State of Wisconsin

Systems Management Committee

Wisconsin Emergency Medical Services Board

Department of Health and Family Services

Report to the Wisconsin Emergency Medical Services Board

Funding of Emergency Medical Services in Wisconsin

02 July 2003

Executive Summary

The purpose of this document is to provide a comprehensive review of EMS funding sources in the State of Wisconsin. The EMS Board determined that this review was necessary so that planning for future can be organized to assure a strong and healthy emergency medical service for all Wisconsin communities.

This document will summarize key goals, review of key data sources and a series of recommendations that can serve as a starting point for dialogue around this very important issue of preserving EMS in Wisconsin communities.

The objective of the study included the following:

- Gain an understanding of current revenue and expenses incurred
- Identify unmet financial needs and variations in need
- Identify alternative funding sources
- Examine distribution methodology of FAP funds
- Identify options for structure of EMS and resource requirements associated with structure and process changes

Key Findings and Recommendations

- Because of the variable EMS providers and community needs, it was determined that are inconsistent systems supporting the EMS providers in the state.
- The service provided to the citizens of WI by EMS is an important aspect in the full continuum of health care in the state.
- Funding is available from a variety of sources, but appears to be inadequate to meet the needs of EMS providers through out the state.
- A more stable source of funding is needed to assure the future of EMS

- A regional structure coordinated through the Bureau of EMS can go along way to assuring a more equitable distribution of funds, as well facilitate a more efficient management of cost and resources across various organizations.
- Opportunity for regional structures and process could be coordinated with other efforts at regionalization i.e. Trauma, bioterrorism to reduce cost and to improve coordination with these services that have an aligned relationship with EMS.

This is an opportunity to plan for an Emergency Medical Systems that will be stronger and healthier. The study on Funding for EMS for Wisconsin is about making sure that we get the best value for the dollars provided by various sources and for identifying ways to improve the infrastructure that support EMS.

Thank you

Systems Management Committee

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(to be completed by staff)

I. Need for Study

Since the termination of federal support for emergency medical services in 1979, there has been a general perception that Emergency Medical Services (EMS) in Wisconsin has been under-funded. In fact, the EMS system nearly collapsed during the 1980s due to lack of adequate funding. In 1989, Act 102 did provide a sum of $2.2 million per annum in support of EMS across the State. This revenue stream has remained the same since, and constitutes the only direct financial support to EMS in the State. Despite numerous attempts to gain increased State financial support for EMS, there has not been any augmentation in funding to EMS since the passage of Act 102 (1989).

It has become clear to the EMS Board that, a "stable source" of funding for EMS was not available to adequately fund EMS in Wisconsin. This perception was furthered by the evaluation in 2001 of the state of EMS in Wisconsin by the Technical Advisory Team of the National Highway Traffic Safety Administration that noted that: "*Currently, resources are being cut and personnel and financial support to maintain and continue improving the EMS system in Wisconsin have eroded to the point that the system is in danger of collapse."* However, the consensus of the Board has been that these perceptions did not have sufficient evidence to support this perception, and therefore, the EMS Board charged its Systems Management Committee with the responsibility to study EMS funding in Wisconsin. This report details the findings of the Systems Management Committee, and presents recommendations by the Committee to the EMS Board.

II. Objectives

1. Gain an understanding of current sources of revenue and actual expenses incurred by EMS agencies.
2. Identify if there exist unmet financial needs in EMS, and if they do exist, what are they?
3. Identify whether there are other sources of funding for EMS activities, and if so, how such funding sources can be obtained.
4. Examine how needs differ between different levels of service, locations, and sponsorship.

5. Examine how the current Funding Assistance Program distributions are used.
6. Develop short- and long-range strategies for funding EMS activities in the State.
7. Identify changes in funding that will be needed to foster further development of the EMS system.
8. Determine what additional resources are needed and how such resources should be distributed.
9. Identify the staffing requirements in the DHFS needed to support current activities in the EMS Bureau/Section and what resources will be required to support future developmental activities.
10. Identify potential funding sources for EMS activities and for further system development.
11. Suggest strategies for the acquisition of such resources in order to provide a "stable source of funding" for such activities.

III. Methods

1. Review of previously submitted documents (Regionalization Phase I (1994), Regionalization Phase II (1996), Medical Communications Report (2000), EMS Scope of Practice (1999)).
2. Structured interviews with randomly selected services and analysis of the data collected using descriptive and inferential statistics.
3. Review and evaluation of the analysis and recommendations of the NHTSA Technical Advisory Team of 1990 and 2001.
4. Review and evaluation of the Trauma Report sent to the Legislature by the STAC.
5. Determine the reasons that the recommendation for funding of EMS provided in the STAC Report to the Legislature was rejected by the Joint Finance Committee.
6. Discussions with the sponsors of the mechanisms by which the amendment to the budget bill for partial funding of the Trauma System was developed, why it passed the Legislature, and why it was vetoed by the Governor. Subsequently, funding for one years was included in the 2002 Budget Repair Bill.

7. Evaluation of potential sources for funding and the pros and cons of the likelihood that each either would contribute to the sustenance of the current activities or would provide resources for further development of EMS.

IV. Sources of Data

It became clear early in the investigation that any evaluation would suffer because of the paucity of data available in Wisconsin to facilitate the study. Data pertaining to EMS operations in State were sorely lacking. Therefore, data had to be obtained from other sources. Hence, data for this report were obtained from multiple sources accumulated by the Committee. Sources included: (1) Structured interviews with randomly selected services by Systems Management Committee members; (2) Study conducted by the U.S General Accounting Office (GAO); (3) Study conducted by the National Association of State EMS Directors; (4) Report of the Findings from the 1999 National Survey of Ambulance Providers conducted for the American Ambulance Association by Project Hope Center for Health Affairs; (5) State Ambulance Policies and Services Report (OE1-09-95-00410) conducted by the Office of the Inspector General of the U.S. Department of Health and Human Services, 1998; (6) Bureau of EMS and Injury Prevention of the Wisconsin Department of Health and Family Services (DHFS); (7) Report from the Technical Advisory Team of the National Highway Safety Administration; (8) Historical information from participants; and (9) Medicare Program: Fee Schedule for Payment of Ambulance Services and Revisions to the Physician Certification Requirements of Nonemergency Ambulance Services; (10) Comparing Your Organization with 200 Others: Wisconsin EMS Association Service and Corporate Membership Data, published in the EMS Professional, September–October 2002;23–25; and (11) from other persons considered to be knowledgeable and expert in specific areas that pertain to the financing of EMS in Wisconsin..

1. Structured Interviews

The Systems Management Committee developed a set of questions pertinent to the financing of EMS in Wisconsin. This process required several months for piloting and

completion. In an effort to obtain a representative sample of the EMS services in the State, the EMS Section place the names of all of the EMS providers into a hat, and 40 names were withdrawn blindly. Each of the 40 services selected was contacted by Committee members. At total of 23 forms were completed and analyzed.

2. GAO Study of EMS

At the request of U.S. Senators Feingold and Collins, the Unites States General Accounting Office (GAO) conducted a study of Emergency Medical Services in the United States.

> The information we collected and analyzed came from a variety of local, state, and national sources, such as a national EMS association's survey conducted in 2000 that assessed rural EMS needs, as well as federal assessments conducted from 1988 through 1997 covering the capacities and needs of EMS systems in 46 states. This information was supplemented by interviewing officials at national associations with an interest in improving EMS.[2] To obtain more detailed examples of system needs, officials from nine local EMS systems and six states, chosen because they reflected widely varying locations and system characteristics were interviewed. At the federal level, the work focused on four agencies that are involved with EMS: (1) NHTSA, (2) HHS's Health Resources and Services Administration (HRSA), (3) HHS's Centers for Disease Control and Prevention (CDC), and (4) the Federal Emergency Management Agency's U.S. Fire Administration (USFA). Also the Health Care Financing Administration (HCFA) was contacted, because of its role in providing health insurance coverage for ambulance transports. Medicare, the federal insurance program for the elderly, pays more, than $2 billion each year for ambulance services. The work was performed in accordance with generally accepted government auditing standards from September 2000 through July 2001.

The Report was made available to the Committee by Senator Feingold's office, was reviewed by the Committee, and the findings are incorporated into this report. The GAO Report and further information obtained by Senator Feingold’s staff primarily from EMS personnel in Wisconsin and other national EMS organizations, generated Federal Legislation as part of the Bioterrorism legislation passed by the Congress and signed into law by the President in June 2002.

3. Data Collected by the National Association of State EMS Directors

The National Association of State EMS Directors (NASEMSD) conducted a survey of State EMS Offices in an effort to define the sources of revenue for the support of EMS in

the respective states. As of this writing, responses had been obtained for the year 2000 from 24 of the states. These data have been analyzed and incorporated into this report.

Office of the Inspector General of DHHS

The Inspector General of the U.S. Department of Health and Human Services collected and analyzed data for the purpose of providing baseline data about the ambulance industry and to determine how state and local ordinances affect the delivery of ambulance services. Specific data were collected using in-person and telephone interviews with 53 State Emergency Medical Services Directors for the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, and the Virgin Islands regarding the number of suppliers, licensed vehicles, and certified personnel operating within the States during 1995 and 1996. The universe of Medicare ambulance claims separated by Metropolitan and Non-metropolitan Statistical Areas was analyzed. In addition, financial reports provided by the ambulance industry were analyzed.

5. Project Hope Report to the American Ambulance Association

The "Final Report" by the Center for Health Affairs of Project Hope for the American Ambulance Association in March 2000 was evaluated. The study was conducted in response to the Balance Budget Act of 1997 that requires the development of a national fee schedule to pay for Medicare ambulance services. Project Hope with a subcontractor developed and conducted a national survey of Medicare-billing (to HCFA) ground ambulance providers in an attempt to answer these questions:

(1) What are the relative average costs of providing different levels of ground ambulance services?

(2) How do costs vary by urban and rural location?

(3) What are the major factors influencing the costs of providing these services?

6. Bureau of EMS and Injury Prevention of DHFS

The EMS Bureau of the DHFS provided the Committee with information relative to its staffing and ability to carry out functions mandated by the Legislature. In addition, information was provided relative to recent changes in reimbursement regulations that

may alter the ability of private and municipal and volunteer services to recover expenses. Data also were obtained from the Bureau relative to the uses of the Funding Assistance Program Funds. These data were derived from the reports required from the services who had received FAP funds. Data from the first 72 services that received FAP support were analyzed. The Section also supplied the data from the NAEMSD noted above, historical information, positions, and information relative to unfunded mandates directed to the Section by the Legislature. The numbers of responders and ambulance providers also were provided.

7. Report from National Highway Safety Administration

The Technical Advisory Team of the National Highway Traffic Safety Administration (TAT-NHTSA) report that resulted from its consultation evaluation of EMS in Wisconsin provided to the Department following its visit in April 2001 was studied in detail along with the analyses of the report provided by the Bureau and the Strategic Plan of the EMS Board that evolved from the Report.

8. Historical Information

Historical information was accumulated from persons involved in EMS in Wisconsin primarily to cross-check the information gathered from other sources.

9. Fee Schedule for Payment of Ambulance Services and Revisions in the Physician Coverage of Nonemergency Ambulance Services (42 CFR Parts 410 and 414; HCFA-1002-FC; RIN 0938-AK30)

This rule established a fee schedule for the payment of ambulance services under the Medicare Program, implementing Section 1834(1) of the Social Security Act. This Fee Schedule replaced the operational retrospective "reasonable-cost "payment system for EMS providers and the "reasonable-charge" system for suppliers of ambulance services. In addition, the rule requires that ambulance suppliers accept Medicare assignment, codifies the establishment of new Health Care Common Procedure Coding System (HCPCS) codes to be reported on claims for ambulance services furnished in rural areas based on the location of the beneficiary at the tiome the beneficiary is placed on-board

the ambulance, and revised the certification requirements of nonemergency ambulance servicees.

The objectives for the new rules were to: (1) Establish mechanisms to control increases in expenditures for ambulance services; (2) Establish definintitons for ambulance services that link payments to the types of services provided; (3) Consider appropriate regional and operational differences; (4) Consider adjustments for inflation and other relevant factors; (5) Phase in a new fee schedule in an efficient and fair manner; and (6) Require payment be made only on an assignment-related basis.

10. Wisconsin EMS Association Data

The Wisconsin EMS Association collected operational data from >200 organizations. The report includes information relating to >140,000 EMS responses during 2001 that utilized 420 ambulances. More than $34-million was budgeted to provide these services. These data include nearly half of the EMS activities in Wisconsin.

11. Other Sources

a. *Emergency Services of Washara County*—This organization that bills for >60 ambulance services in Wisconsin. It arose out of the need of services to process the billing for services in an efficient manner. For these services and many others, the administrative load of having to deal with dealing with insurance companies and federal and state funding mechanisms: a task they find has become overwhelming as the agency furnishing the Report to the Committee has >1,000 insurance companies in its database.

b. *Wisconsin Technical College System (WCTS)*—The Wisconsin Technical College System (WCTS) provides the bulk of training for emergency medical services personnel. Currently, the System is the principal recipient of the majority of the $800,000 provided per annum through Wisconsin Act 102 and this sum has remained fixed since 1989 despite rising costs of providing the education. The expenses and dilemmas in the provision of this training were obtained from the VTAE System.

Public Expectations and Reality

Expectations of the public relative to the emergency medical services they are served by are shaped by the media. In general, the media promote all of emergency medical services as operating at the paramedic level. They do little to promote or even recognize the existence of the all-important volunteer, basic life support system. Therefore, the public expects every EMS unit to respond with the highest level of care with the latest and best of the available technology and drugs in a timely manner. This is not possible in the current volunteer, basic life support component of emergency medical services in Wisconsin. Tables V-1 and V-2 summarize the actual current distribution of levels of services in Wisconsin as derived from the WEMSA database. Seventy-five percent of the services that participated operate with volunteers or paid-on-call personnel. Volunteer personnel receive no financial remuneration for the services they provide, and paid-on-call personnel receiver a minimal stipend either for being on-call or by a stipend (flat-fee) for actual participation in a call or a flat-fee/hour/call). Actually, according to the WEMSA database, only 7% of the Services are staffed with full time paid personnel.

