health care

Recommendation Summary

Raise Connecticut's Medicaid rate for ambulance services. Reform and streamline the current rate application process. Only ambulance companies charging above the statewide rate and requesting a rate hike would be required to file a detailed rate application. All other ambulance companies would be required to file only a summary financial statement, including total revenues, total expenses, and volume of emergency and non-emergency business.

Background

Connecticut began setting commercial ambulance rates in 1967. Responsibility for setting rates rested with the public utilities commission. In 1974, rate-setting authority was transferred to the Commission on Hospitals and Health Care, and one year later it was again moved, this time to the health department. In 1980, the statute was modified to require the health commissioner to establish rates for certified as well as commercial ambulance companies, and required that the commissioner develop regulations concerning the rate-setting process. Those regulations were not developed until 1988.

The regulations require DPH to set maximum allowable rates by classification -- i.e., basic life support (BLS), advanced life support (ALS) or paramedic, and invalid coach -- for each provider that bills for service. Maximum level rates are also set for each provider for ancillary charges like mileage, night calls, and the like.

The rate-setting process and time frame are laid out in regulations. The rates are set for a calendar year, based on a provider's costs and financial experience for a 12-month period for the previous May through April. (For example, 1999 rates are established based on provider costs of May 1, 1997 through April 30, 1998). By July 15th of each year, providers must submit to DPH extensive financial information. After a review process, which may involve a hearing, the commissioner establishes the rates by December 15 for use beginning on January 1. Until this year, every provider had to file the detailed financial information, including: loans taken out; interest rates; capital purchases; salaries and fringe benefits paid; and expenses like marketing and advertising.

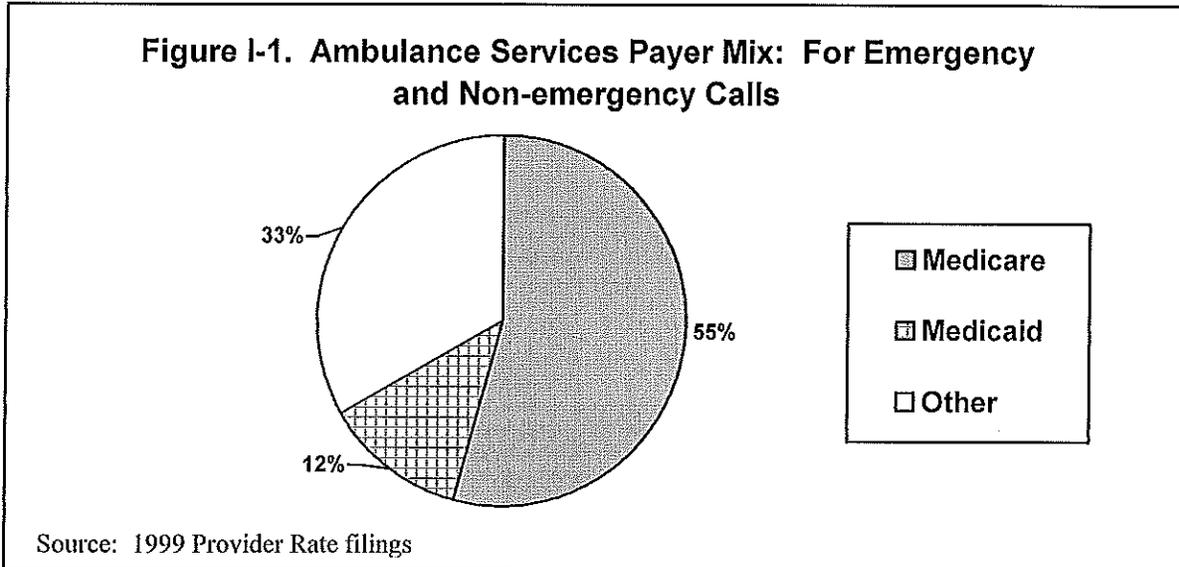
Early in 1999, DPH issued a policy change, although not by regulation, that substantially impacts the rate setting process. Beginning July 15, 1999 (for year 2000 rates) only those providers charging above a certain threshold set by DPH (\$280 BLS level) and/or handling more than 1,200 calls per year had to submit a comprehensive filing.

Consumer Protection

A major reason for rate regulation is to protect consumers from extremely high prices in areas where competition cannot be expected to keep costs down. In Connecticut, emergency ambulance transportation is non-competitive because the state designates exclusive territories for individual ambulance companies to answer *all* emergency medical calls in that area. Thus, in a strict economic sense, it would seem that rate regulation is necessary. However, the committee believes the vast majority of consumers are already protected through their

government payer or their private health insurer. Because ambulance transportation is part of the health care system, health insurers typically reimburse it, and those insurers are often setting their own ambulance service payment rates.

Government payers. Government pays for the largest portion of ambulance calls. Medicare, the federal health insurance program for those persons 65 or older, makes up the largest portion. As Figure I-1 below shows, Medicare clients make up about 55 percent of EMS calls. Another 12 percent of calls are comprised of state Medicaid clients who are not in a managed care program. Thus, about two-thirds of the ambulance calls are paid by government.



Medicare, which is totally federally financed, sets rates for ambulance services for four different regions in Connecticut. In 1999, the regional rates ranged from \$260 to \$318 for basic life support service. The same rate is paid whether the ambulance transport is emergency or non-emergency.

Medicaid, the state-administered medical assistance program for Connecticut's poor and disabled, is reimbursed for half its costs by the federal government. The Medicaid rate for BLS - basic ambulance transportation on an emergency or non-emergency basis -- is currently \$99.25 statewide, and has not increased in more than 10 years. Other rates, for paramedic level service (\$153.45), for waiting time (\$34.87 for initial hour), were also set before 1990.

Program review compared Connecticut's Medicaid BLS-level rates with those of other New England states and the results are shown in the table below.

Comparison of Ambulance BLS Medicaid Rate in Connecticut with Surrounding States	
Connecticut	\$99.25
Maine	\$95.00
Massachusetts	\$94.90
New Hampshire	\$68.70
Rhode Island	\$50.00
Vermont	\$108.00
Source: State Medicaid Offices and HCFA Region I Office	

While the rate in Connecticut is comparable to those in other states, the *program review committee finds the Medicaid rate for ambulance services is not adequate*. First, the Medicaid rate is significantly lower than Medicare rates. Second, as mentioned, Connecticut has not increased its Medicaid rate in more than a decade, so it certainly has not kept pace with inflation. Third, the committee expressed concern that, because urban areas include a higher Medicaid population than other areas of the state, the low Medicaid rates affect EMS providers serving large cities more acutely.

For the above reasons, the Legislative Program Review Committee recommends that the Medicaid rate for ambulance services be raised.

The committee's recommendation did not set a level to which the rate should be raised, but requested staff to estimate the costs of increasing the BLS level service to \$200. As shown in the previous graph, about 12 percent (48,000) of all ambulance transports in the state are Medicaid clients. It is unknown how many Medicaid patients are transported at the BLS level and how many require the ALS (paramedic level). If all calls are reimbursed at the BLS rate, and that is raised to \$200, an increase of about \$100 a call, it would cost an additional **\$4,800,000** (48,000 *\$100 increase per call).

Committee staff discussions with both state Department of Social Services and Health Care Financing Administration Region I Office indicate that the federal government reimburses for 50 percent of Medicaid costs, including ambulance costs. Therefore, the net cost increase to the state would be approximately **\$2.4 million**.

It is important to note this cost estimate does not address increasing rates for any of the ancillary charges, like mileage and waiting times, nor does it address raising the paramedic level (ALS) rates. If these were also raised it would add to the state's Medicaid costs.

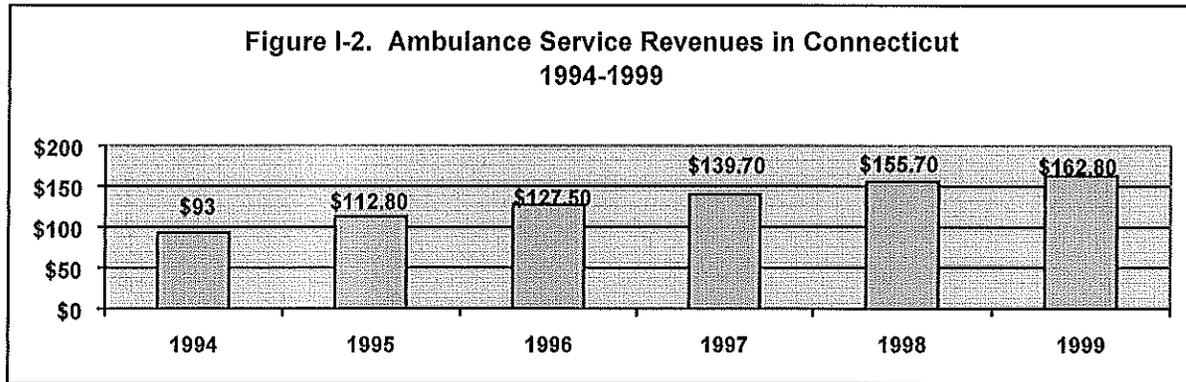
Third party payers. Of the remaining one-third of transports that are not government-paid, many are covered by health maintenance organizations (HMOs) or other health insurers that have contracts with major ambulance companies at rates the two parties negotiate. For example, American Medical Response, the largest ambulance company in Connecticut, has contracts with most Connecticut HMOs. Committee staff interviewed AMR officials, and was told that HMOs negotiate lower rates than those set by DPH, and that their contracts with HMOs prohibit providers from billing patients for the balance. Thus, HMO ambulance contracts also protect consumers from high ambulance costs.

The statutory cap. As mentioned in phase one of the EMS study, the statutes (C.G.S. § 38a-525) set a \$500 maximum limit on the amount private insurance companies must pay for each *emergency* ambulance transport. Program review was unable to determine the full extent insurers use the limit, but identified the state's largest health insurer, Anthem Blue Cross/Blue Shield, as employing the cap. Anthem officials indicate that if the ambulance is an in-network provider, the provider would be prohibited from billing the patient for the balance over the \$500. Out-of-network providers would be allowed to bill the client for whatever Anthem did not pay,

although the company indicates total costs for an ambulance trip seldom exceeds the \$500 insurance cap.

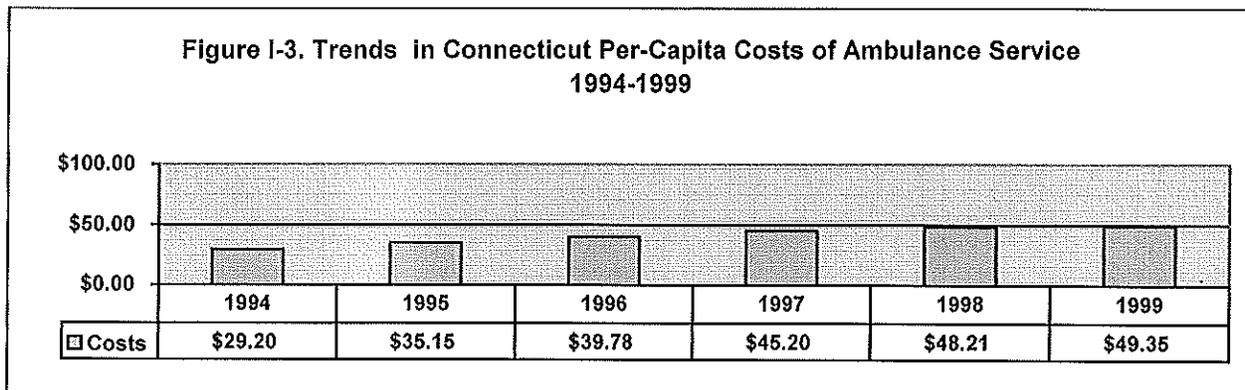
Rate Regulation and Costs

Impact on costs. *Rate regulation has not kept overall ambulance service costs down in Connecticut.* Program review obtained ambulance cost information from DPH rate summary reports and individual rate filings and analyzed the data using several different measures, and *finds that costs have risen at a dramatic rate.* The first measure used is overall ambulance company revenues, which are funds raised from all sources by all charging ambulance providers in the state. Figure I-2 below shows that between 1994 and 1999, revenues in Connecticut increased about 75 percent, from \$93 million to almost \$163 million.



Some of this increase is due to smaller ambulance companies who began charging during the period. The total number of companies that bill for calls rose from 80 to 107, but the impact of the recently charging companies on overall revenues is slight because they do not have a large segment of the overall market. Commercial ambulance companies generate about 80 percent of total ambulance transport monies in Connecticut; thus, revenues of charging volunteer and nonprofit companies are not significant overall.

Expenses for all ambulance services in Connecticut have also increased, rising about 73 percent from 1994 to 1999. To examine what that means for Connecticut residents, the expenses were analyzed on a per capita basis by dividing annual ambulance expenses by the Connecticut population for the same years. The results are graphed in Figure I-3, and show the cost per capita for ambulance service in Connecticut for the six-year period rose 68 percent, from \$29 in 1994 to \$49 in 1999.

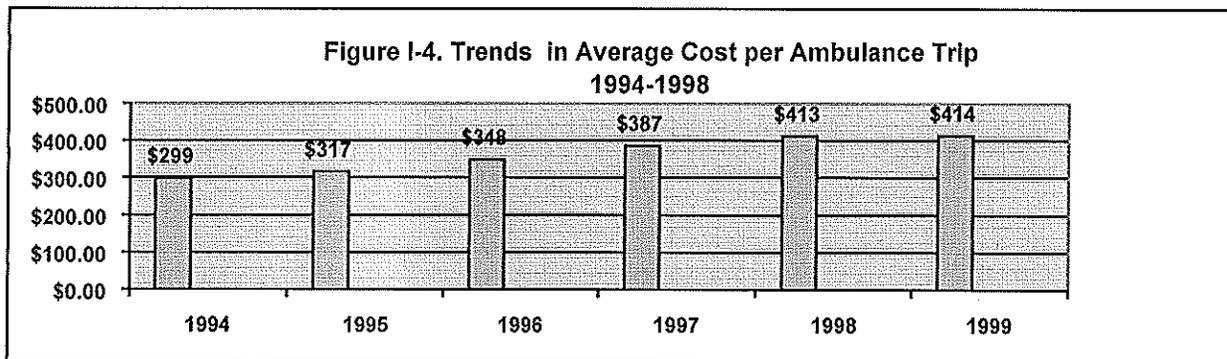


A partial explanation of rising costs is the increasing number of ambulance transports. The number of ambulance calls between 1994 and 1999 grew by about 25 percent, as indicated in Table I-2. Thus, volume does not completely explain the approximate 73 percent jump in expenses over the same period.

<i>Year</i>	<i>Total Calls</i>	<i>Percent Change</i>
1994	312,932	
1995	354,587	13.3%
1996	366,387	3.3%
1997	375,675	2.5%
1998	388,356	3.3%
1999	392,472	1.0%
Total Increase	79,540	25.4%

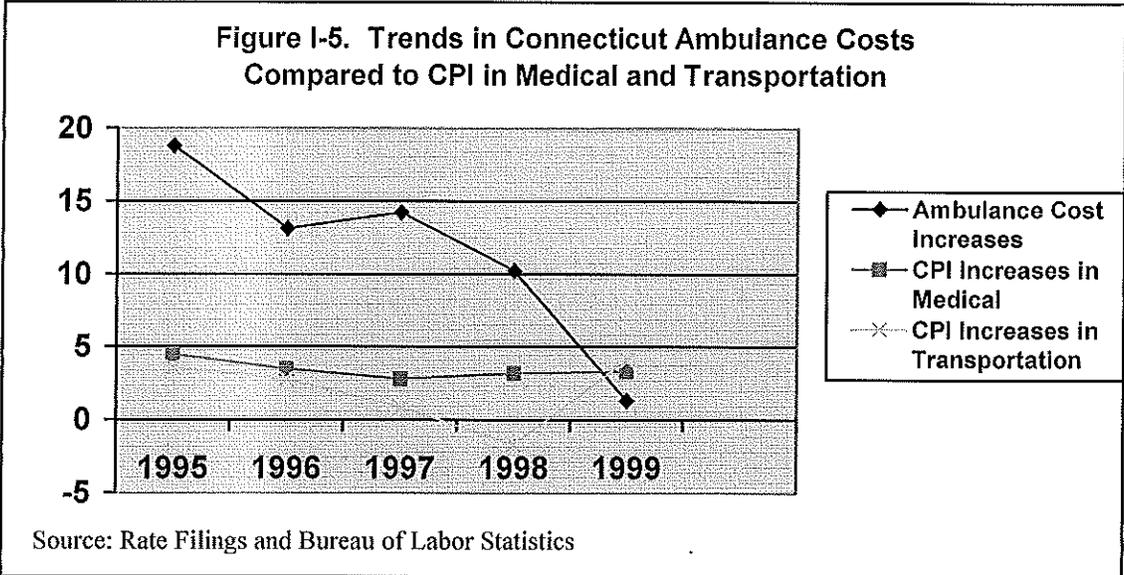
Source: DPH Summary of Rate Filings

Since not all expenses can be explained by increasing demand for ambulance service, the study also examined the trend in costs for individual trips. The total industry expenses were divided by total ambulance calls (both emergency and non-emergency) for each year from 1994 to 1999. The results are graphed in Figure I-4 below, and show that in 1994 the average cost per trip was \$299; by 1999 the average cost had risen to \$414, an increase of more than \$100 per trip (38 percent).



All of these indicators point to stiff increases in the costs of ambulance services in Connecticut between 1994 and 1998. The increases have leveled off in 1999, although it cannot be predicted whether this is a trend or not. The committee determined the stabilization in overall costs during 1999 is largely due to a drop in one provider's -- American Medical Response -- expenses. AMR's expenses dropped \$4 million in 1999, after annual increases in the tens of millions of dollars. Between 1996 and 1997 alone, its costs rose from \$39 million to \$68 million.

Connecticut's increases in ambulance service costs were compared with annual increases in the consumer price index (CPI) for two similar service areas -- medical and transportation. The graph in Figure I-5 illustrates that, until 1999, the costs of ambulance services in Connecticut far outpaced the increases in health care or transportation.



Incentives. The committee concluded the current rate-setting process offers an incentive for providers to seek a yearly rate increase since they have to submit an annual rate filing anyway. Until this year all *charging* providers -- no matter what their rates and whether seeking an increase or not -- were required to submit an annual detailed rate filing. Beginning with the year 2000 rate application process, if providers were charging no more than a statewide rate of \$280 for BLS, and had call volume of no more than 1,200 calls, that provider had only to file a short form. Streamlining the rate application process is a step in the right direction. However, 34 providers charging above the \$280 were still required to file a detailed rate application and all but one asked for an increase over their 1999 rates.

Another negative consequence of the recent changes has been to boost the rates for those providers that had been charging less than \$280. They were allowed to automatically raise their rates to a new "statewide" rate of \$280, without requiring justification. Seventy-one providers bumped their rates to the \$280 level, an average increase of \$30. Three services *kept* rates at or below \$280, and two providers dropped their rates to \$280, escaping the full rate review process. Thus, a rate-setting process put in place to keep costs in check may have contributed to raising rates for the consumer.

Further, restricting individual provider rates has not been very successful. For the 1999 rate year, 92 providers requested a rate hike. DPH approved 63 at the levels requested; 13 received more than requested; and only 18 received less than requested.¹ The committee believes the benefit of those rate reductions to the consumer was minimal. Of those providers that had their rates reduced, the average reduction DPH made was \$14.70 on an average rate request of \$309. The department was questioned about granting higher rates than had been requested in 1999, and DPH responded that it was done to bring low-charging providers up to a

¹ Two of the 13 providers who received more in DPH's rate review had not requested an increase.

certain rate level in anticipation of using the \$280 statewide rate for the 2000 rate year. Again, a rate-setting system put in place to keep costs in check actually raised costs to the consumer.

No standardization of rates. *Because rates are cost-based, and vary by provider there is really no standard or statewide rate.* Even among the high-volume commercial providers, price ranges are great – for example, one company charges \$280 for a basic transport, while another charges \$334, a 20 percent difference. Mileage cost differences are even more pronounced – among the top commercials one charged \$7 a mile while another charged \$9.50, a difference of 26 percent. Variation is even greater if rates among all providers, not just commercials, are considered.

Further, because rates are established for different service components, the overall charge for ambulance transport may be very different from the BLS rate. When mileage, night call fees, and/or paramedic intercept fees are added, the charge can be substantially higher than the basic rate. For example, as illustrated in Figure I-4 above, the *average* cost for an ambulance trip during 1999 was \$414. The BLS rate for the *highest* charging provider in the state was \$386. Thus, while maximum rates are set by DPH, they are established for so many different components for every provider, it is difficult for a consumer to know what the rates actually mean and if he/she is overcharged or not.

Cost-plus rates. *As stated above, EMS rates are based on provider expenses. Thus, the higher a provider's costs that can be justified, the more a provider can charge.* Total charges generate revenue, and both officer salaries and profits depend on a company's net revenues -- established by DPH policy at 6.8 percent and 6 percent, respectively. The more revenue generated, the higher corporate officers' salaries that can be paid, and the more profit that can be earned.

In addition to being a disincentive to keeping costs down, non-commercial providers complain that the cost-plus system builds an inherent unfairness into the system. Municipal and non-profits do not pay corporate level salaries and therefore are not built into expenses. Further, the rate of return on net revenue for municipals and non-profits is limited to 2 percent, compared to the 6 percent of net revenue for-profit companies are allowed to keep.

Link to DON is weak. The connection between the determination of need and rate-setting components is vague. In fact, two of the biggest cost drivers in ambulance services have been outside the determination of need process. One is due to ambulance companies raising the level of service from Basic Life Support to Advanced Life Support, thereby increasing costs.

A second cost-driver occurs when an ambulance company purchases another and raises rates to the buyer's level. For example, when AMR purchased Medstar Ambulance in 1995, AMR's base rate was \$30 higher. When AMR bought L&M, Professional, and Trinity ambulance companies, AMR's BLS rate was about \$40 higher than the rates charged by the three companies it purchased. Upon purchasing the companies, AMR charged the higher rates, and has subsequently increased rates each year since, creating greater costs for ambulance services in Connecticut.

State moving away from setting rates. *Connecticut is one of only four states that sets statewide rates for ambulance services. Further, Connecticut has reduced its rate-setting functions in other medical areas like hospitals.* Since 1993, the Office of Health Care Access has limited financial review of hospitals to their budgets rather than setting individual hospital charges. The committee believes that if the state could remove itself from establishing rates for hospitals -- which involves over \$4 billion dollars for inpatient services -- it can certainly lessen its rate-setting role in the \$163 million ambulance service area.

The committee recognizes that rate setting by DPH has not been very effective in keeping overall ambulance transportation costs down and that other consumer protections exists in controlling ambulance service prices, like managed care contracts and insurance caps. For these reasons, the program review committee recommends EMS rate regulation should be reformed as follows:

Rates currently filed and approved by the Department of Public Health would remain in effect. Effective July 1, 2000, regulations concerning rate filing (Sec. 19a-179-21(f)) shall be modified to require only charging providers who wish to increase rates to submit complete financial information currently required by regulation. Rate increase requests could be filed at any time, but no more than annually. Detailed financial and operational information supporting the request would have to be filed for the time period from the provider's last rate review.

Charging providers willing to stay at current rates would be required to file, by July 15 of each year, an audited summary financial statement, including total revenue, total expenses, emergency and non-emergency call volume, and a written declaration that no change in the current maximum rates has occurred.

If the recommendation were in place, there would be an incentive for providers to continue operating under existing rates, becoming more efficient to keep more profits or put the money back into the business. If the rate regulation process and the information required for increasing rates is as cumbersome as providers complain -- and it does appear time-consuming, tedious and detail-oriented -- providers will want to keep their existing rates rather than encounter a rate approval process that can be avoided. This will save time and money for both providers and the state, and could potentially stabilize ambulance service costs overall.

The committee examined a number of alternatives to the current rate-setting process -- for example, setting one statewide at the median or average of all providers, and allowing only future increases equal to the consumer price index, or a rate rollback for all providers. However, setting a universal rate retrospectively is nearly impossible. If set too low, it could have serious service implications (e.g., layoffs), and if set too high it could provide a financial windfall for some providers without benefiting the consumer. The committee concluded the most workable proposal is to keep the rate-setting structure in place but limit its use to providers that request a hike. Providers will now have an incentive to escape regulatory review if their rates do not change.

The recommended change would bring the rate approval process in line with the models used for public utility and some lines of insurance. Under those models, the rate review process occurs only when requests for rate hikes are made, and attention and resources are focused only on those companies requesting the increases. The recommendation still provides a check to ensure that large commercial companies, which cover such a large part of the market, cannot unilaterally raise prices.

The committee was reluctant to radically change the rates in Connecticut, recognizing the federal Health Care Financing Administration is now looking at its Medicare rates for ambulance services nationwide. The results of this negotiated rule making, as it is termed, are likely to become effective in 2001. HCFA decisions in this area are likely to have a significant impact, especially considering the percentage of ambulance transports in Connecticut that are Medicare clients. Thus, without being able to predict what HCFA will do, the committee determined it would be premature to alter rates at this point.

Rate review administration. Earlier this year, DPH, through a memorandum of agreement, shifted the administrative functions for ambulance rate review to the Office of Health Care Access. The health department transferred one fiscal support staff, and one year of funding of \$50,000 – almost all of which was to pay a consultant DPH had contracted with for the past several years to do the rate reviews.

The change to OHCA makes administrative sense, since review of health care capacity and financing is part of the health access agency's responsibility. However, the committee believes the arrangement between the agencies should continue to be an informal one for the present. Both DPH and OHCA indicate the transfer is an experiment to construct an improved rate review process. The first year in the health care access agency has not gone smoothly by many accounts. Because setting EMS rates was a new area for OHCA, agency staff needed to develop knowledge of the area. Also, based on its staff's observations, the committee concluded both the rate request forms and agency communication regarding provider submissions need to improve.

The health department has also established a number of subcommittees to advise DPH on various aspects of EMS, including a rate review subcommittee. However, the committee found that a few of the subcommittee's proposals have been implemented informally, without benefit of regulatory change. Some areas already restructured (like a statewide threshold for full rate review) appear to run counter to the current regulations and should have gone through the full regulations review process before adoption. The committee therefore recommends:

By January, 1, 2001, the financial summary forms and the full rate request filings shall be on forms issued by the Department of Public Health. Further, if the department needs additional information pursuant to Sec. 19a-179-21(f)(2) of EMS regulations, DPH must specify the additional the financial and operational information it wants.

The regulations review subcommittee established by DPH to examine the

rate-setting process shall review the regulations concerning rates and issue its report to the Department of Public Health by July 1, 2000. The health department shall seek to have the regulations revised through the normal regulation review process.

If forms could be revised to fit the needs of all providers and filled out easily, the revisions could: eliminate confusion about where to account for certain expenses on the form; reduce the number and extent of requests for additional information; and make the rate setting and financial submittal process more uniform, consistent, and fair. However, any change affecting the current rate regulations should be formally adopted, so that all interested parties will be informed and have input prior to implementation.

Certified Providers Charging for Non-Emergency Transport Services

Phase two of the EMS study called for an review of whether certified -- non-licensed -- providers should be allowed to perform and charge for non-emergency ambulance transports. Program review staff developed information that favored allowing certain certified providers meeting specific thresholds to do non-emergency work. However, the committee believes such action would be premature at this time, since no data exist on the number of non-emergency transports in a given town or on the potential impact expanding the scope of service for certain certified companies would have on the provision of emergency ambulance service.



Determination of Need (DON)

DON Process Should Be Streamlined

Findings Summary

- DON process is not a proactive review of overall market needs but an examination of an individual provider's need
- Standards used by DPH to make need decisions are unclear
- DON is used to determine need for purchase of a single vehicle
- Evaluation of what number of vehicles are needed is mostly based on a prospective estimation of what service needs will be or a demonstration of poor or inadequate service being performed
- Purpose of DON is to contain costs, but not all significant cost drivers are included in DON review
- The current DON process is cumbersome and time consuming
- Traditional government health care cost containment functions are increasingly being replaced by managed care organizations
- Very few other states have a determination of need process
- There is no retrospective review of market or how well need is met

Recommendation Summary

Streamline the determination of need process by allowing providers the opportunity to operate any number of vehicles and any number of branches they believe is necessary. New services and providers requesting to charge for the first time would still be required to go through an initial DON process to prove a need exists before operating.

Background and Analysis

A major regulatory tool used by DPH, in conjunction with rate setting, is the determination of need (DON) requirement. Historically, the medical market place has been thought of as imperfect and increased capacity did not always

result in a reduction in costs. The purpose of DON is to regulate the supply of health care facilities and equipment to contain utilization and costs.

An overview of the DON process was provided in phase one of the EMS study (May 1999). In this section, a brief description of DON components is provided followed by analysis and recommendations.

DON requirements. It is DPH's responsibility to plan, coordinate, and administer the state's EMS system. One of the enumerated duties of the health commissioner is to annually inventory all medical emergency service resources within the state to determine need and effectiveness of existing services (C.G.S. § 19a-177(3)). Taken together, the statutes appear to assign DPH the responsibility to monitor and evaluate the entire EMS system -- including gaps in service and the identification of poorly served areas. But, the department is only now beginning to inventory the system and has not yet completed any systematic statewide needs assessment. *Instead, needs of the system are brought to the department on an individual provider basis. Thus, the committee finds that, while DPH has the responsibility to assess the needs of the entire EMS system, in effect it reviews only small parts of the system on an ad-hoc basis.*

While DPH makes no proactive effort to determine need or effectiveness of services, no provider may engage in a "new or expanded" service without securing approval from the department through its DON process (C.G.S. §19a-180). What is considered new or expanded service is defined in regulation and includes:

- operating a new emergency medical transport service, non-emergency ambulance transport service, or invalid coach service;
- adding emergency medical vehicles, ambulances, and invalid coaches to operations (not replacements); or
- adding branch office locations.

While not technically defined as a new or expanded service, the regulations also require that any certified provider requesting to change from a non-charging to a charging service must go through a determination of need hearing.

Exclusions. An ambulance service already licensed to provide the basic level of service does not have to go through the determination of need process to provide advanced life support service. By regulation, any sale of an existing ambulance service is exempt from demonstrating need under certain conditions, which include the requirement that the entire company be purchased. Finally, any volunteer ambulance service that provides a new or expanded service and does not charge for the service is exempt from the determination of need process.

Factors. The factors to be considered by DPH in determining whether there is a need for new or expanded medical service are set out in regulation. No other defining criteria are spelled out in statute or regulation. The factors are:

- 1) population to be served by the proposed service;
- 2) geographic area to be served by the proposed service;
- 3) volume of calls for the previous 12 months within such areas;
- 4) impact of the proposed service on existing services in the area;
- 5) potential improvement in service in the area including cost effectiveness and response times;
- 6) location of the proposed principal and branch places of business in relation to health facilities and other providers;
- 7) need for special services, if applicable; and
- 8) recommendations of any applicable regional council.