Type of Service	Percent of Total
Volunteer	35.0
Paid While on Call	39.5
Full-Time Paid	7.0
Combination	18.5

Table V-1—Types of EMS Services in Wisconsin classified by status of payment of personnel for services (source: WEMSA database for 2001)

Level of Service	% Total	Volunteer (%)	Paid/Call (%)	Combination (%)	Paid (%)
First-Responder	8	87	13	0	0
EMT-Basic	47	41	45	13	1
EMT-I (provisional or IV tech)	35	21	49	28	2
EMT-Intermediate	4	17	17	33	33
EMT-Paramedic	6	0	0	36	64

Table V-2—Level of Service by classification of personnel staffing ambulances, type of service and level pf payment [Get license stats from Nan)

Table V-2 details the distribution of personnel by classification and pay status as obtained from the WEMSA database. In this analysis, only 8% of the providers are at the paramedic level, a marked discrepancy from what is perceived by the public. There is some discrepancy with the database collected by the EMS Section that indicates that 19% of the providers operate at the paramedic level. However, both databases indicate that 82% of the providers operate at the basic EMT level. Paramedic services either a paid, full-time or consist of personnel some of whom are paid, full-time combined with personnel that either or volunteer or paid per call. More than half of the services operate at the first-responder or BLS level and only 45% are capable of providing any ALS-level services.

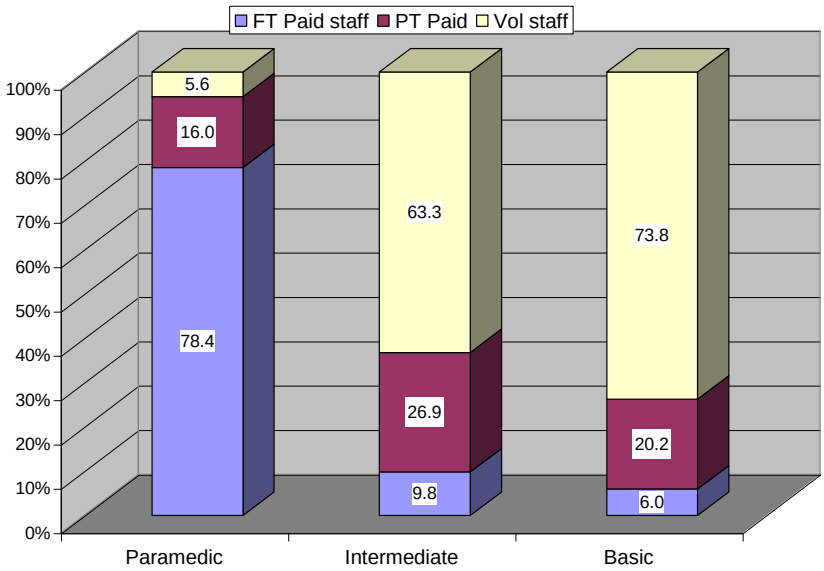


Figure V-1—Proportions of personnel that are Full-time paid (FT Paid Staff), Part-time paid (PT Paid), and Volunteer (Vol staff) from self-reported data submitted to the EMS Section by level of service provided.

The distribution of paid vs volunteer status from the data obtained by the EMS Section and those obtained by WEMSA are similar: the three-fourths of the paramedic services have their staff paid, full time, and three-fourths of the basic services are staffed by volunteers. .

Stipend/Hour during Run	**% Services**
$5.35–$9.99	24.0
$10.00–$14.99	54.5
$15.00–19.99	9.5
>20.00 or flat fee	12.0

Table V-3—Pay while on-a-call per hour (Source: WEMSA database)

Stipend Taking Call/hour	% Services
≤$1.00	54
$1.01–$2.00	36
$2.01–$3.00	10

Table V-4—Pay per hour while taking call (Source: WEMSA database)

The amount paid to the staff either on call or or during participation in a response is minimal at best. The levels of stipends paid are detailed in Table V-3 qnd V-4. According to the WEMSA study, the overall average of stipend provided while participating in a call was $12.59/hour of service with a range beytween $5.35 and $20 or more per hour and an average hourly standing on call stipend of $1.33 per hour with a range of <$1/hour to $3/hour.

Thus, the public's perception about the level of prehospital emergency medical care provided by EMS in Wisconsin does not match with reality. The cost of upgrading the lower service levels to the LAS level or even the paramedic level will be staggering and it is not clear whether the human resources required even are possible given the current organization of EMS in Wisconsin..

This issue is clouded even further by the public's perception that the emergency medical services provided by the hospitals is equal for all of the hospitals in Wisconsin. This also is nowhere near reality. Numerous attempts have been made to categorize hospitals by their respective emergency-care capacities. Act 160 (19xx) in accordance with the federal EMS Act of 1973, 1975, and 1977, mandated that the emergency capacities of every hospital in Wisconsin be *categorized* annually for each of six components: (1) Cardiac; (2) Obstetrics and Neonatal; (3) Trauma; (4) Medical; (5) Psychiatric; and (6) Burns. Categorization levels included: (I) Comprehensive; (II) Intermediate; (III) Minimal; and (IV) Not Classified. Thus, nit was recognized that all hospitals were not equal in terms of their capacities. The process was self-reporting based on criteria developed by a committee of experts. It must be noted that although pressure was present to designate the hospitals in accordance to their classification in each of the categories, designation did not occur. Categorization consisted of the capabilities of each of the hospitals in each of the categories, designation would have mandated that patients in the EMS system be taken to the hospital with the highest designation (lowest numerical classification) in the region. This initial attempt at regionalization was opposed by the hospitals and was not implemented. However, the realization that all hospitals did not have the same capacity was recognized at the State level. Furthermore, as noted above (Historical Perspectives), attempts by the EMS Board to regionalize emergency

services in accordance with the emergency care capabilities of the hospitals during the last decade also have not been successful.

However, the American College of Surgeons (ACS) has recognized that the capabilities of all of the hospitals in the provision of care to victims of traumatic physical injuries are not equal. The ACS certifies hospitals on a voluntary basis in terms of their respective capabilities to provide such care. In concert, the State Legislature also recognized that the capabilities of the hospitals were not equal in terms of trauma care. Wisconsin Act 154 (1997) created a statewide Trauma Advisory Committee (STAC) to develop specific recommendation for the development of a statewide trauma system based on the capabilities of the hospitals in the realm of trauma care. The process has proceeded to the development of Regional Trauma Advisory Councils that will implement a regional trauma system based on the capabilities of hospitals in each region. Currently, there are two Level-I Trauma Centers (highest level capacity) and four Level II Trauma Centers in Wisconsin. Regional Trauma Centers will form the hubs for the development of a Regional Trauma System in Wisconsin. Thus, despite the general perceptions of the public, it now is recognized by the medical community and the public sector, that the emergency capacities of every hospital are not the same.

VI. Medical Progress and Utilization of Emergency Medical Services

The problem is complicated further by the rapid advances in medical sciences and technology. Such advances cause increases in the costs encumbered by their use in the provision of Emergency Medical Services. Newer and better drugs are being developed, tested, and shown to be useful for use in the prehospital and in-hospital components of EMS. Examples include the addition of Amidarone, a potent drug shown to be superior to other drugs for the control of rapid heart rates. Unfortunately, this drug costs the EMS provider $300/dose and several doses may be required. The previous agent used for the same purpose cost the provider only about $5/dose. Furthermore, the administration of clot-busting drugs for the treatment of patients suffering a heart attack is becoming a standard across the US and Europe. A single dose of such agents (thrombolytics) cost

$2,500–$3,000. The use of such agents currently is not reimbursable by Medicare, Medicaid, or by most health insurance carriers.

In addition, the costs of all of the equipment and supplies used by even the basic service continue to increase almost exponentially. The cost of an ambulance today ranges from $80,000 to $120,000, an increase of 65% during the last decade. New equipment such as pulse oximeters, end-tidal CO_2 monitors, portable ventilators, intravenous infusion pumps, blood sugar measurement devices, defibrillators, and electrocardiographic monitoring devices have become standards of care within the last few years. As medical science continues to progress, these expenses will continue to increase while the reimbursement for these expenses continues to shrink.

Furthermore, the demand for emergency medical services continues to increase in both the Prehospital emergency medical services and in the hospital emergency departments. Services all over the State report a steady increase in the number of responses they must perform. On the average, call and patient volumes are increasing at a rate of 5–10% per year.

For the prehospital component, this increase in the demand for services not only manifests in the requirement for more responses but also in more paperwork and a greater administrative workload. All of this is occurring in the face of a dwindling supply of volunteer emergency medical technicians and first responders. An increasing proportion of volunteer services have found it necessary to hire full-time EMTs to staff their services, especially during the daytime shifts. This has created an even further strain on available resources. According to the WEMSA report, by far an away the greatest perceived challenge for the Services is the recruitment and retention of volunteers. Almost half (47.5%) of the respondents listed recruitment and staffing as the greatest challenge. The second most perceived challenge was "Moving to a new EMS level" at a 17% response level!

A principal complaint from the volunteer services, first detected by the Board during the development of the two Regionalization Reports, has been the administrative load required to operate the service. This load has resulted in the attrition of much of the administrative leadership for the volunteer services. Most of the leadership has not been trained in management skills. Consequently, some of these services have found it necessary to hire outside administrative services in order to optimize their reimbursement. At least one agency has formed to assist the services in some of this

administrative load. The one agency surveyed currently serves more than 60 prehospital emergency medical services. The costs of providing such services are assessed based on collections. This adds further to the costs of operations.

Lastly, local volunteer or municipal ambulance services must be maintained because in many areas of the State, private ambulance service is not an option since private services are not interested in providing services in areas in which profits are not likely to be generated. It is not likely in many areas of the State that such operations will be profitable and further it is not likely that the provision of such services by local volunteers will be adequately reimbursed for the provision of the services to allow survival of the services, especially given the current difficulties in providing adequate numbers of volunteers.

VII. Changes in Economic Environment

The changing economic environment also is a factor in the provision of ambulance service statewide. New regulations for reimbursement will further stretch the ability of local services to provide service at a reasonable rate required to stay “in business”. Central support is key to assist in procuring grant funds and to help services complete the paperwork necessary to acquire reimbursement. (More on reimbursement schedules here including Jerry Miller’s response and function).

The new Medicare Rules may have a profound impact upon the survivability of many of the prehospital emergency medical service providers. Prior to implementation, ambulance reimbursement used a "reasonable charge" method for billing. It included four methods: (I) a single, all-inclusive charge that reflected all services, supplies, and mileage; (II) One charge that reflected all services and supplies with a separate charge for mileage; (III) One charge for all service and mileage with a separate charge for supplies; or (IV) Separate charges for Services, mileage, and supplies.

The rule recognizes only seven levels of ambulance services: (1) Basic Life Support (BLS); Advanced Life Support, Level 1 (ALS1) that includes administration of up to two ALS interventions; (3) Advanced Life Support, Level 2 (ALS2) that includes

administration of at least three different medications or the provision of one or more of the following interventions: (a) Manual defibrillation or cardioversion; (b) Endotracheal intubation; (c) Insertion of a central venous line; (d) Cardiac pacing; (e) Chest thoracostomy decompression; (f) Establishment of a surgical airway; (g) Establishment of an interosseous infusion line; (4) Specialty Care Transport (SCT) that consists of interhospital care beyond the scope of practice of a paramedic; (5) Paramedic ALS Intercept (PI) consisting of ALS services provided by a non-ambulance transport service; (6) Fixed-Wing Air Ambulance (FW) consisting of air transport from the point of beginning of patient transport to the nearest hospital with appropriate facilities inaccessible by a land vehicle or great distances or other obstacles using a fixed-wing aircraft when the medical care required is deemed not appropriate for transport either by BLS or ALS ground ambulance; and (7) Rotary-Wing Air Ambulance (RW) also consisting of transport from point of loading of the patient using the same criteria noted in (6) above. The impact of such changes in reimbursement upon the system is not clear at the time of this writing **[Get opinion from Dan and Jerry]**

A further view of the economic environment was provided from the agency noted above. When adequate knowledge about the reimbursement schemes available (>1,000 insurance companies) and good techniques are used, collection rates as high as 83-84% have been achieved. However, it is estimated that collection rates average between 70 and 75%. Many services claim collection rates of only 50-60%. Thus, there is a bad debt that ranges from 16–50%.

There is one additional aspect of the changing economic environment that is affecting both the prehospital and in-hospital components of the EMS setting. A profound shortage of nurses has become an important force in the provision of health care and in EMS. The reasons for the shortage are multifactoral and are not essential for this discussion. Lack of adequate nursing staff results in the inability of many hospitals to staff all of their beds. The inaccessibility of staffed beds forces a backup of patients awaiting admission to hospitals. This results in diversion of incoming patients to hospitals other than the hospital requested by the patient or the referring physician (for inter-facility transfers) and in the overcrowding of emergency departments. Diversions from destination hospitals result in increasing tensions between the patient and the care-givers, feelings of

frustration for all parties involved, and increasing transport times, delays in return to service, and increased costs to the patient and providers.

VIII. Historical Perspectives

The publication in 1966, of the White Paper, *Trauma, The Neglected Disease*, by the National Science Foundation changed forever the concepts about emergency medical care in the United States. It pointed out that what we had learned during wartime never had been transferred into the civilian sector. Simultaneously, a course for the training of emergency medical technicians was developed for the National Highway Traffic Safety Administration (NHTSA) by two orthopedic surgeons in Woodruff-Minocqua, which became the National Standard for upgrading emergency medical services. Thus, EMS as we know it today had its origins in Wisconsin.