The fourth factor has been the source of some controversy. Providers argued the factor called for a review of the business impact on existing providers from any new potential competition. The Connecticut Supreme Court in 1997 ruled against the providers on the grounds that the statute, upon which the regulation is based, requires DPH "to protect the public at large and not the interests of individual competitors." (Citing earlier cases).²

Analysis of DON Decisions

Program review staff examined all department decisions for DON over the last 2½ years. Table II-1 shows the outcome of the cases by year. Of the 23 cases that came before DPH, only two were denied, 16 were approved, and five were modified. Thus, 70 percent of all DON applications were approved, and if modified decisions are included, the approval rate rises to 91 percent.

Table II-1. Outcome of DON Decisions: 1997-1999				
	<i>Approved</i>	<i>Modified</i>	<i>Denied</i>	<i>Total</i>
1999 (6 mos.)	4	0	0	4
1998	6	2	2	10
1997	6	3	0	9
Total	16	5	2	23

Source: LPRIC analysis of DPH decisions

DON decisions were analyzed in terms of major issues, and the result is presented in Table II-2. Most DON activity involves applications for new vehicles (58 percent). This is also the area where all modifications and most denials occurred. (It should be noted that new vehicles mean additions to the current fleet, not replacement vehicles.)

Applications must be made to purchase any of three types of vehicles: ambulances; invalid coaches; and non-transport emergency vehicles. Ambulances are used for the transport of emergency and non-emergency patients at the basic or advanced life support level; invalid

² Med-Trans of Connecticut, Inc. v. DPHAS, 242 Conn. 152, 165 (1997)

coaches are used to transport non-ambulatory patients who are not stretcher-bound; and non-transport vehicles are typically vehicles that carry paramedics and often referred to as “fly cars”.

Table II-2. DON by Major Issue: 1997-1999					
	<i>Branch</i>	<i>New service</i>	<i>Charge</i>	<i>Vehicle</i>	<i>Total</i>
Approved	2	2	5	7	16
Modified	0	0	0	5	5
Denied	1	0	0	2	3
Total	3	2	5	14	24
Note one case involved two issues (23 cases and 24 issues)					
Source: LPRIC analysis of DPH data					

New vehicle analysis. Because most DON activity is in the area of new vehicles, program review staff analyzed each decision involving the addition of ambulances and invalid coaches to determine if any standards or defining criteria could be discerned. As noted above, the hearing officer is obliged to consider eight factors to determine whether there is a need for the requested service. Population, square mileage of service area, number of health care facilities in the service area, call volume, response time, regional council approvals, etc., were examined in each case.

While all those factors are usually mentioned in the decisions, committee staff analysis and interviews with DPH disclosed the most important items were the number of passed calls, the volume of calls, and response times (or other contractual performance measures, such as maximum wait times for invalid coaches). But even these factors were not subject to any consistent measure or benchmarking.

For example, successful applications for an emergency service ambulance indicated the number of passed calls (where the company had to refer the call to another provider) ranged from 2 percent to 25 percent of all calls. Furthermore, the most specific measure that could be derived was calls per vehicle per day (ambulance or invalid coach). This call volume evaluation is essentially based on prospective estimation of what service needs are projected to be or a demonstration of current bad or inadequate service performance over the previous year or more. In many instances, this measure was mentioned as a deciding factor.

Program review staff determined the calls per vehicle per day based on the available evidence, if it was not calculated in the decision. The ranges for calls per ambulance or invalid coach for certified and licensed providers, including the approved additional vehicle(s), are shown in Table II-3. There was a significant amount of variation in the call ranges that DPH ultimately found acceptable. In other words, because “need” is defined by providers, one town, for example, saw a need for a new ambulance with about one call every day, while another waited until the anticipated call volume was more than four calls a day. Both had their “need” approved by DPH and each received the additional ambulance.

Table II-3. Call Volume Analysis for Approved DON Decisions: 1997-1999		
	<i>Ambulance*</i>	<i>Invalid Coach*</i>
Commercial Providers	2.8 to 3.5	3.5 to 4.5
Certified Providers	.5 to 2.1	N/A
*Calls per day per ambulance or invalid coach including estimated calls for new vehicle Source: LPRIC analysis of DPH decisions		

Table II-4 shows what the call per day per vehicle outcome would have been if all the requested vehicles were approved. In the absence of a DON review, the range would have been 2.4 to 3.0 for ambulances and 2.4 to 4.6 for invalid coaches, (as compared to the ranges for approved applications shown in Table II-3 of 2.8 to 3.5 for ambulances and 3.5 to 4.5 for invalid coaches). Two conclusions may be inferred:

- the applications at the upper end of those ranges (3.0 for ambulances and 4.6 for invalid coach) were denied even though other applications were approved at a lower call volume; and
- even though the DON review prevented the low end of the range to drop further (a .4 drop in the case of ambulances and 1.1 for invalid coaches), it is unknown whether providers would actually buy the maximum number of vehicles requested. The process is one where providers may ask for more than they really need in order to get approval for a number close to what they want.

Table II-4. Call Volume Analysis in Absence of DON: 1997-1999		
	<i>Ambulance*</i>	<i>Invalid Coach*</i>
Commercial Providers	2.4 to 3.0	2.4 to 4.6
*Calls per day per ambulance or invalid coach including anticipated ambulances Certified providers received approval for all vehicles requested Source: LPRIC analysis of DPH decisions		

Thus, there is no actual standard for approval; individual cases vary and individual decision-makers can hold different standards. In addition, the committee concludes that decisions are made in the absence of any statewide needs assessment, but are provider based and are founded on negative factors such as past poor performance. Finally the committee finds that some services -- that could be significant cost drivers, such as upgrades to an ALS service -- are excluded from the DON process.

National standards or practices. Program review attempted to locate standards for the optimal numbers of vehicles as well as EMS providers. No national or industry standards could be found. Staff queried other states as to the number of ambulances and number of providers that each state has and calculated a measure of each based on each state's population. Table II-5 shows the results of the survey. While certainly not the only, or even the best, measure of a system, this gauge allows some type of comparison to be made among states.

The survey reveals that Connecticut is about in the middle (15 out of 33) with regard to the number of providers per 100,000 population. (No distinction was made between the number of volunteer versus commercial providers.) Further, the ambulance measure indicates the state is below average (17 in Connecticut versus 22.3 average) in the number of ambulances compared to other states and places eighth lowest out of 29 states that responded. While not all the states responded to the committee's survey, it nonetheless tends to indicate that Connecticut is not overloaded with ambulances. On the other hand, it does not indicate what the appropriate number is.

	<i>Providers per 100,000</i>	<i>Ambulances per 100,000</i>
Range	1 to 25	14 to 38
Average	6.5	22.3
Connecticut	6	17
Connecticut's Place/Total Responding	15 th out of 33	8 th out of 29
Ambulances include both emergency and non-emergency. Providers include volunteer, non-profit, and commercial. Population based on 1998 Bureau of the Census estimate. Source: LPRIC survey of other states 1999		

Complicating considerations. Two additional factors complicate the determination of need process. One is the fact that while a service provider must indicate the geographic area the service intends to operate in the need application, *nothing prevents the provider from going into another area or not serving the specified area once the request is approved.* This is especially true for invalid coach and non-emergency ambulance transport services. Also, while the primary service area responders (PSARs) are responsible for emergency services (9-1-1) in a specific territory, they may justify need for additional vehicles for other service areas if they provide backup to other PSARs.

Secondly, with regard to non-emergency transportation services there is a recognized statutory overlap between the oversight of invalid coaches by DPH and that of livery services by the state Department of Transportation. The General Assembly has tried unsuccessfully to resolve the overlap issue through the creation of a task force on the issue and legislative attempts to consolidate the responsibility of regulating non-emergency transportation under one agency.³ Several elements outlined below are important to understanding this dilemma:

- Non-emergency transportation may be provided in an invalid coach, falling under DPH's purview. DPH is mandated to license providers of emergency and non-emergency transportation for patients who are "*...injured, ill, crippled or physically handicapped person requiring assistance and transportation*" (C.G.S. § 19a-175 (2)).
- Non-emergency transportation may also be provided through livery services, regulated by DOT. The department issues two types of licenses for livery service

³ In 1995, two bills were introduced (HB 6484 and HB 6898) -- one would have transferred regulation of invalid coach to DOT and expand the authority of livery coaches, and the second would have restricted the use of livery vehicles. Both pieces of legislation failed. In 1996, the Human Services Committee sought to clarify the law by changing the definition of an invalid coach (HB 5567), but this effort also failed. Finally, in 1997 sHB 6905 sought to redefine "patient" and "invalid coach" but was not acted upon by the public health committee.

under C.G.S. § 13b-103 for general livery services or under C.G.S. § 13b-105 for specialized elderly and handicapped services;

- DSS, one of the largest purchasers of non-emergency transportation services, treats wheelchair-accessible livery vehicles and invalid coaches as providing the same service;
- In addition to the restrictions imposed by statute (e.g., patients must be non-ambulatory, going to or from a medical appointment, etc.), the Attorney General has attempted to make a distinction between invalid coach and livery services by interpreting legislative intent. It was concluded that invalid coaches are to be used for people who need medical assistance. Livery services should be provided to people who may need physical assistance but not medical assistance during transit; and
- In spite of this interpretation, DPH only requires invalid coach drivers to have certification in CPR. This in effect creates a rather slender, if any, distinction between the two types of services.

The difficulty from a DON perspective is two different agencies are trying to oversee and project need for essentially the same market. There are indications the standards against which invalid coach and livery service providers are evaluated may differ even though they are attempting to serve the same customer base. In one DPH case, a livery service provider was denied invalid coaches, even though the provider was performing on average over six calls per day per vehicle -- well above the 3.5-4.5 range cited above for other invalid coach providers. Though individual cases can vary, DOT staff indicated the acceptable average call volume range for livery service vehicles is approximately 12 calls per day per vehicle.

Timeliness. *The process for DON can be cumbersome and time consuming. Program review staff calculated the time it takes to complete a DON decision involving additional ambulances or invalid coaches:*

- For certified providers, who all received their requested ambulances, the time elapsed between application submittal to final decision ranged from three to seven months with an average of nearly five months.
- For commercial providers, the time elapsed between application and final decision ranged from about five months to over 1½ years. The average was 422 days or over one year. Many of these DON cases involved several hearings and were appealed to the commissioner, which contributed to the longer time frame.

The lengthy process and slow decision making may discourage some providers from coming forward. In its 1991 review of Connecticut's EMS system, the National Highway Traffic Safety Administration (NHTSA) stated, "while there is a certificate of need process, it appears to discourage the development of new and improved services." It can be difficult for some providers to make business decisions when it takes over a year to get a result.

Lessening of Need Determination in Other State Agencies

The Office of Health Care Access (OCHA) and the Department of Social Services (DSS) implement a certificate of need (CON) program for certain aspects of the health care market that operate like the DON requirement in the Department of Public Health. *However, the recent trend has been to raise thresholds that trigger a CON review, streamline procedures, or eliminate some services from CON review.*

Office of Health Care Access. Similar to DPH's determination of need process, OCHA's program reviews capital expenditures by health care facilities and the institution of new services. OCHA also reviews the purchase of major medical equipment, termination of services, and transfer of ownership issues.

An examination of OCHA's statutory mandate and practices discloses a trend toward eliminating or reducing the need for regulatory oversight of the health care market. The legislature has increasingly shifted OCHA's role from cost containment to developing a planning capacity to assist in establishing goals and priorities that promote citizen access to a variety of health care services.⁴ In recent years, OCHA has greatly simplified and streamlined its CON process. For example, it has:

- eliminated CON requirements for 12 categories of facilities;
- instituted an exemption process for nonprofit facilities that fill a service need identified by another state agency; and
- created waivers for CON review for certain replacement equipment.

Department of Social Services. DSS maintains a CON process for, among other things, the capital expenses for nursing homes. The threshold for triggering a CON review was raised in 1997 (PA 97-2). A CON application is now required only for capital expenditures in excess of \$2 million or a capital expenditure exceeding \$1 million and which increases the facility by 5,000 square feet or 5 percent of existing square footage. Prior law required facilities to obtain a CON from DSS for any capital expenditure exceeding \$1 million.

Thus, the committee finds a lessening of the regulatory thresholds of determining need. The committee believes this is largely because traditional government cost containment efforts have been somewhat ineffective and are increasingly being replaced by managed care organizations.

Very Few Other States Have a Determination of Need Process

Of the 36 states that responded to a program review survey, only 13 had some sort of DON process at the local or state level. The predominate area covered by a DON process in other states was for new services. *No other state regulated the number of vehicles a provider operated.* In addition, four of the 13 states allow, but do not require, local governments to engage in a DON process.

⁴ PA 98-150

No Retrospective Review of Market or Individual Provider Needs

After receiving authorization for vehicles there is little review to see if they are being used and for what period of time; nor is there any check to ensure that areas specified in the application are the areas actually being served. There is no revocation of authorization for permits or vehicles not being used.

A review of the number of vehicles authorized by the department for the last five years versus the actual number of vehicles reveals the following:

- For commercial services, the percentage of authorized vehicles in excess of the actual number ranged from 6 to 18 percent.
- For certified services, the percentage of authorized vehicles in excess of the actual number ranged from 2 percent to 8 percent.

Recommendation

Based on the above findings, the Legislative Program Review Committee recommends the determination of need process be streamlined by allowing providers the opportunity to operate any number of vehicles (i.e., ambulances, invalid coaches, and non-transport emergency vehicles) and any number of branches they believe is necessary to render adequate ambulance or invalid coach service. New services (for ambulance and invalid coach) and services requesting to charge would still be required to go through an initial DON process to prove a need exists before operating.

Providers shall continue to notify DPH of the number of vehicles they have in service each year and receive a permit for each vehicle in use. The department may consider the appropriateness of the number of vehicles when analyzing any application for a rate increase. If, during the normal course of a rate review, the department finds an excessive number of vehicles and branch offices, it may revoke authorization for those vehicles and disallow the expenses related to those vehicles and branch operations for rate determination purposes.

Rationale

Protection from excessive costs.. The primary purpose of a determination of need process is to contain costs. The patterns of health care delivery and reimbursement, though, have changed dramatically over the past several years. Managed care providers have altered the landscape by scrutinizing each aspect of the health care delivery system, reducing the need for strict government oversight. Other state agencies (e.g., OCHA and DSS) have recognized this fact and have scaled back their management of the health care market.

There are significant cost factors, such as personnel expenses, that could be used currently by providers to inflate expenses if they wished to, which are not covered by DON. But there is little benefit to be gained in stocking up on vehicles that cannot be used just to inflate costs. Without calls, no one will pay for them. As indicated above, some providers maintain a number of permits in excess of the actual number of vehicles. Some of this excess may be due to providers waiting for vehicle delivery. But in three of the last five years the permitted number exceeded the actual number of vehicles by over 8 percent (reaching a high of 18 percent) for commercial providers. If vehicles were needed to raise costs (and rates), then one would expect all permits to be filled.

Medical transport providers cannot create markets. There are only so many customers and so much reimbursement that a provider can rely upon -- the overwhelming majority of which come from government or managed care payers. This is the ultimate determinate of how much capital a provider is willing to invest in vehicles and branch operations. Therefore, the need for vehicles and how they will be paid for is a business decision that should be left up to the individual provider to determine.

Streamlining the current DON process. Without DON if abuse is suspected, it may be scrutinized during the rate review process, *as all expenses can be now*. In the past, almost all requests have not been for great expansions. Except in a few instances, most providers have asked for an additional one to five vehicles. Most DON requests have been approved; only two cases in the last 2½ years have been denied outright.

Projecting need is a very inexact science; different hearing officers will use different standards. Under the current system, the hearing officer attempts to project what will happen in the health care market or review a case of poor service to determine if need exists. Further, a defacto practice of requiring a record of bad service as a means to get an additional vehicle is perverse. In addition, there is no follow-up after a decision is made. A major difference offered in this recommendation is that there will be an actual record of use of the additional vehicle -- an indisputable record of need.

New providers. Under the recommendation, new providers will still be subject to the DON process to provide some market stability. It has been stated that the non-emergency and invalid coach transport market subsidizes a portion of the emergency market. A benefit may accrue to limiting the entrance of new providers, based on a demonstrable need, rather than allowing anyone to provide service at temporarily discounted rates which could negatively impact the provision of emergency services.

Data Collection

EMS Data Collection System Needs to be Implemented

Findings Summary

- Since 1975, the statutes have required that a data system be put in place – 25 years later there is no data collection system
- Absent a system, there are no basic descriptive information on Connecticut's system, and no data to evaluate the system
- Lack of consensus within EMS community appears to have stymied the implementation of a system
- Several attempts were made at initiating a system but they have been piecemeal approaches, and largely unsuccessful
- Connecticut is one of a minority of states without a comprehensive data collection system
- Costs have been an obstacle in the past, but DPH may not have looked for the most cost effective methods to implement a system
- A substantial number of other states still rely on paper transmission for part of its data collection efforts

Recommendation Summary

Require DPH to collect, maintain and report on data contained on ambulance run forms. Annually, DPH would report on the data by town and grouped by urban, suburban and rural categories.

Background

One of the biggest gaps in the EMS system in Connecticut is the lack of a data collection system to measure how the system is performing. Since 1975, the statutes have required (through P.A. 75-112) that there be a data collection system in place. However, almost 25 years later there are no comprehensive data on the system, including key performance indicators like types of calls, passed calls (i.e., where the responder cannot take the call), response times, or

patient outcomes. Even basic information like the number of emergency and non-emergency calls and the services that respond are not routinely collected or reported. There are a number of reasons for the continuing lack of an EMS data collection. They are explained below.

Unclear statutes and regulations. The statutes call for the commissioner of DPH to “develop or cause to be developed a data collection system which shall include a method of uniform patient record keeping. . .” (C.G.S. § 19a-177(8)). However, the statutes do not indicate where or how the data should be kept. The EMS regulations specify that records on each request for emergency medical service be maintained at the provider’s location for at least seven years. The records, which the regulations specify contain at least 10 pieces of information, including response time and patient treatment, must be available for OEMS inspection. However, the records are not required to be sent to DPH nor are the providers required to report on them.

Data not examined. While the regulations give DPH authority to inspect provider records, *there was no state effort to examine those data until recently.* Beginning in March 1999, a DPH staff person assigned to conduct vehicle safety inspections began examining the provider records. The results are being included as part of the vehicle inspection reports, but one staff person is able to review only a small sample of records. Further, *site inspection of records is an inefficient way to examine data, and comprehensive results are not systematically recorded or maintained.*

No consensus exists. The EMS system is comprised of many players – DPH, commercial ambulance companies, volunteer and nonprofit companies, towns, hospitals, physicians, and dispatch centers. The EMS community appears to strive for decisions by consensus. But there has been -- and still is -- no consensus among the parties on how a data collection system should be implemented. What might be a good method for one segment of the EMS community might be too costly or time-consuming for another. *Thus, in an attempt to find a method that suits everyone, nothing is accomplished.*

Even among EMS regional councils, there is no agreement. Table III-1 on the following page illustrates the variation in proposals dealing with data collection. While most regions followed the state EMS plan, which called for a full-time data systems manager, there continue to be differences in the regional plans dealing with implementation, method and time frame.

Table III-1. Data Collection Recommendations Contained in Regional EMS Plans

<i>Region</i>	<i>Implementation</i>	<i>Method</i>	<i>Time frame</i>
Northwest	Manager to work with data committee. Develop an RFP to design and implement an EMS data system at state level	No recommendation; Suggests the bubble form at a certain cost or electronic at higher cost	Five years for an electronic system; two years for the bubble sheet
Eastern	Regional approach: This region states a clerical person is needed in each region (\$45K a region) plus \$10k in equipment for each region	Suggest \$3 million for hardware, software and training. No "method" suggested	No time frame established
South Central	No recommendations on implementation Regional plan indicates "support state efforts"	"support state efforts"	No time frame
Southwestern	No implementation recommendations – continue to send representatives to task forces, working groups	Work with DPH and EMS Advisory Board during FY 99-00 to identify funding source	No time frame
North Central	Change statutes to require EMS providers to submit data to DPH in format the agency prescribes	Allocation of up to \$3 million with "carry-over" authority	No time frame
Source of Data: Regional EMS Plans			

Prior attempts. *There have been several attempts through the years to initiate a data collection system but none have been successful and were subsequently abandoned.* For example, just last year a pilot program was initiated where computers were installed at two rural hospitals with the aim of having individual emergency medical technicians (EMTs) enter the data at the hospital site. However, the project was terminated because it was too time-consuming and EMTs had not been trained in entering data into the computer, and, therefore, did not use the system.

Securing adequate resources to finance and staff a data collection system has been cited as a problem. However, *some of the proposals for data collection may not have been reasonable in terms of costs.* For example, the fiscal note attached to the 1999 proposed legislation, based on DPH information, estimated costs of about \$4 million, with \$2.5 to be borne by providers and towns for computer equipment on individual vehicles, an expensive approach.

DPH has diverted its focus for establishing a comprehensive EMS data system to other data mandates, but in a piecemeal fashion and without oversight on outcomes. For example, in 1992, in response to NHTSA findings, a Commissioner's Committee on Trauma (CCT) was appointed and charged the committee with developing trauma regulations.

The trauma regulations, which became effective in 1995, call for specific data elements to be collected on EMS but only related to trauma cases. After federal funding supporting the trauma data system expired, the data collection collapsed. The Connecticut Hospital Association, which had been maintaining the data, indicates it cannot continue the system without continued funding. More than \$500,000 has been spent on the trauma registry, and while a couple of reports were produced, EMS participants questioned the validity of data contained in the reports. No reports on the trauma data have been issued since 1998.

Parties involved in the system indicate that some providers question the need for a data collection system. *The failure to date to produce any data useful to providers reinforces that negative response.*

Why Data Collection is Necessary

Reasons for a data collection system were listed in phase one of the study. In summary, they are:

- Connecticut does not collect the data needed to provide even basic descriptive information of the system, such as the number of 9-1-1 calls requiring EMS, what towns they were in, what types of calls, or what treatment was required
- Commitment is needed from the towns that they will be monitoring their providers; towns cannot adequately monitor without data
- Accountability cannot improve system without measuring and evaluating provider performance; bad performance will not come as a surprise to towns if monitoring is ongoing
- Providers may not have the data they need to examine their own performance and work toward improvement
- Need to evaluate what works in EMS and what does not. For example, if data show no difference in outcomes of a certain category of patients using BLS versus those where ALS was sent, the need for ALS for that type of call should be considered
- Justification for allocation of resources to EMS

Flexibility in Approach

In phase one of the EMS report, the program review committee recommended that towns be responsible for collecting data from EMS providers and to report annually to the Department of Public Health. The recommendation was drafted into proposed legislation, but faced intense opposition. The bill was amended to have the providers furnish the data, with towns using dispatch centers, known as public safety answering points (PSAPs), where that was mutually agreeable. Some parties still objected and the bill did pass.

Since the 1999 session, and the failed proposal, program review has consulted many parties to determine the best way to collect, maintain and report on EMS data. The main thrust of their comments follows:

- The data collection *method* has to be *flexible*;
- The pieces of data collected have to be *uniform* (all providers must report the same pieces of information). The “run form” used for each ambulance call may be best way to do this;
- The purpose of data collection *cannot be seen as punitive*; but there must be an evaluation component to it;
- There has to be *expected compliance* and *consequences* if providers don’t comply;
- It *cannot* be too *costly*;

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- There have to be ways to *check the validity* of the data;
 - Data must be *measured in fractile response times*, not average times;
 - Data must *measure* the performance of *all segments* of the system;
 - All parties must be using a universal measurement of *time*;and
 - There must be a realistic *time frame* for compliance.

Taking these factors into consideration, the program review committee recommends the following:

By January 1, 2001, the Department of Public Health shall collect and maintain data from the ambulance run form. Data points required to be submitted to DPH shall be uniform by all EMS providers. Providers shall submit copies of the run form information monthly via a method that accommodates needs of both providers and the department. The trauma reporting requirements shall be consolidated on this run form to satisfy both general EMS and specific trauma data fields.

By March 2002, and annually thereafter, DPH shall report on the following information which shall include, but not limited to:

- **total number of EMS calls;**
- **number of calls requiring each level of service;**
- **number of refused calls and number requiring mutual aid response;**
- **names of service provider for each level of service; and**
- **fractile response times for each level of the EMS system -- dispatch, first response, basic life support, and advanced life support – using common definitions of response times established by the Department of Public Health. Data may be subject to audit by DPH, as the department deems necessary.**

The report shall compile the information and report it in an aggregated format by town – with towns grouped according to urban, suburban, and rural categories – and make the information publicly available, including through DPH’s web site. The department shall notify the Public Health Committee of the report’s availability.

If a provider does not comply with the submission of required data for a period of six months, or if DPH has cause to believe the provider knowingly and intentionally submitted incomplete or false information, DPH shall notify the provider and the towns served by the provider that compliance is mandatory. If full compliance is not achieved within the following quarter, DPH shall hold a hearing at

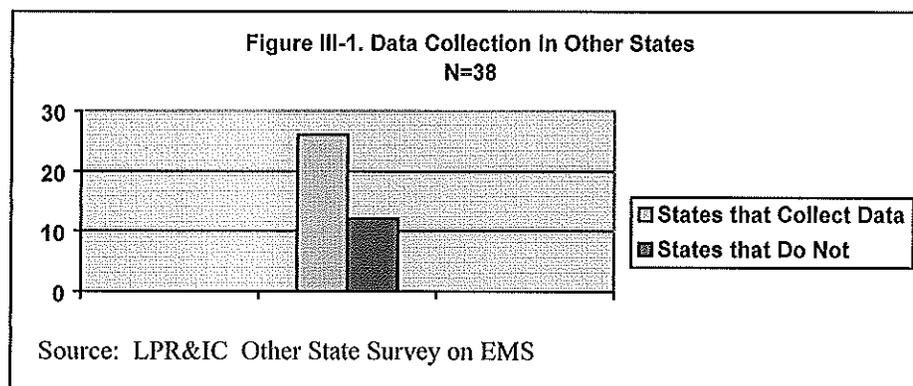
which the provider would be required to demonstrate why the Primary Service Area assignment should not be removed.

In addition to EMS providers, each public safety answering point (PSAP) shall, beginning January 1, 2001, submit quarterly aggregated data on its EMS calls to the Office of Statewide Emergency Telecommunications (OSET), within the Department of Public Safety. The data submitted from PSAPS shall include all 9-1-1 calls where a medical emergency is involved. The aggregated data shall report elapsed time for dispatch -- from the time the call was received to the time the call was dispatched or transferred -- and shall be reported in fractile response times.

Rationale and Implementation

The program review committee believes responsibility for EMS data collection should be at the state level for a number of reasons. Designating EMS data collection and reporting as a state level function offers the best opportunity for quality assurance of the data, and the most effective use of staffing and equipment resources necessary to perform the duties. Further, if the data collection function for EMS is assigned to a single place, an implementation date of January 1, 2001 is more easily accomplished. Finally, since DPH has overall regulatory responsibility for the state's EMS system and more specifically a statutory mandate for developing a uniform data system, it is logical to conclude DPH carry it out.

Other state experience. The majority of states receive some type of EMS performance data; Connecticut is one of a minority of states that still does not. Program review surveyed all 50 states on their EMS systems. The results of the states responses regarding data collection are illustrated in Figure III-1. Thirty-eight states answered the question, and 26 states -- more than two-thirds of respondents -- indicated they received EMS performance data. Thus, most states have seen the value in being able to monitor their systems; Connecticut must do the same.



DPH as designated agency. In Connecticut, the Department of Public Health is the most appropriate state agency to collect and compile EMS data since it has regulatory authority over the EMS system. However, before any data collection system can be initiated, DPH must

ensure that all areas of the state have a designated responders as required by regulation. (See findings and recommendations in Chapter V).

The committee considered requiring public safety answering points to collect and report EMS data, but decided against that option for several reasons. First, in response to the program review survey of public safety answering points, the committee found that:

- 62 percent of PSAPS said they dispatched the ambulance, but more than one-third did not;
- only 54 percent of responding PSAPs indicated they dispatched paramedic level services; and
- even lower percentages could report when ambulances or paramedics arrived on the scene.

Thus, a substantial percentage of PSAPs would not have data needed to fulfill complete EMS reporting. Of the PSAPs *not* currently collecting response time information, 93 percent indicated they would *not* have the capability to collect and compile that data. To require PSAPs to collect and report complete data for all EMS providers is likely to be seen as an unfunded mandate for dispatch centers.

Dispatch centers. Requiring PSAPs to collect and report data for the entire EMS system, as discussed above, seems an unworkable proposal. However, the program review committee believes it is necessary to collect performance data on the dispatch segment of the EMS system. This is an area where no data are collected now, and excludes an important time element – from the time a call is received until dispatch or transfer.⁵

The committee concluded PSAP data should be collected by the state Department of Public Safety (DPS). Because of agency jurisdiction -- public safety answering points are under the purview of DPS, Office of Statewide Emergency Telecommunications (OSET) -- it makes administrative and organizational sense to have PSAP data reported to OSET. Data on fire responses are already required to be submitted by local fire departments to the Department of Public Safety, Office of the State Fire Marshal, but those data do not measure dispatch information either.

Further supporting dispatch center reporting is a regulatory mandate (§28-27-10) that all 9-1-1 calls be answered at the PSAPs within 10 seconds. The committee determined that performance data should be collected to assess how well dispatch centers comply with this mandate as well as report on how quickly the centers dispatched the appropriate responders. While not part of the recommendation, program review believes the PSAPs should use the same number on the data form as the responders use on the run form. If a unique identifier is used for each call, there will be a way to track the entire call if necessary.

⁵ Even with data from the PSAPs and the EMS providers there will be an incomplete EMS time picture for those towns where the PSAPs transfer an EMS call to another dispatch center (like a local fire or police department) rather than dispatching the EMS call directly.

The mandate that dispatch centers begin reporting by July 1, 2001, would apply only to EMS calls, because of the limits in the committee's scope of study. However, if OSET and the centers agreed, dispatch data could also be collected for fire and police.

Data transmission. Many states still rely on paper for some transmission of data. Of the 26 states who collect data at the state level, 14 states responded to the committee survey that they rely on paper (including scannable bubble sheets) as the *primary* source of transmitting data, while five states responded they use electronic methods *primarily*. Seven states indicated they used both methods.

In light of the number of states still using a primarily paper-based system, the committee determined there should be no mandate, or even expectation, that all providers transmit data electronically immediately. Many Connecticut providers already use computerized data from the run form for their own reports and/or for billing purposes. A growing number are obtaining computers with Internet access. Electronic transfer by all providers will be likely in the near future, but a mandate for that is premature now. The important element is that the data reported are uniform, comprehensive for all types of calls, and reported by *all* providers and segments of the system.

In keeping with the recommendation, the program review committee concludes that the collection of trauma data should be consolidated with the data collected on the entire pre-hospital system so that all EMS cases can be evaluated. Attempts to revive the trauma registry or maintain the data separately will only divert resources and attention away from establishing an overall data collection system.