The Wisconsin Department of Health and Social Service (DHSS, now Department of Health and Family Services, DHFS) hired six instructors to begin the transformation of EMS in Wisconsin. This process was supported in part by Block Grant Project 40 funding. During the period from 1966 to 1973, this faculty trained about 8,000 persons in Wisconsin to function as Emergency Medical Technicians (EMTs). With the passage of the Federal EMS Act of 1973, additional resources became available through Title XII funding. Title XII provided funding for the development of "EMS Systems" defined by 15 components deemed essential by the Federal funding agencies. Under Project 40 and Title XII funding, the EMS Section was formed within the Division of Health of DHHS supported by soft grant funds with little investment by the State. Simultaneously, an EMS Medical Examining Committee was appointed by the Section in an effort to develop legislation to implement an EMS system in the State. This Legislation was passed in 1979 and resulted in the development and implementation of the rules (HSS 110, 111, 112) in support of Act 146 that regulated EMS in Wisconsin until 1993 with the addition of Acts 251 and 252. Inherent in the initial Legislation was a mandate for the Section to be the licensing agency for the EMS providers in the State. This mandate persists to the present time. Title XII legislation was renewed in 1975 and 1977 and the EMS Section gradually expanded to a staff of 13 persons.

During the period of substantive federal support, the development of EMS in Wisconsin flourished. Many services developed at the local level staffed with volunteers with equipment and supplies funded at least in part, with Federal grants. When the Federal legislation failed to be renewed in 1979, the State was not prepared to assume the support of the system and services, and the many services that were in part dependent on federal revenue suddenly had to fend for themselves. The staff of the EMS Section dwindled to six and barely could support its licensing function. The communities served by the services also for the most part were unable or were not predisposed to assume the support of emergency medical services. Such services were provided free of charge to the patients who received the care provided. Consequently, most of the services had to fend for themselves and raised resources through fund drives, social events, raffles, etc. As a consequence, the services became rigorously independent, and any semblance of a statewide system that developed during the period of plenty, dissolved. Essentially, the services became self-supporting.

During the next decade, progress in the state EMS system foundered. The EMS Section was unable to provide support to the services and any semblance of a statewide EMS system gradually faded. Recognizing the need for financial support of emergency medical services, Senator Boyle introduced legislation in 1988 called the "One-for-Life" Bill. This Bill proposed that $1 be added to motor vehicle registration. This bill was defeated. In 1989, Act 102 provided $2.2 million per year to assist Emergency Medical Services in Wisconsin. The resulting Funding Assistance Program (FAP) continues without changes including augmentation of the level of funding, to the present. Distribution of these funds is conducted using a formula based on service areas and population served. The bulk of these funds has been directed towards paying for the training of EMTs. Accounting of the uses of the FAP is described in Parts VI and VII of this report. Unfortunately, the original bill provided 2.0 FTEs to administer the program, but the final bill resulting in Act 102 provided no positions and no budget to administer the program.

In 1990, at the request of the DHHS and the Department of Transportation, an evaluation of Emergency Medical Services in Wisconsin was conducted by the Technical

Advisory Team (TAT) of the National Highway Traffic Safety Administration (NHTSA). The overview of the findings of the TAT was:

> *The team observed individual and specific local examples of commitment to quality emergency medical care. However, the team found evidence of program fragmentation at all levels, insufficient funding to support mandated regulatory tasks, and a need for greater physician involvement in setting standards and implementation of the medical aspects of the EMS program. Restructuring t6he EMS lead agency, strengthening its staff, and developing a comprehensive plan for meeting future system needs, all are vitally important issues.*

Two attempts were generated by Senator Robson in an effort to obtain support for the position of a State Medical Director. Both of these attempts failed.

In 1991, the Legislature created a Program to certify First Responders. The Program was to be implemented by the EMS Section in 1992. The mandate provided for 0.5 FTE for administration of the Program with revenue to be obtained from charges levied for the certification. However, the revenue generated by the certification program only provided about $10,000/year and the 0.5 FTE position was frozen in 1998 and has not been renewed.

Little else occurred to meet the recommendations of the TAT until 1992, when a Legislative Council Study Committee was appointed and charged with evaluating the legislative needs for EMS in Wisconsin. The deliberations of the Study Committee were codified in Acts 251 and 252 of 1993. As this legislation was making its way through the Legislature, the DHHS was able to acquire funding for a State EMS Medical Director and attain the appointment of a State EMS Advisory Board to be appointed by the Governor through the passage of Act 16. Act 16 provided $50,000/year to be awarded by contract to a State EMS Medical Director to be appointed by the DHHS. However, no additional resources were provided to cover this added mandate and resources were to be taken from the GPR sources already provided to the DHFS.

Acts 251 and 252 passed through the Legislature and were signed into law by Governor Thompson. The initial bill provided 8.5 FTE for support of the duties of the EMS Section. The amended bill provided 3.0 FTE, but the final Act 251 provided only 2.0 FTE to be reassigned from the DHFS. The original bill provided $390,500/ year in

support of EMS in Wisconsin, but the final version provided no GPR funding. In addition, the original bill added $600,000/ year for funding state and local EMS to be provided from Federal Department of Transportation Highway Safety funds, but this provision was struck down with the net result that no resources were made available from DOT Highway Safety resources.

Act 251 mandated that the State EMS Board develop 10 reports to the Legislature as its first order of business. No resources were added to support the activities of the EMS Board. Included in these reports was an evaluation of the formula used for distribution of FAP resources. The first of these reports sent to the Legislature by the EMS Board recommended the development of a regionalized, statewide EMS system. The second of the Regionalization reports identified the benefit:cost relationships in EMS in Wisconsin and noted that regionalization could provide many of the services needed to support EMS. It calculated the in-kind contributions provided by the volunteer EMS services at $44-72 million per year using a base pay rate of $10/hour for the volunteer services. This was put forward as the potential cost to the citizens of the State if the volunteer system in the State could not be sustained. The Board could not identify another acceptable formula for the distribution of the $2.2 million in FAP funds. The Board identified a host of potential sources of funding for EMS. Unfortunately, none of these has been pursued. In subsequent action, the Board recommended and the DHFS agreed to withhold $30,000 of the $2.2 million for support of grants (1999). This funding was distributed for the first time in 2000.

Recognizing that EMS still were not able to *develop* further, several attempts were made to gather additional funding for the support of EMS in Wisconsin. Separate attempts were made to gain funding from mandatory seat-belt legislation and bicycle helmet legislation. Each of these efforts failed to generate additional funding needed by EMS.

Act 200 was passed in 1995 and implemented in 1996. Act 200 created a mechanism that provided liability exemption for emergency responders who honored Do-Not-Resuscitate orders. Although the EMS Section was charged with producing the administrative rules necessary to implement this law and for the administration of the Program, no FTEs or funds were allocated to support this program.

In 1997, the Legislature passed Act 154 that was signed into law by Governor Thompson in 1998. This Act required that the Secretary of DHFS appoint a State Trauma Advisory Committee (STAC) to recommend a mechanism by which a Statewide Trauma System could be developed and implemented in Wisconsin. The initial bill designated 1.0 FTE for support of this Committee. However, no FTEs accompanied the Act and a budget of only $8,000 was provided with this mandate. The formation of the Committee was delayed for more than a year until funding of a position to support this mandate was obtained through the DHFS budget process. The position became available July 2000 along with a budget of $80,000 ($45,000 for salary and fringe benefits, $10,000 for evaluation of the options available for the development of a statewide Trauma Registry, $17,000 for evaluation of hospital capabilities, and $8,000 for general support activities). The STAC filed its report on 01 January 2001. The sources suggested for funding of the development of a regionalized trauma system was directed to adding a $1 assessment (surcharge) to the motor-vehicle registration fees: this would generate some $5.2 million for the support of EMS and the Trauma System in Wisconsin. This recommendation was presented to the Joint Finance Committee for action. The Joint Finance Committee, however, forwarded the recommendation back to the Legislature.

Given the tight budget setting, this recommendation was not acted on by the Legislature. Instead an alternative, stopgap measure was proposed by Senator Robson and Assemblyman Johnsrud to provide interim support of **$390,000** for 2001 and **$540,000** for FY 2002 to facilitate the development of Regional Trauma Councils recommended by the STAC and the EMS Board. The source of the funding was to be Block Grant funding provided to the Department of Transportation as Highway Safety funds. The amendment passed the Legislature, but was vetoed by the Governor. Thus, currently, there are no resources available for the development of the Statewide Trauma System mandated by the Legislature and the Administration. **[Add current funding for RTACs]**

The 1998 Act 27 created a requirement that all healthcare and daycare providers be checked for criminal history. The task of developing administrative rules for its implementation and for its ongoing support was assigned to the EMS Section. Two 9-month project positions were assigned, but no ongoing support was provided.

The 1999 Act 7 created a law that allowed the public to use "smart" defibrillators (Automatic External Defibrillation; AED) in the assessment and treatment of victims of sudden cardiac death. The EMS Section was mandated to establish the standards, administrative rules, and integrate the program with local EMS Providers. No positions or resources were provided to support this ongoing activity.

Also in 1999, Act 56 mandated that all medical first responders be certified by the EMS Section. The EMS Section was responsible for the development of the administrative rules, provision of training and standards for the same, licensing of the personnel, investigation of complaints and scope of practice violations, and integration of the new providers into the rest of EMS in the State. No personnel or other resources were provided to the Section for this ongoing activity.

It is important to note that the EMS Board and its Physician Advisory Committee participated in the development of these programs. The Board consists of volunteer members appointed either by the Governor or by the Board. The activities of the Board relative to the above mandates also had to be provided with staff support from the EMS Section.

. Lastly, the TAT of the NHTSA returned for a re-evaluation of EMS in Wisconsin in April of 2001. The Introduction to the Report summarized the:

> *Despite the outstanding progress of the past eleven years, much remains to be done. Some of the barriers to progress that existed eleven years ago are still present today. Dedicated people throughout the state, both paid and volunteer, doing a job with little recognition and inadequate resources have created monumental achievements. But even dedication and hard work can carry Wisconsin only so far. Currently, resources are being cut and personnel and financial support to maintain and continue improving the EMS system in Wisconsin have eroded to the point that the system is in danger of collapse. Even with a host of volunteers, a stable, continuing funding source must be obtained for the Bureau of EMS and Injury Prevention and personnel resources must be allocated to meet the demand for services to the public, the EMS volunteer and career personnel and other EMS system partners. The political leadership in Wisconsin must address the real needs facing the Wisconsin EMS system and ensure that stable funding mechanisms and personnel resources are available to maintain a good system and make it even better.*

Summary

Although the responsibilities of the EMS Section have been increasing progressively and the limited resources of the Bureau and Section have been unable to provide either the

technical or adequate financial support the to the services, a stable funding source to support the evolving EMS systems in the State has not been provided. The current system not only does not have the resources to promote enhancement of the services provided, but actually is in danger of disintegration.

IX. Increasing Demands on the Bureau of EMS and Injury Prevention of DHFS

The EMS Section of the Bureau of EMS and Injury Prevention has 10 approved positions (FTEs) (Table IX-1). The total support provided for the personnel is $777,708 per year. Resources for the Funding Assistance Program (FAP) totals $2.2 million, which is distributed to the EMS Providers across the State. No position (FTE) is provided to support the FAP. During the past decade, the scope of responsibility for the EMS Section has increased dramatically without a corresponding increase in staff. During this period, six legislative acts have been enacted that directly pertain to EMS. Only one of those acts had staff positions (2 FTE) as a component of the act. A one-year supplement has been provided through the Budget Reconciliation Act or FY 2002 to support the formation of Regional Trauma Advisory Councils.

Program Area	**FTE**	**Funding/Appropriation Source**	**Budget**
Administration	1.0	GPR - General (101)	$90,046
Administration	1.0	Fed Prevention -General (190/732)	64,000
EMS	4.25	GRP - EMS (101/051)	397,708
EMS	4.75	Fed Prevention - General (190/732)	300,000
First Responder	0.0	PRO (144)	0
EMS-Trauma	1.0	Interagency DOT (167/962)	80,000
Medical Director	0.25	????	50,000
TOTAL	**10.0**		**$827,708**
Funding Assistance for Providers	0.0	Act 101 Funding Assistance Program (101)	$2,200,000
TOTAL	**10.0**		**$3,477,708**

Table IX-1—Current funding of the EMS Section of the Bureau of EMS and Injury Prevention

A substantial part of the increased scope for the EMS Section is tied directly to the requirement to support its advisory groups. The EMS Section has three assigned formal advisory groups: (1) the EMS Board; (2) the EMS Physician Advisory Committee; and (3) the State Trauma Advisory Council, plus a contracted State EMS Medical Director. The three advisory groups and their formal sub-committees are comprised of >100 individuals providing input to the EMS Section or a ratio of 10 advisors per staff person. Although the volunteer contributions and advice of these groups is extremely valuable, there also is a considerable amount of work associated with these groups. The meeting times alone for the groups will involve staff participation in 28 days of meetings during this year. Support also is provided for the State EMS Medical Director.

It is extremely fortunate that volunteer members of these advisory groups have devoted many hours to doing much of the committee work themselves. Nonetheless, support of these groups needs to be a high priority for the EMS Section, and additional resources would be needed to provide that level of support. If more staff could spend dedicated time on some of the advisory group functions and recommendations, implementation of new initiatives could be done on a timelier basis.

The ability of the EMS Section to provide adequate support to individual services (e.g., technical support, data collection and analysis, grant generation, etc.) also is limited. The same resource issues summarized above for the advisory bodies also pertain to support of EMS providers. The main role of the EMS Section should be to provide assistance and support to services, many of which have voluntary staff and administration. The section's ability to provide resources to providers to ease their administrative tasks, and further develop projects such as statewide data analysis, are also resource dependent.

A major part of volunteer services in the EMS system are disappearing, which is why central support of some provider functions is essential. Ambulance services are faced with shortage of volunteer personnel and increasing costs of providing care due to improving technology and replacement of equipment and supplies. There also is an increase in the demand for services, resulting in more runs and more paperwork. At the

local level, there is an increasing demand for higher levels of care. The ability to handle that demand will place an even greater need for State financial and human resources.

The NHTSA-TAT Report listed as the top priority the need for a stable source of funding for EMS in Wisconsin. The increasing administrative load on services is a trend that will continue as the scope of practice for EMS expands and requires that more medical oversight and quality improvement practices are in place.

Another increasing demand is the growing need for data about EMS in Wisconsin. Data are needed for: (1) Definition of the performance and hence, needs of the system; and (2) Quality assurance and improvement. Currently, there is no uniform data set or mechanism for the evaluation of services at the local, regional, or State level. Financial support was gendered from the Wisconsin Department of Transportation using Federal Highway Safety funds, for the development of a universal data collection and analysis system for the State. Great energy and substantial financial and human resources were invested in the development of a system that never met the needs of the EMS Community. Currently, the Quality Assurance subcommittee of the Systems Management Committee is developing recommendations for the beginning of a quality assurance program for EMS in Wisconsin.

Further, this lack of data about EMS has hampered repeated attempts to acquire adequate funding to support EMS in Wisconsin. It has not been possible to define the needs or propose solution for such needs without the data required to substantiate such needs.

X. Growth

The Project Hope study conducted for the American Ambulance Association (AAA) described the EMS as a "growth industry". The report documents that the number of ambulance services that receive Medicare payments increased from 27,813 in 1995 to 45,313 in 1996: a 61.4% increase. Furthermore, the report documents that the number of Emergency Medical Technicians (all levels included) increased from 426,524 in 1995 to 714,925 in 1996 (a 64.7% increase). The paramedic level experienced the greatest the greatest increase of 142% in the two years (36,240 to 87,693)! The explanation for this growth spurt is not clear. It is unlikely that the growth occurred in the industry and is more likely that more services began to bill Medicare for the provision of EMS in 1996 than in 1995. This is consistent with the perception that fewer services were providing EMS free of charge to their customers.

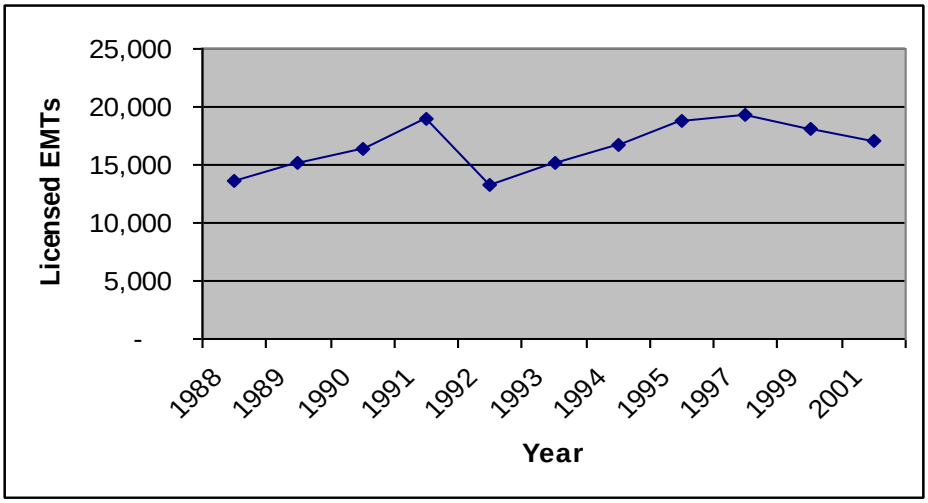


Figure X-1—Number of EMTs licenses in Wisconsin

Such changes did not occur in Wisconsin. The number of licensed ambulance providers had remained constant between 440 and 460 for the last decade (1990s). However, at last count (2001), there only were 438 EMS providers in the State as indicated in Figure X-1 above. There has been no period of sustained growth in the number of licensed EMTs in Wisconsin for more than a decade. Of some concern is the gradual decline in the numbers of EMTs since 1997 with a decrease of 2,193 (-11.2%). Recent data collected by the EMS Section using self-reporting by the individual providers recorded that only 12,310 licensed EMTs were making their licenses and services

available to the providers in 2001: it seems as if only 72% of the licensed EMTs were active during 2001. This observation is consistent with the perception that the supply of available EMTs is declining. Loss of the volunteers would be a tragic blow to EMS in Wisconsin.

XII. The Medicare Example

National Overview

Data used in this section are derived from the studies by the Inspector General of the US DHHS. Although the data were obtained for 1995 and 1996, it is believed that the generalization used will be helpful in understanding the demography of Wisconsin in comparison to other states. Also, data are separated into Metropolitan Statistical Areas (MSAs) and Non-Metropolitan Statistical Areas (NMSAs).

ALL STATES COMBINED

Category/Type of Service		Services		Medicare Allowed Amount		
		Number	Percent	Amount	Percent	Ave$/run
MSA						
	ALS	2,148,657	35.8	$ 682,731,389	41.8	$ 318
	BLS	3,665,397	61.1	$ 876,749,616	53.7	$ 239
	Unknown	189,487	3.2	$ 72,850,592	4.5	$ 384
	SUBTOTAL	**6,003,541**	**80.9**	**$ 1,632,331,597**	**82.6**	**$ 272**
No--MSA					-	
	ALS	616,746	43.5	$ 185,671,938	54.2	$ 301
	BLS	743,386	52.5	$ 133,975,863	39.1	$ 180
	Unknown	56,051	4.0	$ 23,165,570	6.8	$ 413
	SUBTOTAL	**1,416,183**	**19.1**	**$ 342,813,371**	**17.4**	**$ 242**
TOTALS		**7,419,724**	**100.0**	**$ 1,975,144,968**	**100.0**	**$ 266**
	ALS	2,765,403	37.3	$ 868,403,327	44.0	$ 314
	BLS	4,408,783	59.4	$ 1,010,725,479	51.2	$ 229
	Unknown	245,538	3.3	$ 96,016,162	4.9	$ 391

Table IX-1—Numbers of Medicare ambulance transports and reimbursements paid for all of the states, the District of Columbia, Puerto Rico, and the US Virgin Islands

Sample sizes—For the analysis, the IG included data from 7,419,714 ambulance conveyances for 2hich a total of $1.975 billion was paid to the providers (Table IX-1). Of these totals, 59.4% of the conveyances were billed as Advance Life Support (ALS) and 59.4% as Basic Life Support (BLS). Thus, in 1995, the majority of the conveyances were conducted by BLS services. The remainder (3.3%) of the conveyances could not be classified as either ALS or BLS. However, although the BLS claims accounted for 59.6%

of the conveyances, the revenue paid for BLS conveyances only constituted 51.2% of the fees paid.

Provider types—The AAA study included data from 392 services. The sample included emergency (E) and non-emergency (NE) conveyances. According to the AAA study, 34% of the Medicare providers are fire-based, 10% are hospital based, 22% are government-owned, 18% are operated by non-profit organizations, and the remaining 12% are operated by commercial, for-profit organizations. Importantly, in the AAA sample, 58% of the services reported that they were rural while the investigators classified 53% of the reporting services were included in the NMSA definitions. This congruity allows the projection that the NMSA classification represents rural services. This assumption is used throughout the remainder of this discussion.

MSAs vs. NMSAs—Interestingly, conveyances in MSAs constituted 80.9% of the total number on conveyances while NMSA runs constituted the remaining 19.1%. Surprisingly, almost two-thirds of the conveyances in the MSAs were at the BLS level with a greater balance of the conveyances in NMSAs with ALS constituting 43.5% and BLS making up 59.4% of the runs. Of the total reimbursements distributed, 82.6% ($1.632 billion) went to services in MSAs while only 17.4% ($342 million) was distributed to NMSA services. In the NMSAs, greater reimbursement was provided to the ALS services in the more rural settings.

Reimbursement—Lastly, the average payment per conveyance for the country as a whole was $266 per run: $314 for ALS services and $229 for BLS services. Basic Life Support services in MSAs had the lowest average level of reimbursement per conveyance of only $180/ run while ALS services in MSAs had the highest levels. In all states and regions, the differences in reimbursement levels between ALS and BLS services were highly significant statistically. Furthermore, the regardless of the level of services provided, the level of reimbursement was higher for the same level of service in MSAs than in NMSAs. This disparity for the same level of care is of concern.

The study conducted by Project Hope for the AAA indicates that the level of reimbursement provided by services at all levels does not meet the costs to the services of providing the services (Table IX-2). The average costs for emergency conveyances for both the ALS and BLS were 70% greater than they were for non-emergency conveyances.

Service Level	Average Incremental Cost	Relative Value
ALS E	*$783***	2.9*
ALS NE	$460	1.7
BLS E	$470	1.7
BLS NE	$270	1.0

Table IX-2—Estimated incremental costs of providing EMS Services derived from the Project Hope Report to the American Ambulance Association (2000). The number of respondents was 112 and the correlation (R^2) was 0.839. (ALS = advance life support; BLS = basic life support; E = emergency conveyance; NE = non-emergency conveyance; *estimated from 1991 and 1999 studies; ** calculated by SMC from relative value)

Data from the same 24 states used in the Report from the NASEMSD are compared as well as from the states in the Wisconsin Region. The latter include: Illinois, Indiana, Iowa, Michigan, Minnesota, and Wisconsin.

Overview of Wisconsin

Analyses identical to the National sample noted above were conducted for each state, the District of Columbia, and Puerto Rico and the Virgin Islands. The data obtained for Wisconsin are summarized in Table IX-3.

Sample size—A total of 113,931 runs for which Medicare reimbursement was contained are included in the sample for which $25,757,794 were paid to the providers. Of these totals, 72.0% of the Medicare conveyances were conducted at the BLS level and 20.6% were provided at the ALS level. This is in contrast to the 59.4% and 37.3% respectively in the total national sample.

MSAs vs. NMSAs—Similar to the national sample, 76% of the conveyances identified in Wisconsin occurred in the MSAs while 20% were provided in the rural, NMSAs: This compares with 80.9% and 19.1% in the National sample. However, in the MSAs, 72% of the conveyances were provided at the BLS level (vs. 61%) nationally). An even greater

WISCONSIN

Category/Type of Service		Services		Medicare Allowed Amount		
		Number	Percent	Amount	Percent	Ave$/run
MSA						
	ALS	17,969	20.7	$ 5,513,531	27.2	$ 307
	BLS	62,308	71.9	$ 12,604,319	62.3	$ 202
	Unknown	6,363	7.3	$ 2,125,220	10.5	$ 334
	SUBTOTAL	86,640	76.0	$ 20,243,070	78.6	$ 234
No--MSA					-	
	ALS	5,538	20.3	$ 1,889,976	34.3	$ 341
	BLS	19,770	72.4	$ 2,920,997	53.0	$ 148
	Unknown	1,983	7.3	$ 703,751	12.8	$ 355
	SUBTOTAL	27,291	24.0	$ 5,514,724	21.4	$ 202
TOTALS		113,931	100.0	$ 25,757,794	100.0	$ 226
	ALS	23,507	20.6	$ 7,403,507	28.7	$ 315
	BLS	82,078	72.0	$ 15,525,316	60.3	$ 189
	Unknown	8,346	7.3	$ 2,828,971	11.0	$ 339

Table IX-3—Numbers of Medicare ambulance transports and reimbursements paid for all of the states, the District of Columbia, Puerto Rico, and the US Virgin Islands

contrast occurred at the NMSA level in which 72% were provided at the BLS level compared to 52% at the national level. These attest to the more rural characteristics of EMS in Wisconsin than is apparent from the overall national sample.

Reimbursement—Similar to the national sample, a lower level of reimbursement was provided for BLS services relative to its proportion of runs and vice versa for ALS runs. However, the reimbursements received for BLS services doubled those provided for ALS services. Of concern is the observation that while the level of Medicare reimbursement for ALS services/conveyance is the same as it is for the national average ($315/conveyance vs. $314 nationally, the level of reimbursement/run is substantially lower in Wisconsin than it is for the National average: $189 vs. $229 overall and $202 vs. $239 for MSAs and $148 vs. $180 for NMSA.

24 State Sample

An analysis of the data from the same 24 states for which data were available from the State EMS Directors and presented later in this report was done for comparison (Table IX-2). The sample consisted of 2.5 million conveyances for which Medicare claims were paid. A total of $455 million were paid by Medicare to services within these 24 states. This represents 24% of the total paid by Medicare. Overall, the distribution of conveyances between ALS and BLS are the same as for the entire national sample (39.3% ALS and 57.3% BLS for the 24 state sample and 37.3% and 59.4% for the entire sample respectively). However, the distributions between MSAs and NMSA were more similar to those in Wisconsin. Furthermore, in this sample, the reimbursements generally were higher in Wisconsin than for the national averages. The overall average Medicare payment/conveyance was $181 vs. $226 for Wisconsin.