Equipment and staffing. There will be start-up and equipment costs with any data collection system. Program review estimates those to be no more than \$250,000, including the first year of staffing.⁶ The one-time costs include:

- About \$50,000 for a consultant to assist DPH in determining equipment and software needs as well as designing a form that captures uniform data. The committee contacted a vendor that has established EMS data systems in 35 states or counties, and a preliminary, informal cost estimate for developing Connecticut's system was well under \$50,000. The committee believes this would be money well spent. Contracting with an expert experienced in designing EMS systems in many other jurisdictions might avoid both design pitfalls and expenditures on unnecessary equipment or methods, and help parties in the system reach a decision on data needs quickly.
- Approximately \$15,000 for a high volume, high speed scanner to scan transfer the data on the paper run form to a computerized format. Program review estimates the scanner will need to scan about 1,000 documents a week, and therefore a heavy duty scanner should be purchased. DPH has developed specifications on a request for proposal (RFP) but the RFP

⁶ This is a far more reasonable estimate than the \$3 million start-up figure contained in the fiscal note for the data collection proposal contained in the EMS bill during the 1999 legislative session. These high costs were associated with electronic recorders or computers that were to be placed in every vehicle for recording times. The hefty expense note associated with the bill contributed to its demise.

was issued late in 1999, and DPH did not know what the bid amounts would be. The cost figure used here is an estimate from the same national EMS vendor cited above.

- The committee estimates no additional costs for the purchase of computers. DPH should already have an adequate number computers to use for the data collection efforts. DPH now has possession of the computers that had been placed at the hospitals for the pilot program last year, when that program failed. DPH will be responsible for maintaining state computer access to providers to submit their data electronically, but providers must provide their own computers at their site, or submit their forms via paper.
- Approximately \$25,000 for initial purchase (and \$25,000 a year after that) for paper run forms. Approximately 75,000 forms a year should be purchased, although it is likely that at most only 50,000 will be needed.

Ongoing Expenses

Staffing. The committee believes EMS data collection functions can be performed well with two additional personnel hired at DPH. Staffing costs for the first year are estimated at approximately \$110,000. Yearly increases should be limited to raises in salary and fringe awarded through state employment contracts. The positions, associated cost estimates, and proposed functions are outlined below:

EMS Data Collection Project Manager (hired at the mid-range salary for EMS Field Training Coordinator)

Salary -- \$51,882
Fringe -- \$20,723 (@ .40)
Total = \$72,605

Data Entry Operator (hired at the mid-range salary level for Data Entry Operator 1)

Salary-- \$26,883
Fringe-- \$10,753 (@ .40)
Total -- \$37,636

Program review proposes functions to be performed by the project manager include:

Project Manager

- Ensuring the run forms are sent in monthly by each EMS ambulance provider in the state. DPH should probably set a staggered schedule for submissions so that not all forms (especially those needing scanning) will come in at the same time.
- Ensuring the data on the forms appear complete, correct, and valid. Where problems appear, the project manager must work with the providers to ensure completeness, and validity.

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- Conducting audits to ensure the validity of the data. Outside sources, such as the PSAP data, should be used to verify.
 - Compiling data into an annual report (by March 2002) by town and provider so that performance of EMS providers may be evaluated.
 - Coordinating with OSET to obtain and consolidate the data from the PSAPs in order to ensure the report incorporates data on all segments of the pre-hospital care system -- from time the 9-1-1 call is answered to the time the patient is delivered to the emergency room.

Program review envisions this position in the EMS systems development area of DPH, and not in the regulatory bureau. The committee believes the assignment of the position is important because it will signal to the EMS community that emphasis will be on development and assistance rather than immediate compliance and enforcement. Until providers, towns and the public see the benefits -- and not just the anticipated burden -- of an EMS data system and the information it can furnish, provider compliance may be a problem.

In order to obtain compliance, DPH must demonstrate a willingness to work with providers whose data show that improvement in service is needed. The DPH project manager will have to work with providers and towns to prove that cooperative corrective action can occur over a realistic period of time.

At the same time, the recommendation makes clear that data collection is a requirement, and gives DPH authority to take punitive measures if a provider does not report data or submits incomplete or false records. The ultimate purpose of the data is to evaluate provider performance. At some point towns must be able to use the data for establishing contracts, improving service, and/or terminating providers who cannot correct poor performance. To construct the foundation for such an evaluation system, there must be universal and honest reporting. It will be the project manager's duty to ensure this.

Financing. The program review committee believes the approach to data collection outlined above impose realistic cost and staffing demands. However, the proposal will still require funding not allocated currently.

Therefore, the Legislative Program Review Committee recommends that, beginning July 1, 2000, an allocation of no more than \$250,000 annually from the surcharge on phone lines that cover the 9-1-1 system be made to finance data collection, maintenance and reporting for the emergency medical system.

The rationale for the financing recommendation include the following points:

- A dedicated funding stream already exists through the surcharge on phone bills for the state's 9-1-1 system.
- There is more than adequate funding available through the 9-1-1 surcharge. Each penny of the individual assessment generates about \$300,000 annually. Thus, the recommendation will use less than one cent of the surcharge.

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- The surcharge produces more than what can be spent on its original purpose – hardware for the 9-1-1 centers; grants to regionalize dispatch centers; training for dispatchers; and operations at the Office of State Emergency Telecommunications.
 - It is logical that a surcharge that pays for the state’s 9-1-1 system should be used to finance data collected on EMS services generated from the system.
 - Establishing another dedicated source of funding, such as a “Dollar for Life”-- which adds a \$1 fee onto a driver’s license or car registration fee and which some have suggested as a financing mechanism -- would require new or added administrative functions to implement such a fee.

The recommendation calls for a cap on the amount that may be allocated from the 9-1-1 surcharge that would go to EMS data collection. In order to safeguard the integrity of the 9-1-1 financing, a more formal mechanism may be necessary. For example, the public safety department (which oversees OSET) and DPH (which would administer the EMS data collection system) could sign a memorandum of agreement regarding how the funding will be used. The memorandum of agreement could be approved by the Department of Public Utility Control (DPUC), which oversees the assessment and expenditures of the 9-1-1 surcharge. This would provide written assurances that allocations will be spent on purposes that DPH and DPS agree to and DPUC approves as appropriate.



Emergency Medical Dispatch (EMD)

EMD Should be Available to All 9-1-1 Callers Requiring Emergency Medical Assistance

Findings Summary

- Emergency medical dispatch (EMD) is a proven technique used to save lives and promote optimal allocation of limited EMS resources
- Serves as an important link in the chain of survival for those needing emergency medical assistance, especially in cases of cardiac arrest, profuse bleeding, shock, or respiratory problems
- Endorsed by many recognized national emergency medical service organizations and supported in Connecticut by several EMS and telecommunications groups
- Mandate encouraged by Connecticut's Department of Public Health
- Uneven use and availability throughout the state currently; only about half of the 9-1-1 communications centers in the state provide or have access to EMD
- Several communication centers have only partially implemented EMD quality assurance components and may risk increased liability
- Already some public expectation that basic first-aid instruction will be provided over the phone in a medical emergency
- State currently provides regulatory oversight of 9-1-1 communication centers and training for telecommunicators. EMD is a logical and accepted extension of that training.

Recommendation Summary

The committee recommends EMD be available to all 9-1-1 callers requiring medical assistance, through 9-1-1 communication centers or other

dispatch centers having the appropriate qualifications. A four-year phase-in of this requirement is recommended, along with state support of funding for specialized dispatcher training.

What is Emergency Medical Dispatch?

Increasingly, public safety telecommunications involves more than simply answering the telephone, getting an address, and dispatching a vehicle. This area of telecommunications has evolved into a distinct professional field requiring specialized training and the application of specific knowledge and skills. The practice of emergency medical dispatch -- that is the management of requests for emergency medical assistance -- is considered a specialty of public safety telecommunications and requires an advanced level of training. The goal of EMD has been simply stated as giving the caller, "the right help, in the right way, at the right time."

Basic components. Two basic concepts form the basis of EMD; *tiered or priority response* and *pre-arrival instructions*. Tiered response (or priority dispatching) involves gathering information to classify a problem and activating the appropriate response, while pre-arrival instructions involve giving first-aid instructions via the telephone.

Priority response. The primary objective of priority dispatching is to send the most appropriate resources to a call. Proper caller interrogation will allow the dispatcher to differentiate between minor and severe situations. According to the National Highway Traffic Safety Administration, as the field of EMS developed it became evident the dispatcher typically had no uniform or consistent method of caller interrogation or response decision making. The result, asserts NHTSA, was the over-utilization of advanced life support (ALS), under-utilization of basic life support (BLS), and inappropriate use of first responders.

An essential element of EMD, then, is the matching of the appropriate vehicle configuration as well as the appropriate response mode with the level of assistance needed by the victim. The proper configuration refers to the type, capability, and number of response vehicles, while the mode refers to the appropriate driving technique (such as lights and sirens).

Pre-arrival instructions. The evolution of EMD recognizes the importance of communications personnel providing rapid access to EMS services. The dispatcher is responsible for making initial contact with the public and determining the appropriate response. They have sometimes been referred to as the "first, first responder." Consequently, EMD can have a positive impact in many medical emergency situations. For example, according to the American Heart Association, cardiopulmonary resuscitation (CPR) should be started within four minutes of cardiac collapse, as the survival rate is four times greater than if the victim received CPR after that point. In the EMS literature eight minutes has been discussed as the ideal response time for a basic life support ambulance responding to a cardiac arrest. In addition, it takes time for an EMS crew to get to the patient, which some studies suggest is an average of 1½ minutes. So, even the best response times often exceed the physiological ideal to ensure patient survival. In many situations, then, an emergency medical dispatcher providing first aid instructions, including CPR, can fill the void.

Standard protocols. NHTSA has noted that historically EMS systems were lacking in appropriate interrogation methods and many communications centers giving medical advice operated with minimal or no medical oversight or direction. In response to this situation, EMD protocols were developed in the late 1970s and early 1980s to provide communications personnel with sound medical direction. There are several commercially available EMD programs, as well as locally developed programs, that provide planning, organizational assistance, training, and an Emergency Medical Dispatch Protocol Reference System (EMDPRS).

The reference systems (EMDPRS) are at the heart of EMD. They represent a standard set of questioning protocols (often referred to as "card sets") that enable the dispatcher to properly and expeditiously interrogate the caller to identify:

- the level of medical need in order to send appropriate EMS resources;
- situations that might require pre-arrival instructions such as cardiac arrest, choking, shock, profuse bleeding, respiratory problems, etc.; and
- important information the responding crew may find helpful upon arrival and information regarding scene safety for the patient, bystanders, and responding personnel.

To be effective, the dispatchers ask questions and give instructions that are predetermined, delivered in a highly structured manner, and designed to be given over the phone to a third party. These medical protocols are dispatcher prompts that appear on flip cards or a computer and assist in providing pre-arrival instructions.

EMD protocols have developed in several different ways. Not all systems have been created with the involvement of medical oversight, contrary to recommendations in the EMD literature. EMD program status, according to NHTSA, ranges from in-house developed protocols, based upon locally identified needs, to professionally developed and marketed systems. The most notable commercial systems include: Medical Priority Consultants, Inc. (MPC); PowerPhone, Inc.; Association of Public-Safety Communications Officials, Inc. (APCO); and National Communications Institute (NCI). The State of Colorado currently maintains a reference system in the public domain and is available at low cost (or no cost), but has no litigation protection.

NHTSA's national curriculum. NHTSA recently joined with the American Society for Testing and Materials (ASTM) and the National Association of Emergency Medical Services Physicians (NAEMSP) to update its EMD national standard curriculum originally developed in the 1970s. Included in the NHTSA material are instructor and student guides as well as a manager's guide. Some commercial systems are based on the NHTSA materials. These guides, however, do not include a specific set of protocols (or card sets) but focus instead on EMD training and system development.

Agencies may use NHTSA's uniform standards to develop or select an emergency medical dispatch program. The 24-hour course is designed to prepare already qualified

telecommunications personnel to perform EMD and can train them with any protocols whether locally or commercially developed. It does not require dispatchers to have any emergency care training or experience, except for having completed a course in CPR. NHTSA also provides guidance on the selection of EMD personnel, quality assurance measures, and public education critical to a successful EMD program.

Standards and Endorsements

Even though EMD is a relatively new profession, several well-recognized organizations have attempted to establish some common standards and define acceptable practices for the provision of EMD. Many associations have advocated emergency medical dispatching as an essential component of all dispatching centers.

EMD development and use has been endorsed by several professional organizations including: National Association of State EMS Directors, National Highway Traffic Safety Administration, American Heart Association, National Association of Emergency Medical Services Directors, and National Association of Emergency Services Physicians. In Connecticut, the state EMS Advisory Board, Enhanced 9-1-1 Commission, and EMS Medical Advisory Committee have recommended the use of EMD. In addition, at the September 9, 1999, program review committee public hearing regarding EMS services, several speakers representing commercial and non-profit ambulance agencies, as well as an organization representing dispatch centers in Connecticut, spoke in favor of EMD. No one spoke against it. The Department of Public Health endorsed the mandatory provision of EMD.

Provided below is an overview of the components and standards that address EMD system design advocated by these professional organizations. They include:

- formal training, after appropriate selection, and continuing education of each dispatcher, based on the NHTSA national curriculum;
- certification of personnel, through government or professional organizations specializing in EMD;
- utilization of a written, medically approved Emergency Medical Dispatch Priority Reference System (EMDPRS) that includes: systematized caller interrogation questions; systematized pre-arrival instructions; and protocols matching the dispatcher's evaluation of injury severity with vehicle response mode and configuration;
- continuous quality improvement and quality assurance systems need to be in place to provide for periodic auditing and evaluation of the assistance provided and allow for a continual cycle of improvement; and

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- provision of medical control and oversight by a medical director to ensure actions taken are medically appropriate, and to provide assistance in the management and accountability for the medical aspects of the EMD program.

What Are the Benefits of EMD?

Highlighted below are some of the many benefits, cited in the EMD literature, which can result from a properly implemented EMD program.

Potential to save lives. As discussed above, even when emergency crews are able to meet what are considered optimal response times, they may exceed the physiological ideal to ensure patient survival. In Connecticut, many responses will exceed the ideal, because volunteers, who comprise most of the EMS services, often need to assemble a crew before responding and many towns encompass a relatively large geographical area. Emergency medical dispatch can, in many situations, reduce the time gap between the time a call is placed to the receipt of medical care.

Better resource allocation. Inevitably, EMS resources in any area are limited and finite. The issue of appropriate EMS resource allocation by dispatchers has been subject to considerable analysis. Several studies indicate emergency medical dispatchers, properly trained and utilizing a formal, medically controlled telephone triage system were able to properly direct the appropriate EMS resources to the emergency scene.

A principal benefit of prioritizing is the dispatcher can differentiate between a minor situation and a possibly severe one. This effectively preserves the paramedic resource for a call requiring that skill level. Moreover, this results in less wear and tear on equipment and personnel.

Pre-hospital provider information. An additional benefit of EMD is that it allows the dispatcher to relay more detailed information about the patient and the scene to the responding crew. The responders, then, can make better use of their time when they arrive on scene and also be better prepared for any hazards that may exist.