SELECTED 24 STATES						
Category/Type of Service		**Services**		**Medicare Allowed Amount**		
		Number	Percent	Amount	Percent	Ave$/run
MSA						
	ALS	507,524	29.9	$115,430,191	35.1	$227
	BLS	1,128,141	66.4	$197,417,347	60.1	$175
	Unknown	62,300	3.7	$ 15,735,266	4.8	$ 253
	SUBTOTAL	**1,697,965**	**67.4**	**$328,582,804**	**72.2**	**$194**
No--MSA						
	ALS	484,306	38.5	$57,417,561	45.4	$119
	BLS	316,996	38.5	$61,305,202	48.5	$193
	Unknown	21,436	2.6	$7,696,458	6.1	$359
	SUBTOTAL	**822,738**	**32.6**	**$126,419,221**	**27.8**	**$154**
TOTALS		**2,520,703**	**100.0**	**$455,002,025**	**100.0**	**$181**
	ALS	991,830	39.3	$172,847,752	38.0	$174
	BLS	1,445,137	57.3	$258,722,549	56.9	$179
	Unknown	83,736	3.3	$23,431,724	5.1	$280

*States selected are the same as those presented in the NAEMSD data

Table IX-3—Medicare data for the 24 states selected on the basis of the NAEMSD data

These differences are demonstrated graphically in Figures IX-1 and IX-2. For Wisconsin, again the proportion of ALS runs constituted only 26% of the sample vs. 39.3% for the national average while BLS conveyances constituted 72% of the sample vs. 57.3% for the 24 states. Thus, another grouping for comparison was sought.

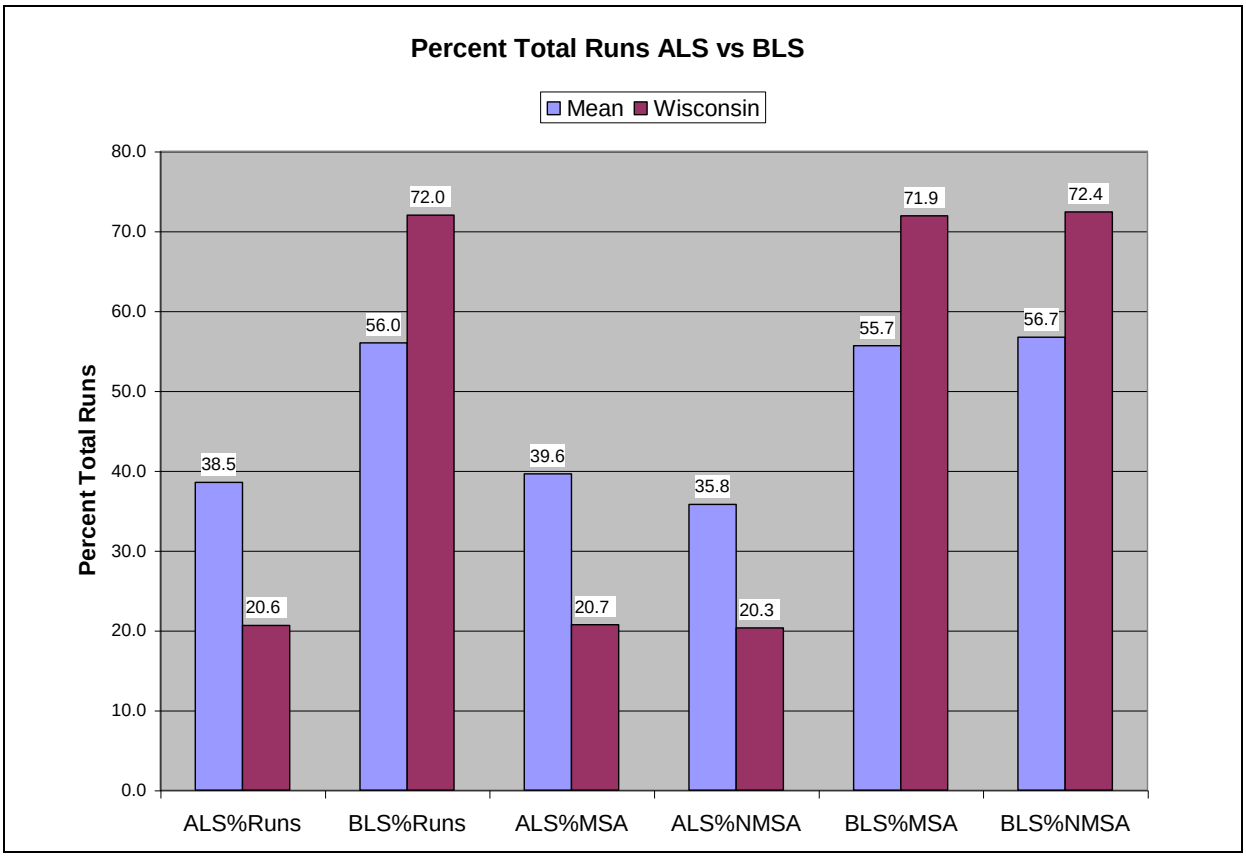


Figure IX-1—Comparison of the proportion of ALS vs. BLS conveyances in the 24 selected states with Wisconsin

Overall, the AAA sample indicated that 66% of all conveyances were performed by ALS services. This is in contrast to the 37% ALS of the total runs reported in the Medicare study. Of the former, 50% of the total runs were ALS-E and 16% were ALS-NE. An additional 2% of the conveyances were comprised of Critical Care Transports.

Thus, the Medicare study may not be representative of all ambulance conveyances. This study may not be representative of all ambulance conveyances. Thus, a more cogent data set was sought for comparison.

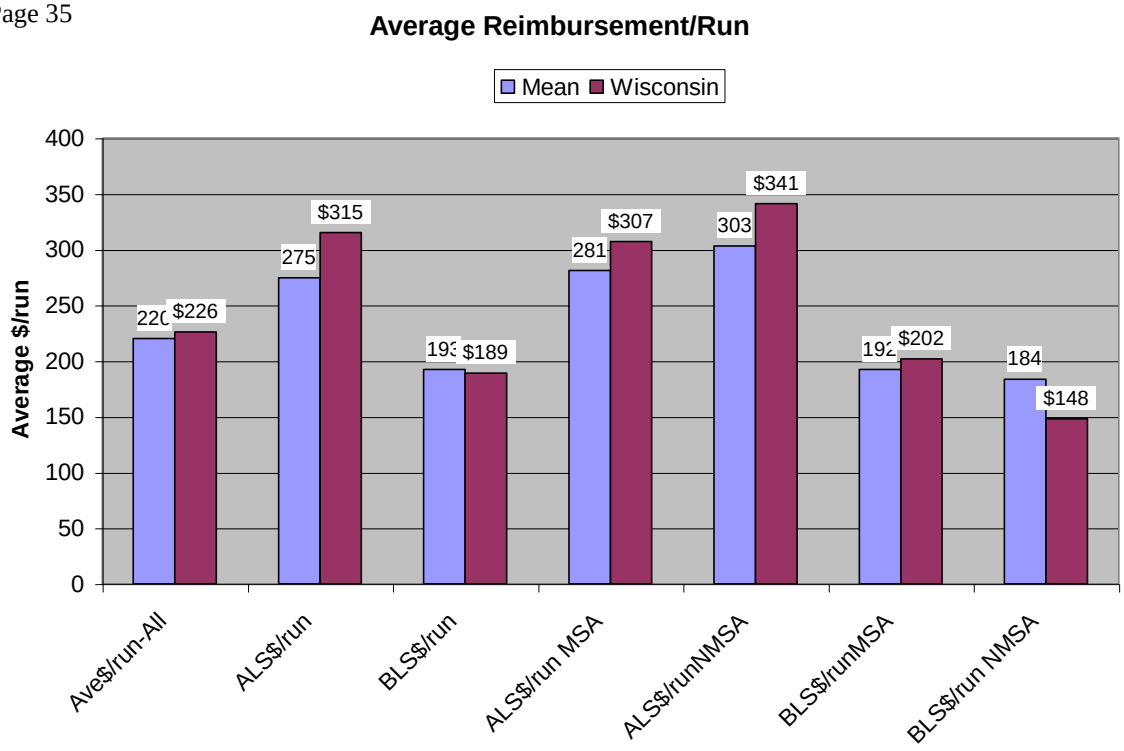


Figure IX-2—Comparisons of the data for Medicare reimbursements between the 24 state sample and Wisconsin.

Regional Sample

In an effort to gain a better understanding of how Wisconsin compares with other states that were more similar in structure and potentially in financing of emergency medical services, Medicare data for states surrounding Wisconsin were analyzed separately from the combinations discussed above. These data are summarized in Figure IX-3 and IX-4. States included: 1) Illinois; 2) Indiana; 3) Iowa; 4) Michigan; and 5) Minnesota. Data from Michigan had not been included in the above groupings.

Demography of Conveyances—In terms of the average proportion of runs for which Medicare claims were submitted that were attributed to ALS and BLS, Wisconsin most resembles Illinois. In Wisconsin and Illinois, the BLS conveyances comprised the majority in MSAs and NMSAs. A similar pattern was present in Indiana, but the differences were not as marked. In Iowa, Michigan and Minnesota, ALS conveyances comprised the majority of conveyances. Wisconsin was the only state in which the proportion of ALS conveyances in NMSA (rural) exceeded those in MSAs (urban-

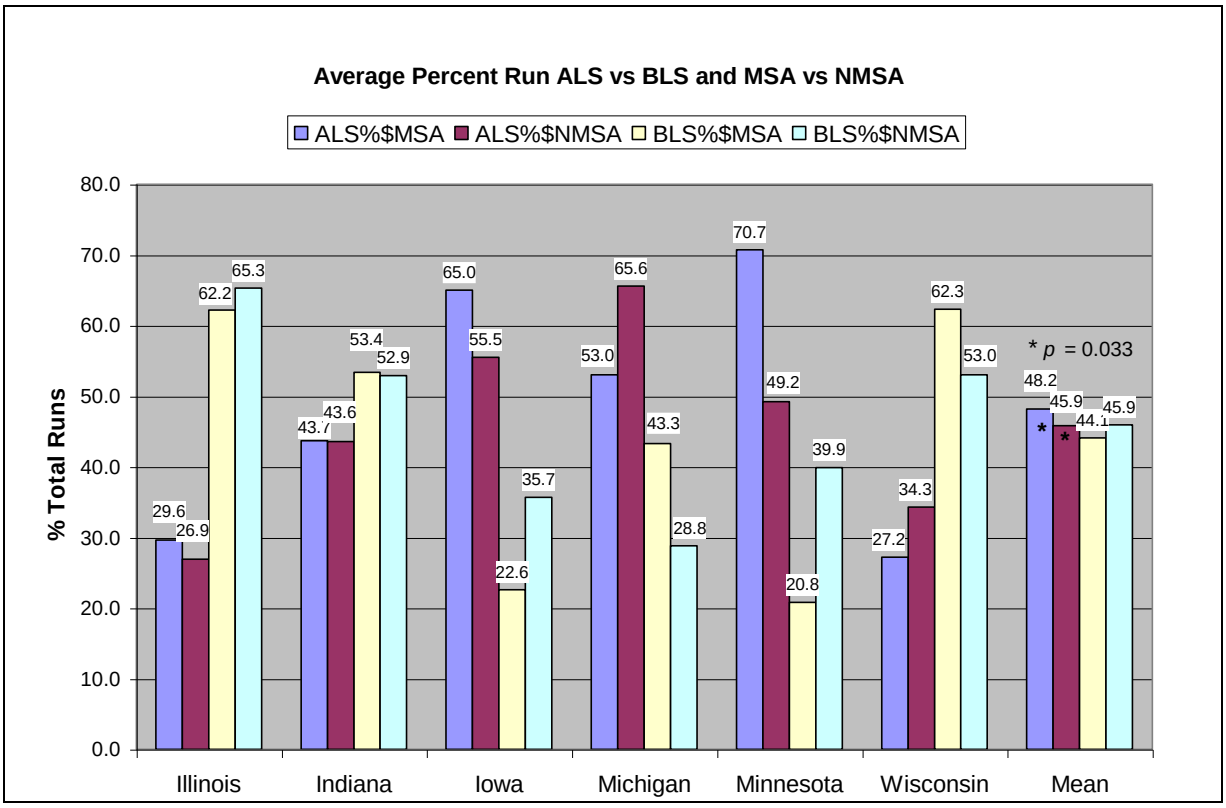


Figure IX-3—Comparison of the demography of the Medicare conveyances in Wisconsin and neighboring states.

suburban). Also in Michigan, the proportion of NMSA conveyance exceeded those in the MSAs.

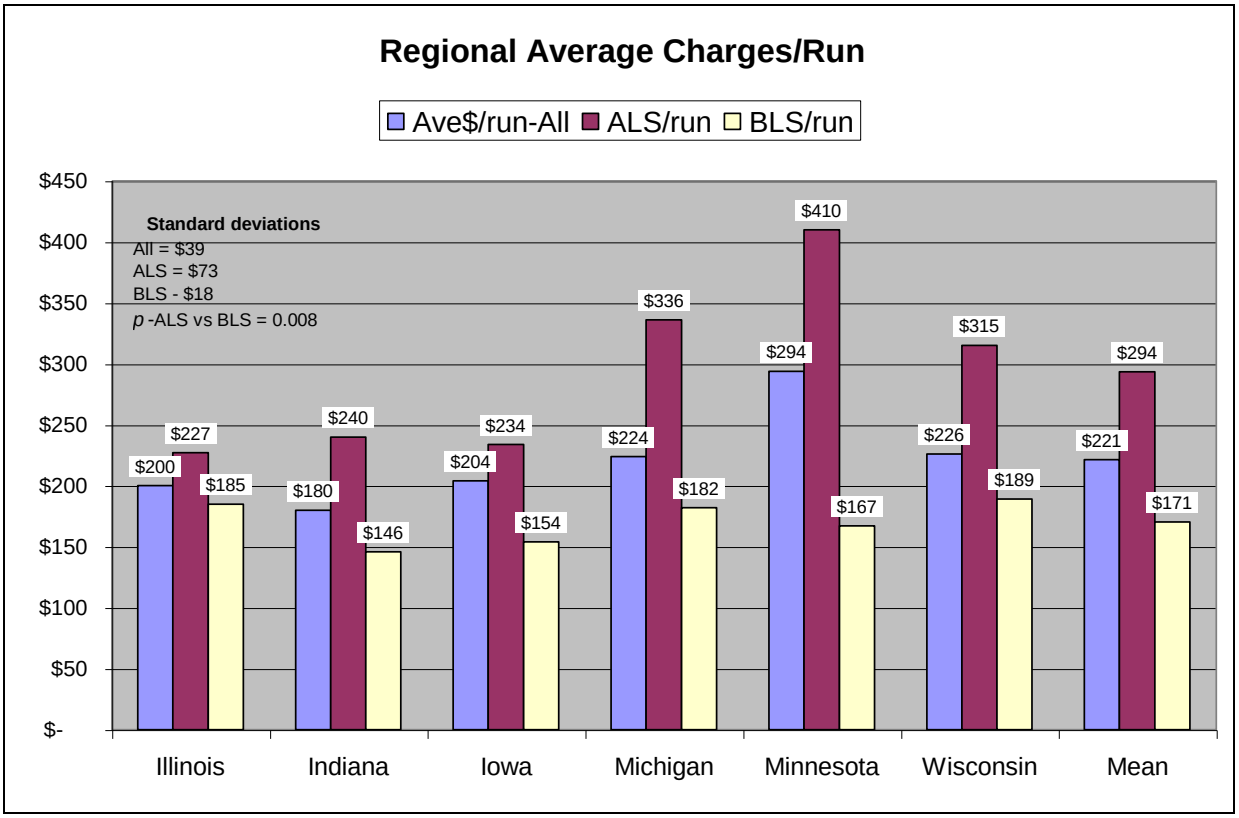
The reasons for these differences are not clear. [Let's discuss this!!!]

Regional Charges per Run—The charges to Medicare for conveyances in Wisconsin were very close to the averages for the six states in the regions (Figure IX-5). As with all of the states, charges to Medicare for ALS exceeded those for BLS conveyances (p = 0.008). However, the average charges for ALS services in Wisconsin lagged behind those in Michigan and in Minnesota, but exceeded the average charges submitted by the other

states. On the other hand, charges submitted for BLS conveyances were very close to those of the other states, but averaged slightly higher (including the mean values).

Figure IX-6—Comparison of the average charges to Medicare for Wisconsin compared to other states in the region.

Similar patterns were present when the data were examined relative to Medicare reimbursements between MSAs and NMSAs (Figure IX-7). All of states except Illinois and Indiana receive more average reimbursements for ALS conveyances in NMSAs than



in MSAs. Generally, the funds received for BLS conveyances in MSAs exceeded those in NMSAs (except for Minnesota). However, the gap between MSAs and NMSAs was greatest for Wisconsin ($154/run). The averages for the region differed only by $6/run.

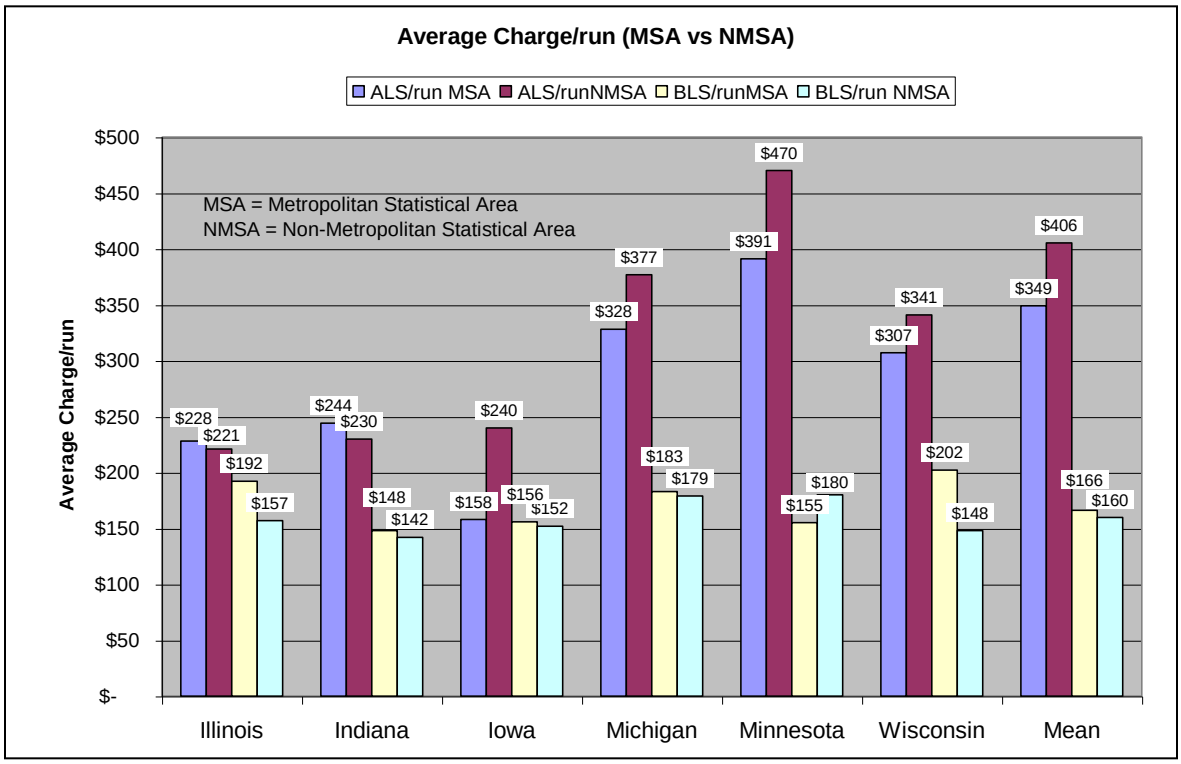
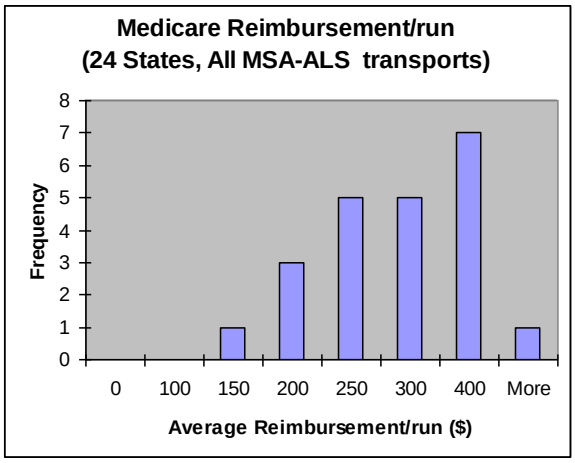
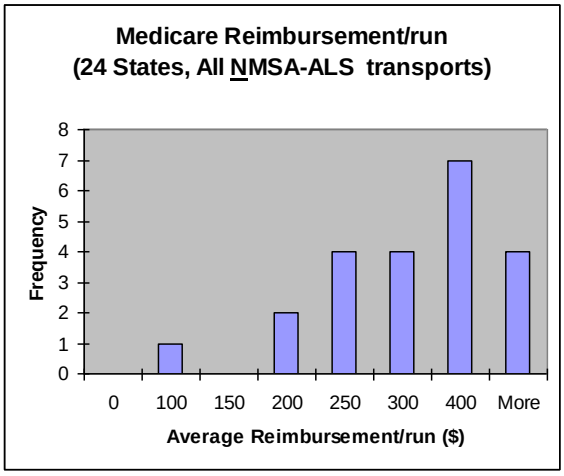
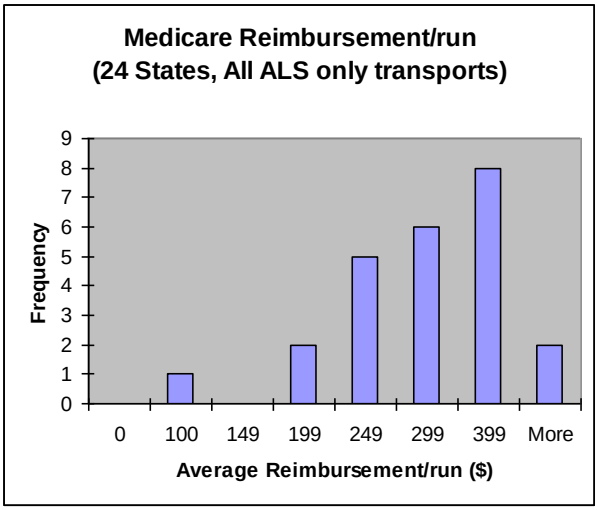


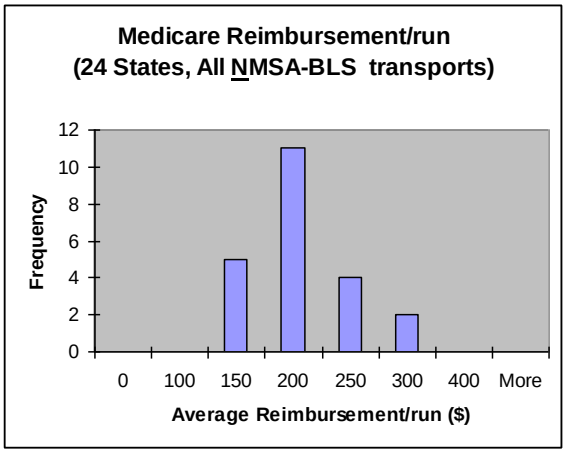
Figure IX-7—The average Medicare reimbursements/run received for MSA and NMSA conveyances in the six states in Wisconsin's region.

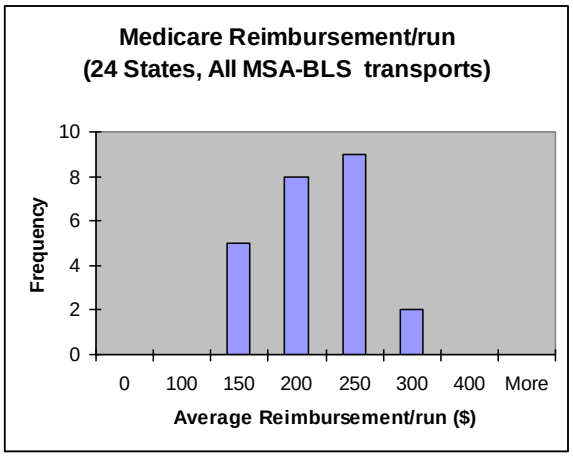
Overall, the AAA sample indicated that 66% of all conveyances were performed by ALS services. This is in contrast to the 37% ALS of the total runs reported in the Medicare study. Of the former, 50% of the total runs were ALS-E and 16% were ALS-NE. An additional 2% of the conveyances were comprised of Critical Care Transports. Thus, the Medicare study may not be representative of all ambulance conveyances.


Medicare Reimbursement/run
(24 States, All MSA-ALS transports)
Frequency
0 1 2 3 4 5 6 7 8
0 100 150 200 250 300 400 More
Average Reimbursement/run ($)


Medicare Reimbursement/run
(24 States, All NMSA-ALS transports)
Frequency
0 1 2 3 4 5 6 7 8
0 100 150 200 250 300 400 More
Average Reimbursement/run ($)


Medicare Reimbursement/run
(24 States, All ALS only transports)
Frequency
0 1 2 3 4 5 6 7 8 9
0 100 149 199 249 299 399 More
Average Reimbursement/run ($)


Medicare Reimbursement/run
(24 States, All NMSA-BLS transports)
Frequency
0 2 4 6 8 10 12
0 100 150 200 250 300 400 More
Average Reimbursement/run ($)


Medicare Reimbursement/run
(24 States, All MSA-BLS transports)
Frequency
0 2 4 6 8 10
0 100 150 200 250 300 400 More
Average Reimbursement/run ($)

XIII. Current Mechanisms of Funding EMS in Wisconsin

1. Funding Assistance Distributions/Formula

The current Funding Assistance Program (FAP) was established 1989 Act 102 beginning on 20 December 1989. It provides supplemental funds for ambulance services owned or operated by a municipality, volunteer fire department, or a nonprofit organization and by ambulance services that contract with a municipality to provide first-in ambulance response to a particular geographic area. The total EMS-FAP allocation is $2.2 million per year of which $800,000 is set-aside for EMT-Basic and EMT-Basic refresher training. It does not have a sunset. It has the following provisions:

1. Providers must sponsor individuals for training and the provider is responsible financially if the person sponsored does not complete the course successfully;
2. Only persons sponsored by an Act 102-eligible provider can have their tuition paid using FAP funds;
3. The costs of examinations costs can only be paid one time per individual;
4. The remaining $1.4 million must be divided among ambulance providers at the end of the fiscal year;
5. The formula provides a base rate of $3588 to each service plus $0.03 per capita in the service area;
6. FAP funds can be used for the purchase and maintenance of ambulances, vehicle equipment, EMS supplies, EMS equipment, and/or training and education for personnel;
7. FAP funds can be placed in escrow to contribute to the purchase of more expensive equipment, vehicles, etc.;
8. Funding must be directed to the EMS provider and not to the muncipality(ies) served;
9. Primary service area is the first-in service to a specific geographic primary service area or contract.

2. Resources Provided by Hospitals (Judy Jones to finish)

Wisconsin Hospitals are involved in the provision of emergency medical services: most **(?%)** support an emergency department, which is an important element of the EMS

system. In addition, some (?%) provide education and training to the prehospital component of the EMS system with particular emphasis on continuing education and quality improvement. Many support the activities, at least in-kind, of medical director services and (?%) support a full or part-time position of an EMS Coordinator.

Of the total of 130 hospitals in Wisconsin, …. operate their own prehospital emergency medical services by supporting its ambulance service. This is true particularly for those hospitals providing air-medical transport services or critical care, land transport services. Currently, other than for the aforementioned, hospitals do not contribute funding directly to supporting the services. Many do offer annual appreciation dinners and programs, and most offer refreshments to the crewmembers and space and some provide computer support for completion of ambulance reports. A few institutions offer supplies to restock the ambulances with supplies consumed by a patient received in the respective emergency department. Recently, such exchanges of supplies and equipments have been excluded from the reimbursement schedules to hospitals.