Reduction of collisions. Contrary to what may seem, upon first consideration, intuitive, not all calls for EMS require a lights-and-sirens, high-speed response (i.e., a “hot” response). As trained dispatchers are able to determine the level of severity of an emergency call, they are able to advise the field personnel how to respond. This reduces the number of lights-and-sirens responses and thereby increases the safety of the responding crew. In addition, it also diminishes the disruptions in the traffic flow and the potential for emergency-related accidents. This is called the “wake effect”, which refers to collisions resulting from the passage of the emergency vehicle but do not involve the emergency vehicle. It has been estimated the combined number of collisions involving EMS vehicles and the wake effect annually exceed 50,000 nationwide.

Sending a hot response for all calls is a fairly common practice among EMS services in Connecticut. This may subject the agencies to increased liability. A reliance on total light-and-

sirens responses is likely misplaced. The EMS provider in Norwalk, for example, reported 55 percent of calls there do not require a lights and sirens response. Further, a program review examination of EMS responses in Hartford revealed only one-third of all EMS calls justified a hot response, based on a life-threatening, time-sensitive injury or complaint classification.

Increased dispatcher satisfaction. As the dispatcher's role becomes more professionalized, a greater sense of ownership and satisfaction may accrue to the employee. Training in EMD gives the dispatcher an increased opportunity to make a difference and have a positive impact on an otherwise potentially tragic situation.

What Are the Concerns about EMD?

As with any innovative approach, changes are often met with suspicion. The provision of EMD is no exception. There was, and still is in some quarters, skepticism over the principles of EMD.

Discussed above were some demonstrated benefits of EMD that attempted to address the basic issue of whether EMD works. What follows is a discussion of concerns that have been brought to the committee's attention as barriers to EMD implementation.

Liability. One issue that prevents many communications centers from adopting EMD is the concern over legal liability. *Program review found no lawsuits based on the use or nonuse of EMD in Connecticut, even though EMD has been used by some agencies in Connecticut for over a decade.* Some believe the use of pre-arrival instructions is unacceptable because the potential for dispatcher error exposes agencies to possible lawsuits. By restricting dispatchers from performing tested and standardized life saving procedures, however, the effectiveness of the overall EMS system in performing life saving functions is reduced.

It is a basic legal maxim that any responsibility accepted by a public safety agency (or any other agency) comes with an obligation to do that job correctly. The EMD field has developed to the point where there are recognized standards against which a provider can be evaluated. The best recourse is in having a legally defensible system. Public safety personnel, acting in many capacities (police, fire, EMT, etc.), are frequent targets of various legal actions. It would be considered unacceptable not to provide police and fire services because someone may do something wrong.

The commercial providers of EMD systems point out there have not been any successful lawsuits against a properly implemented and managed system. The elements of a legally sound system have been defined and are identified above – properly trained personnel, medically approved reference system, medical control, and a quality assurance system.

Further, EMD advocates assert that, because many jurisdictions already provide pre-arrival instructions, the communications centers that do not provide this service are open to liability because of “dispatcher abandonment,” the failure to provide pre-arrival instructions when possible and appropriate. Their reasoning hinges on the belief that a “reasonable

expectation” has been created in the public’s mind about the availability of pre-arrival instructions as a part of 9-1-1 services. It could be argued this expectation has evolved into a standard of care that is due. This expectation is compounded when some jurisdictions provide pre-arrival instructions, while others do not, especially in the same state.

Legal concerns also arise in situations where pre-arrival instructions are forbidden but some dispatchers attempt to give them in the absence of clear protocols, appropriate training, and oversight. From a legal perspective, this is probably the worst case scenario, but the impulse to provide help in a medical emergency is strong.

A recent case was documented in the New York Times where a dispatcher from Connecticut had talked a caller through a resuscitation and saved a child’s life. The dispatcher stated he would have done it, even if there were a policy against pre-arrival instructions, because the punishment received would have been worth saving a child’s life. However, no recognized authority recommends ad-libbed first aid instructions.

Staffing increases. Concerns are often raised about the strain on personnel resources EMD could present in many dispatch centers. It is often assumed EMD requires the dispatcher to spend more time with a caller and therefore, more staff will be needed. That assumption may not be correct in all instances. If a dispatch center is using a freestyle method of caller interrogation (i.e. non-scripted), time efficiencies can be realized with EMD. One study examined the call processing times in Los Angeles before and after the implementation of EMD and found the average time initially increased. But within a short period, the call processing times had returned to the historical average of 72 seconds even though staffing had not changed during the study period. In addition, call information was obtained in a more organized manner and was more useful. The need for time-intensive instructions, such as CPR, was fairly rare. Here in Connecticut, the city of Hartford has recently implemented an EMD program and no staffing changes have occurred.

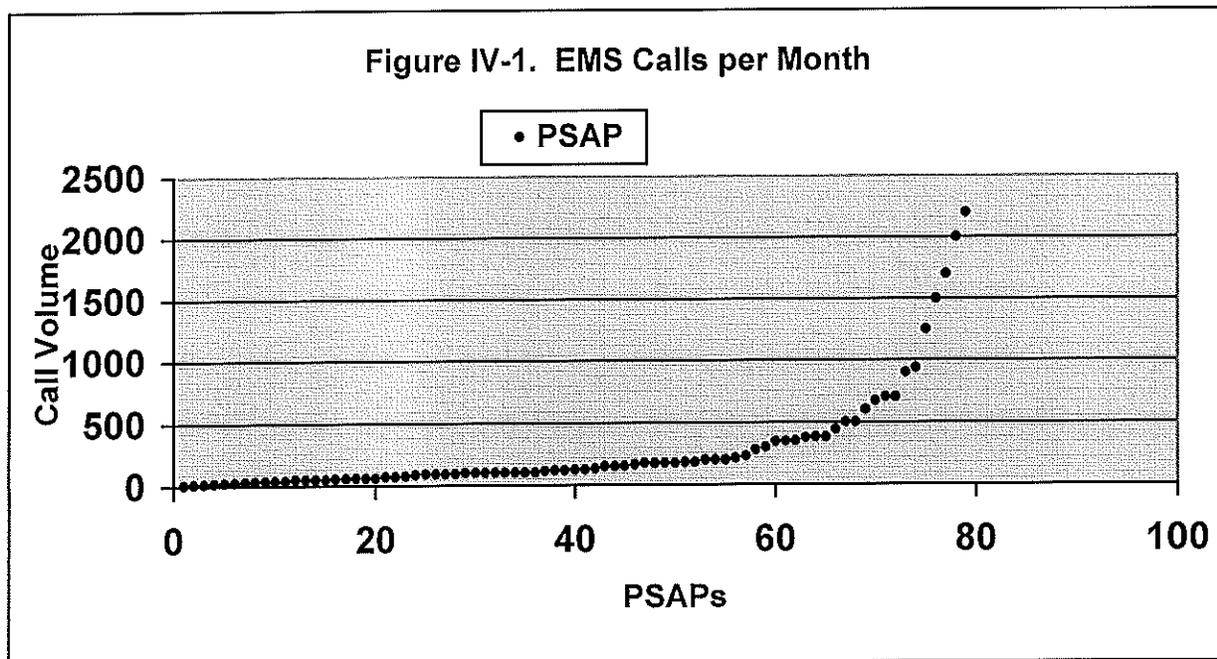
It is asserted that EMD will be a particular strain on single-person dispatcher communications centers. Program review examined the call volume of all Connecticut Public Safety Answering Points (PSAPs) based on information provided by the Office of Statewide Emergency Telecommunications (OSET). Table IV-1 shows 9-1-1 call volume by range and reveals that 60 percent of all PSAPs received 10,000 or fewer calls of all types (police, fire, EMS) per year. Single dispatchers are most likely to staff centers with this volume. *The average number of calls (police, fire, EMS) for a PSAP receiving 10,000 calls per year is just over one per hour.*

Table IV-1. 9-1-1 Calls to Connecticut PSAPs, 1998			
Number of 911 Calls	Number of PSAPs	Cumulative %	Est. Calls /Hour
5,000	40	37%	0.57
10,000	24	59%	1.14
15,000	8	67%	1.71
20,000	7	73%	2.28
25,000	5	78%	2.85
30,000	5	82%	3.42
35,000	3	85%	4.00
40,000	7	92%	4.57
45,000	1	93%	5.14
50,000 & over	8	100%	

Source: OSET and LPRIC calculations

The number of 9-1-1 calls that are EMS related are not collected by OSET. Through a survey of Connecticut's PSAPs (Appendix C), program review obtained the number of EMS calls received monthly from 80 PSAPs and the results are depicted in Figure IV-1. It was determined that:

- the average number of EMS calls per month per PSAP is 488 or approximately .68 EMS calls per hour;
- As the figure shows, the vast number of PSAPs (68 PSAPs or 85 percent of respondents or 63 percent of all 108 PSAPs) indicated they handle about 500 EMS calls or less per month. This works out to less than one (.7) EMS call *per hour*; and
- 41 PSAPs (51 percent of respondents or 38 percent of all 108 PSAPs) indicated they received less than 125 EMS calls per month *or about 4 EMS calls or less per day*.



The preceding analysis is intended to demonstrate that the smaller PSAPs in Connecticut probably do not have call volume that would automatically justify an increase in staffing due to the implementation of EMD. Admittedly, the illustration is somewhat simplistic because it assumes all calls will come in perfectly spaced throughout the day. Calls are unpredictable, though most calls for the typical center come in from about 6:00 a.m. to about 8:00 p.m. Most EMS calls are of short duration. Respondents to the LPRIC survey of PSAPs indicated EMD added only one to two minutes to an EMS call.

There is recognition within EMD systems that multiple calls will occur at the same time. The potential for dispatch overload always exists, with or without EMD. Dispatch training assists in teaching techniques on how to handle such incidents. For example, if a caller needs to be instructed in CPR, it is not necessary that the dispatcher stay on the line the whole time. The dispatcher may provide the instructions to get the bystander started, put the caller on hold to answer other calls, and check back when the other calls have been answered. It is also important to note that a full interrogation is not necessary before sending assistance

Costs. Each of the elements of a proper and legally sound EMD program has a cost. These elements include: initial training; recertification; protocol reference system; paying substitutes while others train; implementation of a quality assurance program; and the assistance of a medical director. Costs are discussed at length below.

Is EMD Already Provided in Connecticut?

While the state encourages the use of EMD, it is not mandated. Consequently, not all 9-1-1 callers have access to EMD. However, because no state agency maintains information on the

number of PSAPs that provide EMD, it is difficult to identify those that offer the service, or its comprehensiveness.

From a program review survey of PSAPs (found in Appendix C) it was determined:

- 34 of 95 respondents (36%) provide some aspect of EMD;
- 22 of 95 respondents (23%) provide both components of EMD -- pre-arrival instructions and priority dispatch;
- 5 respondents (5%) provide priority dispatch only, while 7 (7%) provide pre-arrival instructions only;
- Only one PSAP indicated they had all 5 quality assurance mechanisms in place;
- Not all dispatchers performing EMD have completed the necessary training. Fourteen of the 34 (41%) doing EMD have not provided training to all dispatchers;
- Not all PSAPs offering EMD provide it 24 hours per day. Five of the 34 (5%) do not provide EMD 24 hours per day; and
- 23 PSAPs indicated they transfer EMS calls to other providers who utilize EMD -- *this means at least 52 PSAPs (48 percent of the 108) are at a minimum providing pre-arrival instructions to callers in a medical emergency.*

Connecticut's emergency telecommunications system is regulated by the state but operated on a local and regional level. The state has provided a number of direct and indirect incentives to provide EMD. For example:

- The state has paid for, upgraded, and maintains a highly reliable "enhanced" 9-1-1 statewide system, that currently provides for automatic number identification and automatic location identification for non-wireless users. The state has recognized the benefits of a telecommunications system that provides critical information in order to facilitate a quick and appropriate response in an emergency. The next logical step is to minimize the time between the call receipt and the delivery of appropriate medical services – a principal benefit of EMD.
- All telecommunications personnel hired after January 1, 1990, are required to complete a public safety telecommunications course and be certified (and re-certified) by OSET. The state-sponsored and funded training program includes an EMD component. However, the local PSAP is responsible for developing and implementing the other components of EMD.
- The state provides transition grants to municipalities for the planning and establishment of new regional dispatch centers, and ongoing subsidies for telecommunications centers that decide to consolidate and include at least three towns. Aside from cost savings, regionalization allows additional opportunities for increasing the professionalization of dispatchers, including training in EMD.

-
- The provision of EMD is not prohibited by statute or regulation. Any municipality, PSAP, or ambulance company can choose to implement EMD on its own.

Several barriers to EMD implementation have been identified above. These include concerns over liability, staffing, and costs. *Another element that cannot be overlooked is the sheer number of PSAPs in Connecticut and the difficulty that presents in implementing a new expanded program.* There are 108 public safety answering points, located throughout the state, including eight regional PSAPs. As the General Assembly's 1996 9-1-1 Task Force concluded, "...Connecticut with more public safety answering points per capita than virtually any other state in the nation would be equally or better served by far fewer dispatch centers." At this point, however, the state policy has been to offer financial planning and operating subsidies rather than to mandate consolidation.

Recommendation

The Legislative Program Review and Investigations Committee recommends all Public Safety Answering Points (PSAPs) be required to provide emergency medical dispatch (EMD) or arrange for EMD services to be provided to all callers requiring emergency medical services. Each PSAP or other entity performing EMD functions shall maintain an EMD program. The Office of Statewide Emergency Telecommunications shall provide oversight of EMD implementation.

Each EMD program shall have, at a minimum, the following characteristics: 1) use only trained EMDs to provide medical interrogation, prioritization, and pre-arrival instructions; 2) use a medically approved emergency medical dispatch priority reference system; 3) provide a continuing medical dispatch education program; 4) implement a quality assurance program that, at a minimum, includes the monitoring of EMD time intervals, utilization of EMD program components, and appropriateness of EMD instructions and EMD dispatch protocols; 5) employ a mechanism to detect and correct discrepancies between established protocols and actual EMD practice; and 6) provide for EMS physician medical direction.

In recognition of the initial start-up costs in providing EMD, the committee recommends OSET reimburse PSAPs for the costs related to the initial training of dispatchers and for purchasing an emergency medical dispatch priority reference system. Funding shall be allocated from the surcharge on phone lines that support the 9-1-1 system. Regional communication centers (i.e., Consolidated Medical Emergency Dispatch (CMEDs)) shall also be reimbursed for the initial training and card sets for EMD if they are providing this service for a PSAP. OSET shall approve for use in Connecticut any national or locally developed EMD course that meets the requirements of NHTSA National Standard EMD Curriculum.

A four-year phase-in for this requirement is recommended. This will allow OSET at least one year to select appropriate training providers and establish an administrative mechanism to oversee the training. PSAPs would also decide whether to provide EMD themselves or establish a system where callers could be transferred to an EMD provider. In addition, the committee recommends all PSAP dispatchers performing EMD be trained over a three-year period. PSAPs must provide an affirmative statement to OSET that they either have in place all the elements of an EMD program identified above or transfer to a provider who does within that four-year time frame. This affirmation must be received before any reimbursement from OSET takes place.

Anticipated Costs

The program review committee believes it is important that a state requirement to provide EMD be coupled with a state financial commitment. Outlined below are some of the anticipated costs in implementing this proposal. As identified earlier, the cost items include: initial training; recertification; protocol reference system; paying substitutes while others train; implementation of a quality assurance program; and the assistance of a medical director.

The primary costs to the state would be for initial training of EMD dispatchers and for reference card sets. The estimated total three-year cost to the state would be about \$200,000. Staff has identified two non-General Fund sources of financing that could be used to pay for the state's share.