MORE????

3. Wisconsin Compared to Other States (NASEMSD Survey)

The NASEMSD collected financial data from 24 states for FY 2000. The total combined revenue acquired by the States was $1132,640,383. Hawaii led the way with $35,749,000 revenues collected (31.8% of all the revenue collected)! This equates to $2.94 per capita directed to support of the EMS system. The lowest total revenue was acquired by the state of Vermont ($502,555) followed closely by Rhode Island ($513,525).

As noted above, the Wisconsin Bureau for EMS and Injury Prevention obtained $3,334,000 in total revenue for EMS. This equates to only $0.64 per capital which ranks 18th among the 24 states studied. **).** The average of EMS revenues provided by the 24 states was $4,735,016 and the median of the values was $3,150,000. Thus, Wisconsin places just about at the median of the values.

Of the total revenues generated by the states, an average of 60.4% is distributed to the providers: the remainder is used to support administrative functions (Figure X.4.1). In Wisconsin, 66.0% of the total revenues are distributed to the providers with 34.0% being retained for administrative functions. Five of the states did not distribute any State funds

to the providers. The average amount distributed to the providers was $3,610,474. It should be noted that Hawaii far exceeded all of the other states in the amount of revenue collected and distributed. Hawaii distributed $31,207,240 (80% total revenue) to its providers, but still retained $4,541,724 in support of its administrative functions. This also is the most expensive of the EMS offices to administrate. Without including Hawaii in the calculations, the average amount of resources distributed to the providers is $2,077,375 per year, very close to the $2,200,000 distributed to the providers in Wisconsin.

Given the categories selected by the NASEMSD, comparisons of the sources of this revenue compared to the states combined are provided in Figure X.4.2 and X.4.3, and the data are provided in Appendix…. Overall, the states acquire 54% of their revenue from the states General Fund.

Of the total funding available in support of EMS in Wisconsin, 81% is provided from the State's General Revenue base. This compares to an average of 54% for the states that participated in the NAEMSD survey. Moreover, only 2% of the funding of EMS in Wisconsin originates from "Special" state funds, whereas, an average of 32% of EMS funding is provided through such funding. The "special" sources include committed portions from moving traffic violations, seat belt fines, motor vehicle registrations, surcharges, etc. Furthermore, 12% of the total $3.3 million revenue for EMS in the State is generated through the EMS for Children grant, whereas it comprises only 1-2% of the revenues generated in other states. It is important to note that this is soft money and cannot be depended upon as sustainable.

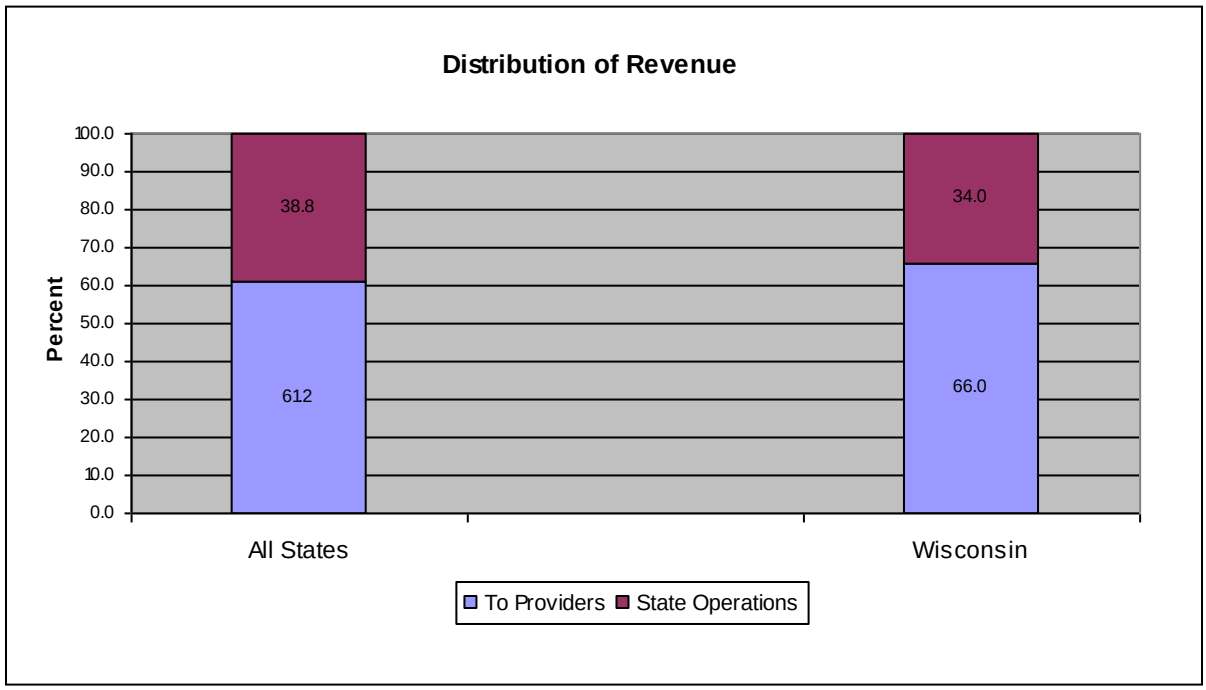


Figure X.4.1—Proportion of total state revenues distributed to EMS providers

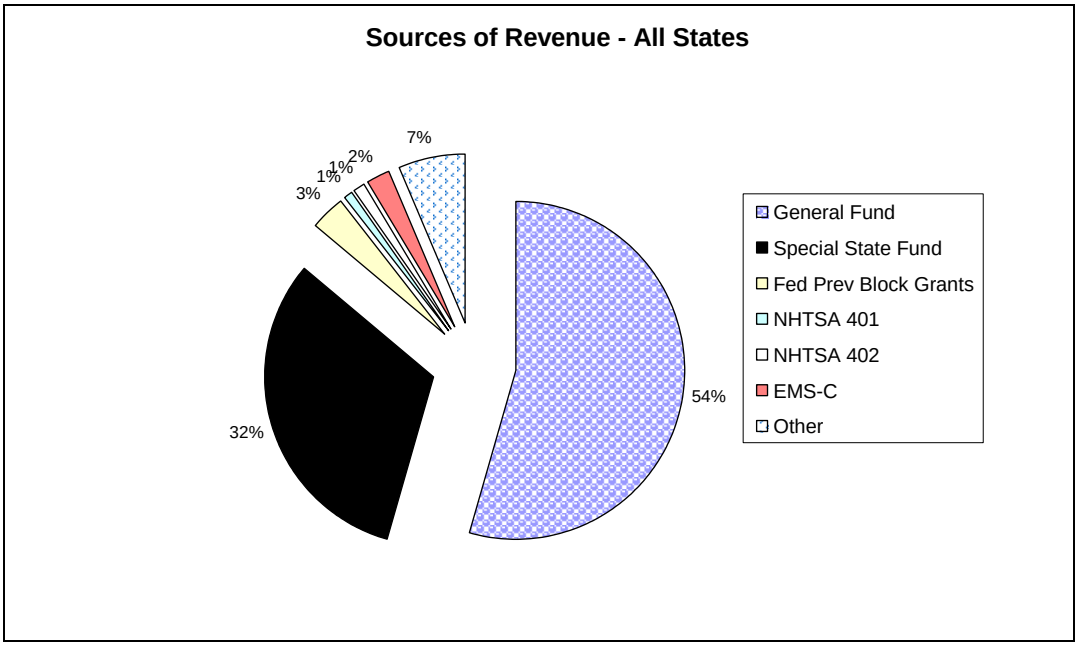


Figure X.4.2—Sources of revenue for the 24 states included in the NAEMSD survey

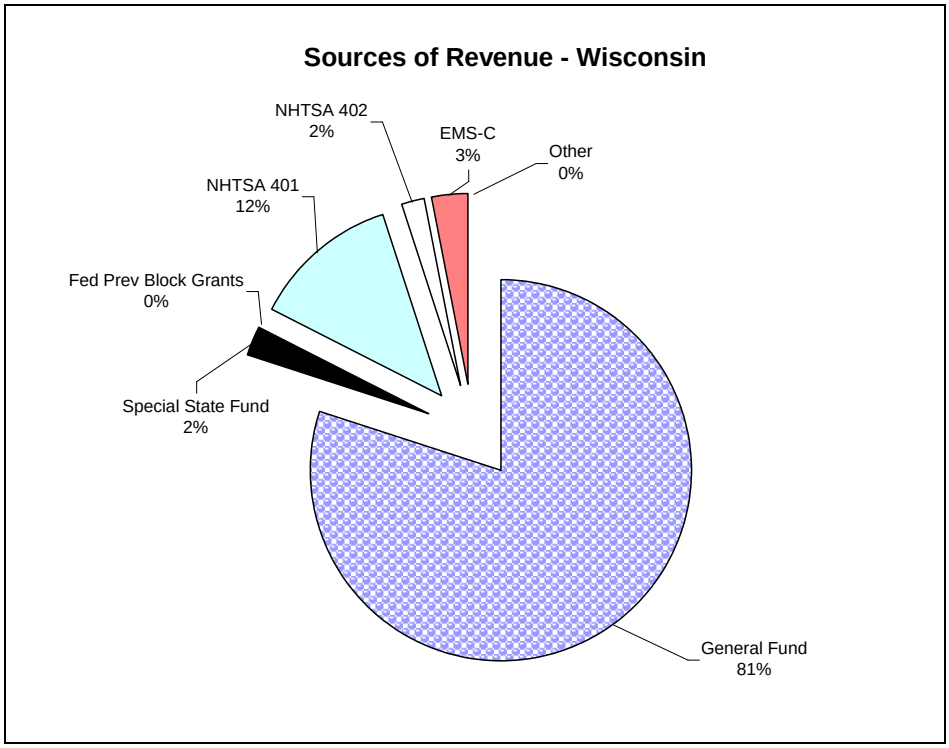


Figure VII.4.3—Sources of revenue Wisconsin as defined in the NAEMSD survey

5. Sources of Revenue for Providers

The average of the total incomes (including FAP contributions, not including educational support from FAP) of the services that participated in the survey/structured interviews was $……±$…….. with a broad range of $….. to $……. Importantly, ….% of the services that participated were rural volunteer, …% were municipal paid, and ….% were private, for profit. The distributions of total revenues generated by the forgoing categories of services are in Figures VI.-5.3-5. The proportions indicated are broken down by sources.

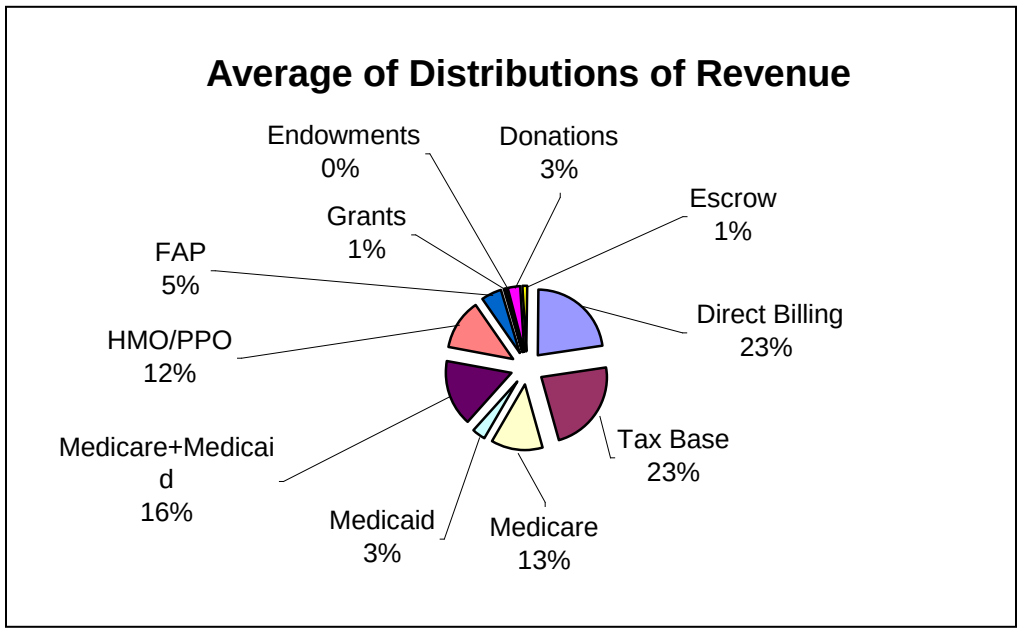


Figure X.5.1—Average distribution of revenue from study of EMS in Wisconsin

Of the total revenues received by the services that participated in the Wisconsin study, one-third (32%) was collected from Medicare and Medicaid combined. An additional 23% was acquired by directly billing patient's insurance carriers or directly from the patients. An additional 12% of the revenues was obtained from HMO/PPOs. Thus, more than three-fourths (77%) of the revenues were obtained by the billing for the services provided. When combined with the 32% billed to Medicare-Medicaid, Revenues from the tax base contributed only 23% of their total revenue, not including the Funding Assistance Program Revenue. One metropolitan service received 100% of its support

from the local tax base. This observation skewed the distribution so that the tax base for most services is substantially less than 23% of the total revenues. The FAP contributed only 5% of their total revenue!

The distributions of the revenue for each of these classes by source are provided in Figures X.5.2a–g. Interestingly, one-third (32%) of the services did not bill patients or their insurance carriers directly (Figure X.5.2.A). For more than another one-third of the services, income derived from directly billing patients constituted <20% of their income. The remaining one-third of the services acquired between 20 and 100% of their revenue from direct billing. Ten percent derived all of their revenue directly from patient sources.