The impact of this requirement on PSAPs is much more difficult to determine. *Costs to municipalities will differ greatly depending on the individual situation of each PSAP. Several PSAPs already provide all or some elements of an EMD program, so their costs would be much less. Other PSAPs already transfer calls or could arrange to transfer calls to an ambulance service or other facility that provides EMD and may not represent any increase in costs. According to the program review survey of PSAPs, the total cost of EMD implementation for PSAPs currently doing EMD ranged from \$0 - \$50,000. Five PSAPs indicated they were able to implement EMD within existing resources; most PSAPs indicated an amount under \$8,000. Most of the costs identified were for training.*

Cost issues and estimates are included below:

Training and EMD reference cards. Table IV-2 highlights some of the costs involved in adopting a commercial EMD program. The two vendors selected for illustration purposes represent the largest EMD providers in the market. The costs for the initial 24-hour training course ranges from \$175 to \$249 per student. The cost of a protocol reference card set for one vendor is included in the price of training and the other charges \$395 per card set. Both vendors indicated this rate does not include any price reduction based on volume of business.

Table IV-2. Comparison of Costs Between Two National Vendors			
	<i>Training</i>	<i>Card Set</i>	<i>Recertification</i>
Vendor 1	\$175-\$250	\$395	\$45
Vendor 2	\$249	Included in training cost	\$129
Costs are approximate. Both vendors noted the price could decrease depending on volume. Source: Vendor pricing materials			

Recertification. Standards issued by ASTM indicate that recertification should occur every two to four years. Recertification costs charged by commercial providers are also indicated on the chart. Vendor 1 requires recertification every two years and charges \$45. Vendor 2 requires recertification every three years and charges up to \$129 (undiscounted) for the required training. Some ongoing training may be required depending on which program is selected.

Paying substitutes. Paying for a substitute dispatcher may be necessary in some PSAPs to complete the initial training course. The Capitol Region Council of Governments recently completed a study on the impact of consolidating PSAPs in the greater-Hartford region. The study indicates the annual salary for dispatchers in 13 towns ranges from \$27,516 to \$41,340. Using those numbers as an approximate representation, the cost to pay a substitute to fill in for the person training would range from \$106 to \$160 per day based on straight pay, or \$159 to \$240 per day based on overtime pay. Program review could not determine how many PSAPs will need to hire substitute dispatchers or what the overall costs might be.

Quality assurance program. Quality assurance efforts are aimed at: ensuring that all employees know and comply with policies and protocols; promoting safe, effective, and efficient practices; and correcting any problems. Broadly speaking, quality assurance refers to: prospective processes, such as training and hiring practices; concurrent processes, such as continuing education; and retrospective processes, such as case review. Costs associated with some of the prospective and concurrent processes have been discussed. A key element of the retrospective processes – case review – is considered below.

Commercial EMD providers suggest different levels of effort for retrospective call evaluations. The exact cost of this could not be calculated. Prudent business practices would appear to dictate that PSAPs, even without EMD, should already be reviewing some portion of all calls to ensure acceptable dispatcher performance. That number should depend on what the PSAP manager believes provides an adequate representation to evaluate a dispatcher's performance. It is also assumed a salaried management employee, not requiring additional overtime pay, would conduct the review.

Medical direction. The medical aspects of the EMD program should be overseen by a physician trained in emergency medicine. This may or may not represent additional costs. Program review found medical oversight at one PSAP in Southeastern Connecticut, for example, was furnished by a doctor from a local hospital at no cost. The physician meets with members of

the center and an oversight committee about three times per year. This type of medical relationship may be able to be replicated throughout the state.

Medical direction of paramedics is required by law and is already provided by local hospitals. Most pre-hospital providers have a relationship with a sponsor hospital where a medical director provides both on-line and off-line medical direction and authorizes certain types of care for patients whom he or she has not seen. Reviews are also conducted by the hospital to ensure conformance with patient care protocols. Ideally, having the same physicians provide input on EMD in their area would complete their oversight of the EMS loop from dispatch to scene care to transport.

Alternatives for municipalities. Currently, a number of PSAPs in Connecticut transfer callers to EMS agencies that provide EMD and others may wish to utilize this option. The advantage of this approach is that it allows the PSAP to increase the level of service to residents without incurring the expenses of training staff and maintaining an EMD program. One method allows the PSAP telecommunicator to receive all incoming 9-1-1 calls, determine the nature of the call, and transfer those medical calls requiring pre-arrival instructions. Three-way conferencing allows the dispatcher to stay on the line with the caller as well as the ambulance service.

Currently, some towns transfer EMS calls to commercial ambulance providers or to regional communication centers called CMEDs. There are 13 CMEDs in Connecticut that provide a communication interface between service providers in the field and emergency room physicians to facilitate direct, on-line medical direction. CMEDs are largely supported by municipal governments and may represent a cost-effective way for small towns to provide EMD.

Costs for the State and Sources of Funding

The primary costs to the state for this mandate would be to fund the additional training of dispatchers and cost for card sets. Discussed below are the estimated costs and assumptions associated with those estimates.

- There are approximately 1,500 certified telecommunicators in the state. Assuming 40 percent of all telecommunicators would not require training because they are already trained or their PSAP transfers calls to another entity that provides EMD, 900 remain. (This is not an unreasonable assumption. The LPRIC survey indicated that at least 52 PSAPs now provide or transfer callers for pre-arrival instructions.)
- If the 900 dispatchers are trained over three years, 300 could be trained annually.

-
- The undiscounted costs for training range from \$175-\$250 per dispatcher. Assuming the average cost would be about \$210, the annual cost for training would be about \$63,000 for each of the three years.
 - The average number of new telecommunicators trained annually is around 280 and the recurring cost would be \$59,000.
 - The costs for the card sets ranges from free (Vendor 2) to \$395 (Vendor 1). If it is assumed that 25 percent of 58 PSAPs (15) choose Vendor 1 and they require an average of two card sets per PSAP, the cost would be about \$12,000.
 - Thus, the total three-year costs to the state would be about \$201,000. Depending on dispatcher turnover, the recurring cost would vary. The recurring cost is estimated at \$59,000 annually for training each new telecommunicator.

The committee identified two sources of funding that could assist in paying for the state's portion of this program and reduce or eliminate any reliance on the General Fund. They are the Enhanced 9-1-1 fund and the Federal State and Community Highway Safety Grant Program ("Section 402 funds").

Enhanced 9-1-1 fund. Public Act 96-150 created the Enhanced 9-1-1 Telecommunications Fund to finance the enhanced 9-1-1 telecommunications system and is under the control of the Commissioner of Public Safety. The funding scheme was part of a major overhaul as proposed by an E9-1-1 task force created in 1995. The task force found the existing 9-1-1 equipment was obsolete and recommended: replacing the equipment; expanding OSET; and changing the method of funding for the 9-1-1 system.

Fund revenue is generated from a monthly fee assessed against each telephone subscriber. The monthly fee amount is determined by the Department of Public Utility Control each June, based on information received from the Commissioner of Public Safety. The current per-line assessment ranges from 31 cents for one line to 6 cents per line for 100 or more lines. Fund money is authorized to be used to: (1) replace existing 9-1-1 terminal equipment for PSAPs; (2) subsidize regional public safety telecommunication centers, with enhanced subsidization for municipalities in excess of 70,000 population; (3) establish a transition grant program to encourage regionalization of public safety telecommunications centers; (4) establish a regional emergency telecommunications service credit to support regional dispatch centers (CMED); (5) train personnel; (6) pay recurring and capital costs of the telecommunications network; and (7) support OSET.

Per-line assessment. The current assessment for the 9-1-1 fund for a single line is 31 cents and is legally allowed to rise to 50 cents. After the current network upgrade is completed, the assessment may be reduced by as much as 12 cents. It is estimated by OSET that each cent assessed against the fund raises about \$300,000. *Thus, using the committee cost estimates of*

about \$200,000, the impact on the assessment would translate to less than a penny for the entire three-year period.

Federal highway safety funds. Section 402 funds are administered by NHTSA and the Federal Highway Administration. The purpose of the fund is to assist states in developing and implementing non-construction highway safety programs designed to reduce fatalities, injuries, and property damage caused by motor vehicle crashes. The main intent is to provide “seed” money for new programs. The maximum amount of time a program can be funded is six years and an increasing percentage of state or local money is required in the last three years. The state Department of Transportation administers the fund in Connecticut. As of December 1998, the federal funds obligated to Connecticut were \$1.7 million.

Various EMS training and related expenses have been funded in the past through this grant program and emergency medical dispatch training is an eligible expense. Due to program restrictions, the money is available only for the start-up of a program, but this should be sufficient time to train the bulk of Connecticut’s dispatchers.

Management Controls

DPH Has Inadequate Management Controls

During the course of this study, the program review committee noted a number of areas where DPH is not in compliance with certain legal requirements or has not discharged its administrative and oversight duties in an appropriate manner. This includes the following examples:

- **Not all Primary Service Areas (PSAs) are assigned as required by regulation**

DPH has the responsibility to assign a primary service area responder (PSAR) to each municipality at each level of emergency service (first responder, basic life support and advanced life support). The committee found in its 1997 report the department was unsure what percent of the state was actually assigned coverage at each of the three levels. Under this current review, the committee continues to find the department has not assigned or does not know all the PSA assignments for all levels. There are three principal reasons for this:

First, members of the EMS community interviewed during the study indicated that in some instances local indecision about who the first responder should be has prevented one from being assigned. Further, in at least six towns no basic life support provider has been assigned. In a few areas, responders may be functioning but are not known to the department. The committee found that PSAs as large as the city of Norwalk, for example, had no designated first responder.

Secondly, in some cases, DPH has lost the documentation for PSA assignments. At least two BLS providers claim entitlement to two different areas where no documentation exists to prove who is the rightful PSA holder.

Finally, it has been stated that due to cost considerations, ALS level of service cannot be provided to each area of the state. Nonetheless, the legal requirement remains. The department could try to encourage more ALS development (such as the regionalization of ALS services), or try to remove this requirement from regulation.

Evaluation of the system is difficult when the number of providers and extent of coverage is unknown. In addition, legal disputes arise when the regulatory agency does not know which provider is the rightful PSA holder. The committee recognizes recent efforts by the department to inventory current

providers. Nonetheless, even after the system is inventoried, the issue with first responders and ALS levels of service will remain. Assignment of first responders is especially important in the delivery of time-critical emergency medical services and should be a top priority of the department.

- **PSA oversight is lacking**

Program review found a provider being utilized who is not the legal PSA holder. A town refuses to use the assigned provider. The purpose of having PSAs is to assign a territory to a specific provider to ensure coverage and accountability. Other towns are also experiencing difficulties with a provider, and the ability of some towns to ignore the law sets a bad precedent.

- **Certified providers charging for non-emergency transport services**

Current state law allows certified providers to charge for emergency work only. During the course of the study, a number of instances were found where certified providers were charging Medicare for non-emergency transportation. In most cases this was only for a few calls. In one notable case, however, a state government-based provider charged for over 100 non-emergency Medicare calls in one year. DPH rate regulation staff indicated no waiver had been issued to allow the provider to do this type of work and it appears that DPH was unaware of the status of the provider or its volume of business in this area. The committee believes if the law is interpreted to restrict non-emergency work, it should be done uniformly. Since DPH is mandated to regulate ambulance business practices -- it needs to be aware of those provider practices, and stop violations -- or seek to lessen those regulatory restrictions.

- **Missing adjudication documents**

Program review requested seven years worth of DON documentation to perform an analysis of decisions. The department lost or destroyed many of its documents including those related to adjudication decisions before and during its move to Washington Street. It is unknown how many cases this effects. Case records are important to understanding what has occurred and to document the decisions of a regulatory agency.

- **Reporting requirements not implemented**

Regulations require that each emergency medical provider supply information to DPH on transports (§ 19a-177-7(e)). This includes the overall number of transports; the number of prior arranged (non-emergency) transports and number of emergency transports. Even though the department has the authority, it has not implemented this requirement. As discussed in Chapter III, no basic data are available to regulators of

the system on the total number of EMS calls, where they occur, or the type of incidents. Nor are any data collected to measure how the system is performing.

Further, other required information DPH needs to be informed on how the system is operating are not recorded with the department and DPH does seek their submission. For example, the regulations require mutual aid agreements be enclosed with a provider's application and renewal for license. DPH is also not apprised of contracts or agreements providers may have with each other for coverage for certain times of the day, etc., which impact the responsibilities of the designated PSA responder.

Agency management is responsible for maintaining an adequate management control structure to ensure compliance with laws and regulations. Most of the above deficiencies relate to very basic administrative functions, but are essential to understanding, regulating, and managing the EMS system.

The department is taking steps to examine its regulatory scope through a Regulations Review Task Force, made up of EMS parties and DPH staff. The task force meets biweekly and is making recommendations to streamline the EMS regulations to make them reflective of the system and enforceable. In addition, the department appears to have made recent progress in some regulatory areas such as more uniform and prompt handling and disposition of complaints and better development and oversight of the state and regional EMS plans. However, if the department's regulatory role is to be taken seriously by the community, DPH needs more comprehensive and uniform enforcement of the areas that are important and seek to remove the regulatory components that are no longer relevant.

The scope of the study clearly removed agency structure and organization from the review. However, the committee believes the new leadership at DPH have a unique opportunity to elevate the department's role in this area. The new Commissioner, Joxel Garcia, M.D., and Deputy Commissioner, Norma Gyle, both appointed during the past year, can establish and manage -- through guidance and directive to DPH employees, and communication to the regulated community -- a clear and strong agenda for regulation of EMS.

Recommendation

The program review committee recommends DPH leadership communicate to department employees and the regulated EMS community the department's intention to discharge its regulatory and administrative responsibilities in the EMS area diligently and uniformly.



Appendix A
Agency Response



STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

OFFICE OF COMMISSIONER

January 27, 2000

Michael Nauer, Director
Legislative Program Review and Investigations Committee
State Capitol
Room 506
Hartford, CT 06106

Dear Mr. Nauer:

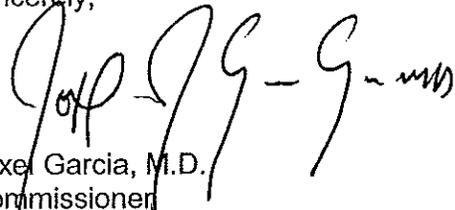
Thank you for providing the Department of Public Health the opportunity to comment on the Legislative Program Review Investigations Committee's (LPRIC) findings and recommendation on the Regulation of Emergency Medical Services; Phase Two.

First and foremost I would like to take this opportunity to express the Department's appreciation for the efforts and many dedicated hours the LPRIC staff invested into their review of Connecticut's EMS system. The report is comprehensive and incorporates several recommendations, which if implemented, will enhance Connecticut's current EMS system.

The Department supports the Committee's recommendations to modify and streamline both the rate setting and determination of need processes. Additionally, the importance of a pre-hospital data collection system as well as the implementation of Emergency Medical Dispatch throughout Connecticut can not be overstated. It is important to point out that the establishment and on-going maintenance of these systems requires a dedicated and secure funding source. As noted in your report, the Department continues to work with representatives of the EMS community in its efforts to amend the current regulatory scheme in order to reflect the changes in the EMS environment. Furthermore, since the 1997 reorganization of OEMS, the Department has ensured that critical EMS records are maintained on file in the Department.

In conclusion, the Department looks forward to working with the LPRIC during this forthcoming legislative session.

Sincerely,


Joxel Garcia, M.D.
Commissioner

JG:rh



Appendix B

Other State Survey of Emergency Medical Services

Legislative Program Review and Investigations Committee Survey of the Regulation of Emergency Medical Services

NAME _____	STATE _____
AGENCY 36 states responded to this survey (listed on the last page)	

GENERAL

1. How many licensed or certified EMS transport providers in your state at each level?

The number of providers ranged from 1 to 25 per 100,000 population

The average number of providers per 100,000 population was 6.5

N= 33

2. How many transport vehicles are in service in your state at each level?

The number of transport vehicles ranged from 14 to 38 per 100,000 population

The average number of transport vehicles per 100,000 was 22.3

N=29

EMS RESPONDERS

3. Does the state require there will be a *first responder* in a medical emergency?

1(3%) **Yes**

35(97%) **No**

N=36

3a. If yes, how? _____

4. Does the state require that *an ambulance* will respond in a medical emergency?

18 (50%) **Yes**

18 (50%) **No**

N=36

5. If there is more than one ambulance provider in an area, does the state ensure that the dispatch system will know who to send?

10 (29%) **Yes**

25 (71%) **No**

N=35

5a. If yes, how? _____

6. Does the state require that the notified provider will respond?

___ **22 (61%)** ___ Yes

___ **14 (39%)** ___ No

N=36

6a. If yes, how? _____

7. Is the state involved in selecting or designating emergency service providers for any jurisdictions in your state?

___ **9 (25%)** ___ Yes

___ **27(75%)** ___ No

N=36

7a. If yes, how? _____

7b. Are other levels of government (e.g., town or county) involved in selecting or designating emergency service providers for an exclusive area in the state?

___ **29 (81%)** ___ Yes

___ **7 (19%)** ___ No

N=36

EMS DATA

8. Does any state agency receive EMS performance data?

___ **25 (74%)** ___ Yes

___ **9 (26%)** ___ No

N=34

9. If yes, what type of performance data are collected and who collects that data?

Who collects Type of Data	Response Times	Patient Outcomes	Patient Satisfaction	Complaints	Other (Specify)
EMS Providers	19	6	5	7	7
Dispatch Centers	6	1	1	1	0
Towns	3	2	1	1	0
Counties	3	1	1	3	1
Other (Specify)	6	1	1	10	1

10. Are performance data collected for the following providers? (check all that are applicable)

- 22 **Commercials ambulance companies**
- 22 **Non-profits**
- 22 **Municipal agencies (fire/ town ambulance companies)**
- 22 **Volunteers ambulance companies**
- 1 **Dispatch centers**
- 9 **First responders**

11. What is the primary method by which data are transmitted to the state?

- 15 **Electronically**
- 17 **Written**
- 2 **Other (Specify) _____**

12. Are the data submitted to the state for:

- 20 **Each call**
- 5 **Compiled for a period of time: _____ weekly _4_ monthly _3_ yearly**

13. Does the state issue any type of report on the performance data?

- 19(73%) **Yes**
- 7 (27%) **No**

N= 26

14. How are data collection efforts paid for?

- 17 **State General Fund**
- 5 **Dedicated Fund Based on Fees (specify what fees) _____**
- 3 **Local Funds**
- 7 **Providers**
- 4 **Other (Specify) _____ (3 = Grants and 1 = Regional funding source) _____**

15. If the state is not collecting EMS performance data, is any other level of government (e.g., town or county) collecting that data?

- 9 **Yes (Specify) _____ (3 = County, 3 = Municipal, 2 = County & Muni.; and 1 = Regional) _____**
- 10 **No**

N=19

PERFORMANCE STANDARDS

16. Are any EMS standards for expected performance established by the state?

- 18 (53%) **Yes**
- 16(47%) **No**

N=34

16a. If yes, what standards are established (check all that apply)

- 3 **Coverage (e.g., # of ambulances by population or geographic area)**
- 11 **Response times (state-established response times)**
- 2 **Complaints (e.g., per number of calls, etc.)**
- 11 **Other (specify) _____**

17. Are performance standards used to evaluate providers?

 17 (59%) Yes

 12 (41%) No

N=29

17a. If yes, what standards are considered and how are they used? _____

REGULATION

18. Are emergency service providers allowed to do non-emergency (interfacility) transports?

 35 (100%) Yes

 0 (0%) No

N=35

19. Is there a determination of need (DON) process for ambulance transportation services in your state?

 13 (36%) Yes

 23 (64%) No

N=36

19a. If yes, please indicate all areas covered by the DON process. (check all that apply).

 8 new licensees

 0 new vehicles

 0 new equipment

 1 new branch offices

 4 upgrade in level of service

 4 purchase of existing service by new owner

 4 other (please specify)

19b. If your state has a need process, are there exemptions? (check all that apply)

 0 expenditures below a certain amount

 1 purchase of existing service by new owner

 2 upgrade in level of service

 6 other (specify) _____

20. If there is no need determination process in your state, are there assurances there are not more services in the system (i.e., providers, vehicles, equipment) than needed, and consumers being charged more for it?

 4 (13%) Yes

 26 (87%) No

N= 30

20a. If yes, how? _____

21. Is there any state-agency review or approval necessary when an ambulance company purchases another ambulance company?

___ **22 (61%)** ___ **Yes**

___ **14 (39%)** ___ **No**

N=36

22. Are towns required to file a local Emergency Medical Services plan with the state?

___ **1 (3%)** ___ **Yes**

___ **35(97%)** ___ **No**

N=36

RATES

23. Does your state set rates for ambulance transportation services?

___ **2 (6%)** ___ **Yes, same rates are set for both emergency services and non-emergency transports**

___ **1 (3%)** ___ **Yes, different rates are set for emergency services and non-emergency**

___ **0 (0%)** ___ **Yes, rates are set only for emergency services**

___ **32(91%)** ___ **No**

N=35

24. If rates are set, what is the rate set?

	Maximum Amount	Average Amount	Other _____
Emergency	\$ -	\$ -	\$ -
Non-emergency	\$ -	\$ -	\$ -

N=0

25. If there is no rate-setting, are any other consumer protections offered against excessive charges for ambulance service fees? ___ **2= Attorney General; 1 = Contracts; 1= Insurance Department; 1 Law; 2 = Municipal Protections** ___

N=7

26. If there is no rate setting, estimate the typical charge for:

___ \$ amount for emergency transport (**\$200 - \$613; Average = \$355; N= 5**)

___ \$ amount for non-emergency transport (**\$150 - \$400; Average = \$266; N=5**)

___ don't know

27. Do these amounts typically include services like mileage, night calls?

___ **14 (82%)** ___ **Yes (includes)**

___ **3 (18%)** ___ **No (excludes)**

N=17

28. Is there any state appropriation that is dedicated to supporting emergency transportation?

___ **6 (18%)** ___ **Yes** ___ \$ amount (**\$1.3M - \$9.1M; Average = \$3.8M; N=5**)

___ **27 (82%)** ___ **No**

N=33

DISPATCH

29. What percent of your state's population is covered by enhanced 9-1-1?

The range was 40% -100%; 6 states = 100% coverage;

N=34

30. How many 9-1-1 answering points in your state?

The range was 1-485

N=21

31. Does the state mandate pre-arrival instructions (i.e., emergency medical dispatch (EMD))?

___ 2 (6%) ___ Yes

___ 34(94%) ___ No

N=36

31a. If not mandated, what percent of the state's population is covered by emergency medical dispatch?

Range = 15%-100%; 7 = 100%; N=20

32. Who performs the emergency medical dispatch functions?

___ 28 ___ 9-1-1 answering points

___ 27 ___ centers that dispatch EMS responders

___ 11 ___ emergency medical dispatch services are forwarded to a center that specializes in such calls

___ 9 ___ other (Please specify) _____

33. Does the state contribute to EMD?

___ 9 (26%) ___ Yes _____ \$ amount annually

___ 25(74%) ___ No

N=34

34. How is your state's 9-1-1 system funded?

___ 5 ___ General Fund

___ 16 ___ Special Fund based on fees (describe the fees) _____

___ 17 ___ Local Funds

___ 5 ___ Other (please specify) _____

35. Is medical oversight of EMD required in your state?

___ 12 (33%) ___ Yes

___ 24 (67%) ___ No

N=36

36. If yes, how is this done? _____

THANK YOU FOR COMPLETING THE SURVEY!

States responding to this program review survey included:

- 1 AL
- 2 AZ
- 3 AR
- 4 CA
- 5 CO
- 6 DE
- 7 FL
- 8 GA
- 9 ID
- 10 IL
- 11 IN
- 12 IA
- 13 KS
- 14 KY
- 15 LA
- 16 ME
- 17 MD
- 18 MA
- 19 MI
- 20 MN
- 21 MS
- 22 MO
- 23 NE
- 24 NJ
- 25 NC
- 26 OH
- 27 OK
- 28 RI
- 29 SC
- 30 SD
- 31 TN
- 32 UT
- 33 VA
- 34 WA
- 35 WV
- 36 WI

Appendix C

Survey of Connecticut's Public Safety Answering Points

**Legislative Program Review and Investigations Committee
Survey of the Public Safety Answering Points (PSAPs)**

NAME OF PSAP _____ PHONE # _____

LIST TOWNS SERVED BY PSAP A total of 98 (91%) PSAPs responded to this survey

DATA COLLECTION

1. How many EMS Providers do you serve at the three major levels, and what service do you provide? (NOTE: If you directly dispatch a unit to the scene, put the number of each level of service for which you perform that function. If you transfer the call to another dispatch for that level of service, put the number for which you perform that function.)

The table below shows the number of PSAPs (not providers) that either dispatch all providers, transfer all calls to providers or another dispatch center, or dispatch some and transfer some calls for each of the three levels of service.

	<i>Dispatch All</i>	<i>Transfer All</i>	<i>Dispatch & Transfer</i>
First Responders N=80	63 (79%)	11 (14%)	6 (7%)
Basic Life Support N=82	51 (62%)	19 (23%)	12 (15%)
Advanced Life Support N=78	42 (54%)	30 (38%)	6 (8%)

2. For those EMS providers you serve, we'd like to know what information you have. If your PSAP just *records* the times for the providers on tape, just put a check on the table below under *Record*. If, on the other hand, your PSAP can use the recorded information to *compile and report on the elapsed times* for the specific responder for EMS calls, put a check below *Report*. If your PSAP can check only on a specific call and print out the times for that one call, consider that a *record* only.

	First Responder		Basic Life Support		Advanced Life Support	
	Record	Report	Record	Report	Record	Report
Time of Dispatch to Provider	27	53	26	49	29	38
Receipt/ Acknowledgment	18	43	15	41	16	31
Time en route	17	46	15	43	14	32
Time on scene	18	51	16	45	19	34
Time depart	17	42	15	43	17	30
Time at hospital	14	30	15	40	15	27
Time back in service	14	44	15	42	11	29

3. About how many 9-1-1 EMS calls do you get a month? **Mean = 488 (90% less than 700)**
Min. = 9 Max. = 16,000
N=80

4. Does your PSAP utilize computer-aided dispatch (CAD)? 62 (64%) Yes 35 (36%) No
N=97

4a. Does your PSAP's system *have the capability to compile* information on the number of EMS calls and calculate times by response categories (for example -- % of calls responded to in less than five minutes; % of calls responded to in less than 10 minutes)?

52 (55%) Yes 42 (45%) No
N=94

4b. If you answered No to Question 4a, does your PSAP's system have the capability to compile and report on average times (for example, X town's first responder went to 50 calls in one month and the average time from time of dispatch to time on scene was 5 minutes).

Of the 42 that answered "No" to Question 4a:

3 (7%) Yes 39 (93%) No
N=42

5. If you answered Yes to Question 4a or 4b, for what period of time could you best compile the information?

40 (74%) Monthly
6 (11%) Quarterly
8 (15%) Annually

N=54

(Note: Some PSAPs indicated they could produce a report for all three time periods. They were grouped in the monthly time period.)

6. Does your PSAP *compile this information now*?

Of the 55 that answered "Yes" to either 4a or 4b:

26 (47%) Yes 29(53%) No
N=55

6a. If you answered Yes to Question 6, please enclose a sample copy of the most recent report.

7. Does your PSAP have the capability to report the number of (check if yes):

52 your 9-1-1 calls that are EMS
27 passed EMS calls

34 mutual aid EMS calls

7a. Does your PSAP have the capability to report EMS call and time information (check if yes):

44 by individual town

37 by individual EMS provider

8. If your PSAP compiles reports now on EMS call and time information, do you provide the reports to (check all those options that apply)

18 Yes, routinely to service providers

7 Yes, routinely to first selectman or CEO of towns

32 Yes, but we provide a report only if requested

32 No, we don't provide any reports

9. If your PSAP does not have an automated system to compile and report EMS calls and time information, could you track and report the information in any other way?

41 (80%) Yes (briefly explain how you could do it) *Most respondents to this question indicated that tracking the information would require some type of manual task usually going through logs to get the times.*

10 (20%) No (please explain the obstacles, if you think it cannot be done) *Similar to the above comments, these respondents also indicated that it would require some type of manual task to get the times.*

N=51

10. What do you suggest as the best method to ensure that all PSAPS, other dispatchers, and service providers are using a uniform time?

Most respondents indicated that the best approach would be to centralize the times at the PSAPs and for all the PSAPs to use a common source such as the "Net Clock" or "SNET Time".

EMERGENCY MEDICAL DISPATCH

11. Does your dispatch center utilize Emergency Medical Dispatch (EMD) with priority dispatch and pre-arrival instructions?

22 (23%) Yes, priority dispatch and pre-arrival instructions

5 (5%) Yes, priority dispatch only

7 (7%) Yes, pre-arrival instructions only

61 (64%) No, Please go to Question 18

N=95

12. If yes, what EMD program do you use?

- 9 (26%) Medical Priority Dispatch
- 1 (3%) APCO
- 19 (56%) Power Phone
- 2 (6%) Developed Own Program
- 3 (9%) Other (specify) *(1 = Medical Priority Dispatch and Power Phone, 1 = Power Phone and Developed Own Program, and 1 = Other)*

N=34

13. Have all EMD dispatchers completed an EMD training program (other than initial Office of Statewide Emergency Telecommunications training)?

- 20 (59%) Yes
- 14 (41%) No

N=34

14. Do you provide EMD for all EMS calls 24 hours/day, 365 days per year?

- 29 (85%) Yes
- 5 (15%) No (Please indicate how often you provide) N/A

N=34

15. What mechanisms for quality assurance for your EMD program have you implemented?

- 6 physician oversight
- 5 established performance criteria for EMD program
- 11 check a percentage of calls routinely for conformity with EMD protocols
- 10 review all incidents that fall outside the range of acceptable variation
- 5 established process for correcting deviations from established criteria
- 3 other (specify) _____

16. What were the additional costs for implementing EMD? (Enter zero if implemented within existing resources).

The total dollars ranged from \$0 to \$50,000. Five PSAPs said they implemented within existing resources and 13 of the 17 (76%) who responded indicated an amount under \$7,800. Most of the costs were for training and one PSAP indicated it added an extra person.

N=17

17. Has your average call processing time increased overall with the implementation of EMD as compared to before use of EMD?

- 6 (19%) Yes (estimate increased time) *Estimates ranged from 1 to 2 minutes, with an average response of 1.5 minutes*
- 10 (32%) No
- 15 (48%) Don't know

N=31

18. Does your dispatch center transfer EMS calls to providers who utilize EMD?

23 (26%) Yes

64 (74%) No

N=87

18a. If yes, how many providers render this service and how many towns do they cover?

81% of the providers said one provider is furnishing EMD

90% said that 1 town was covered

N=21

19. If you do not utilize EMD, do you consider it a necessary part of EMS dispatching?

Of the 61 PSAPs that answered "No" in question 11:

27 (60%) Yes

18 (40%) No

N= 45 (16 did not respond)

20. What are the barriers to EMD implementation at your PSAP?

Most PSAPs indicated that costs usually related to staffing and for training were the primary barriers to EMD implementation.