More than two-thirds (68%) of the services did not obtain any revenue from the patients who were subscribers to an HMO or PPO. No services obtained >60% of their revenue from HMO/PPOs. Furthermore, between 45 and 60% of the services did not receive any revenue from Medicare or Medicaid. Thus, it is clear that most of the services do not bill for the services they provide!

The proportion of income received from Medicare or Medicaid was a bit more robust, but only about one-third of the services derived between 1-20% of their revenue from Medicare. None of the services received >60% of their revenues from Medicare.

Overall, taxpayers contributed little to the support of EMS (Figure X.5.2.F). More than half (54.5%) did not receive any support from local taxes. Less than 20% received the majority of their revenues from the local tax base. One major service received all of its revenues from the local tax base and did not bill for its services. The remaining services received some local tax funds.

Lastly, the Wisconsin Funding Assistance Program (Figure X.5.2.G) contributes little in support of local EMS in Wisconsin. Almost two-thirds (59.1%) of the services obtain one percent or less of their income from the State. More than three-fourths of the services derive <5% of their income from State funding. None of the services obtain >50% of their funding through the FAP.

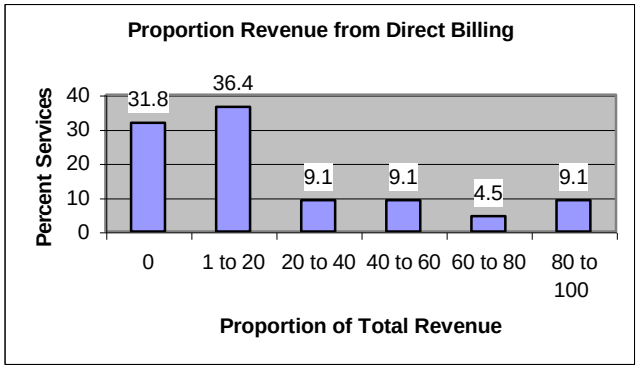


Figure X.5.2A—Distribution of revenue obtained by direct billing to patients or their insurance carriers

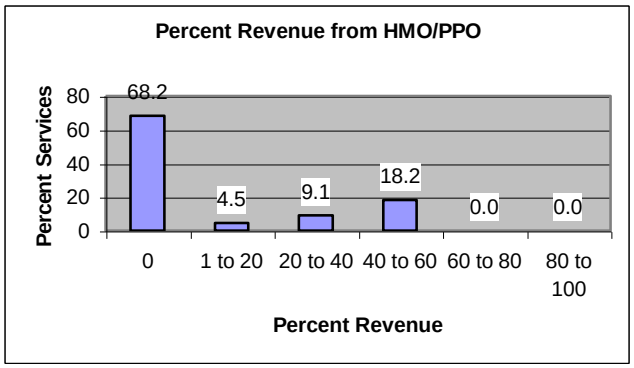


Figure X.5.2B—Distribution of revenue obtained by billing to HMO/PPO insurance carriers

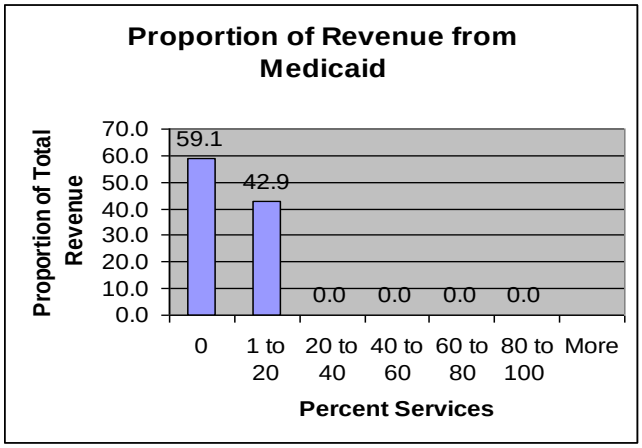


Figure X.5.2C—Distribution of revenue obtained by billing to Medicaid

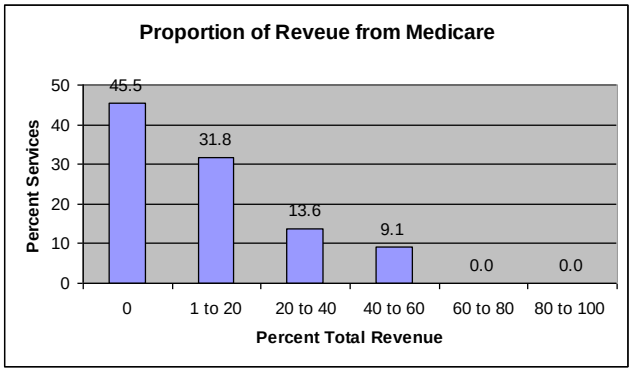


Figure X.5.2D—Distribution of revenue obtained by billing to Medicare

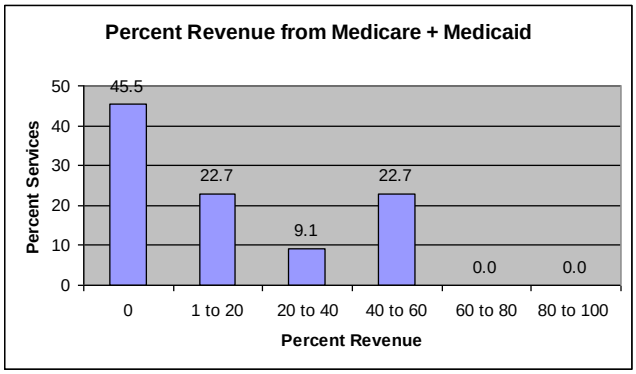


Figure X.5.2E—Distribution of revenue obtained by billing to Medicare+Medicaid

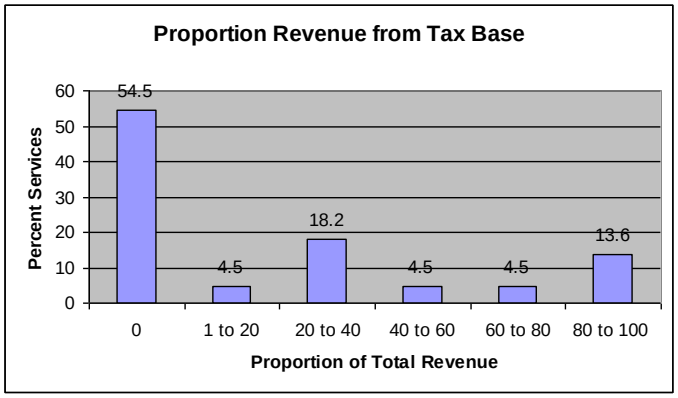


Figure X.5.2F—Proportion of revenue obtained from local tax base

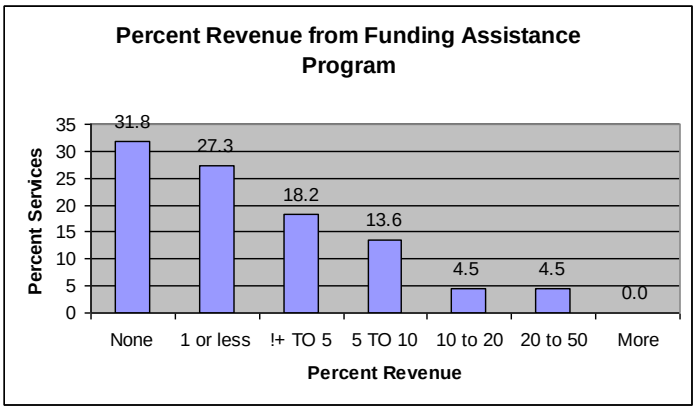


Figure X.5.2G—Proportion of total revenue obtain from State Funding Assistance Program

In an effort to identify if major differences exist in sources of funding for services that were more rural than urban, the distributions for those responding services that serve populations of >10,000 persons was compared with those that serve ≤10,000 persons (Figures X.5.3.A and .B). The principle differences include:

1) The services that provide care to the larger areas obtain twice the proportion of their revenues from direct billing than do the smaller services (34% vs. 17%);
2) Smaller services obtain 53% of their revenues from billing Medicare, Medicaid, or the patients HMOs or PPOs. Larger services obtain 31% of their total revenue from these sources;
3) Both groups receive about the same proportion of their income (24 and 22%) from the local tax base; and

4) Larger services receive 7% of their total income from FAP funds while the smaller services obtain only 4% of their revenues from FAP. This consistent with the present formula for distribution of FAP funding which is based on a per capita formula.

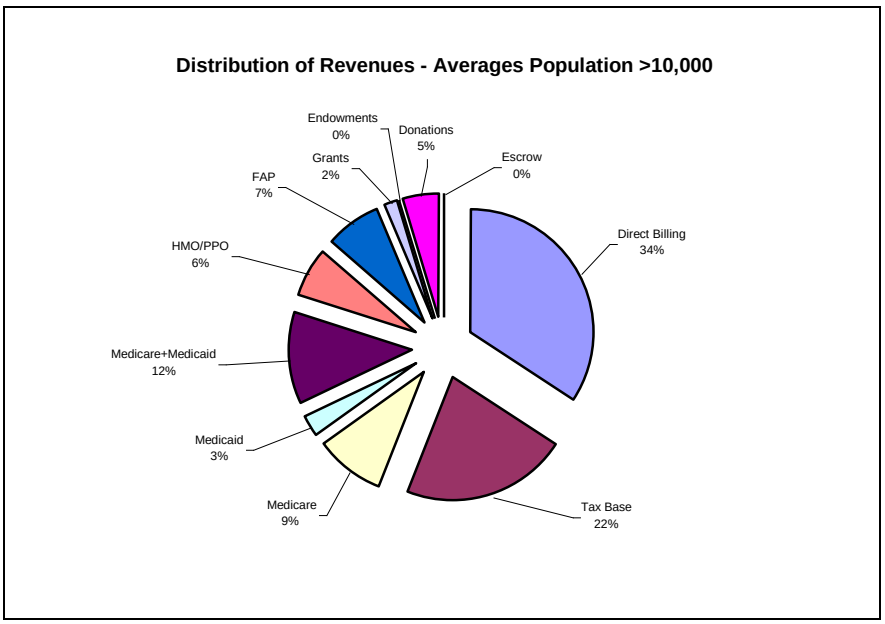


Figure X.5.3.A—Distribution of income for services providing medical care for areas with a population base of >10,000

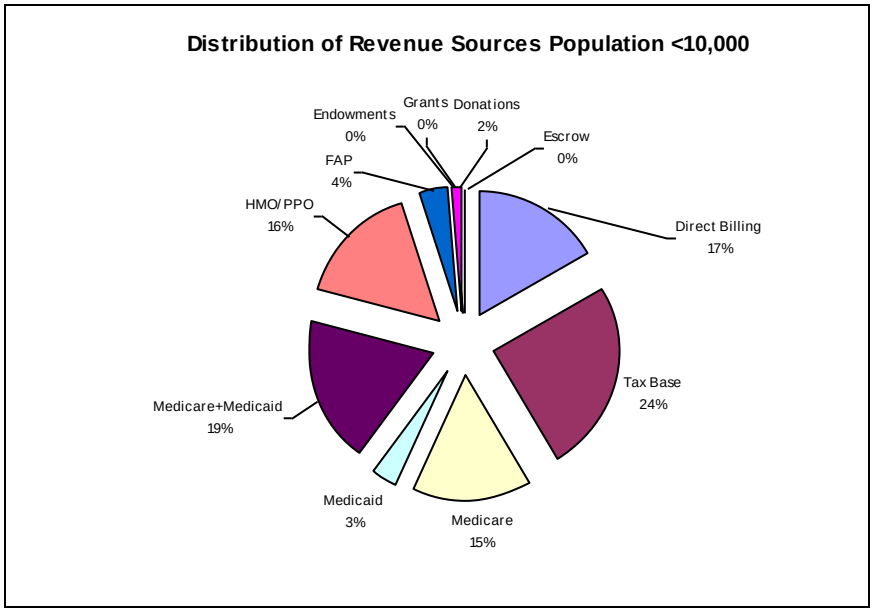


Figure X.5.3.B—Distribution of income for services providing medical care for areas with a population base of ≤10,000

It is important to point out that the analysis that follows does not incorporate the $800,000.00 made available for training, retraining and licensing of EMTs-Basic annually through resources provided by Act 102 (1989). While this training is not directed exclusively to the Wisconsin Technical College System, >95% is accomplished through the 16 districts comprising the Technical College System.

This appropriation has remained the same since it was first appropriated with the passage of Act 102 in 1989. However, the costs of providing the training have continued to increase. In 1989, the EMT-Basic course consisted as 110 hours of instruction (2.75 credits), the tuition charged by the Technical College, as established by statutory formula, was $32.35 per credit. The material fee for the course was $9.50 per credit. Thus, the total cost for tuition and material fees for the EMT- Basic course was $115.10. This stipend was provided through dispersement of Act 102 funds.

Due to progressive increases in the sophistication of prehospital emergency medical care and advances in technology that has been integrated into the EMT-Basic education and training, the current EMT-Basic course has been expanded from 110 hours to 140 hours (4 credits). The current tuition rate, which by statutory mandate is based on the rate of 14% of a system-wide instructional cost, is $67.00/credit and the materials fee has risen to $12.00/credit. Thus, total cost for tuition and material fees for the EMT-Basic student now is $316.00: a 175% increase over what it was in 1989.

While the increases in instructional costs have been difficult to assuage for the EMS Funding Assistance Program, they have been even more painful for the Technical College System. Under its funding formula, an average of 14% of instructional cost is borne by the student in the form of tuition, and approximately 21% is borne by the state in the form of state aids **[is this tax-base or Act 102???].** The lion's share of costs for all programs comes from the local tax-base that helps to support the Colleges. Typically, local taxation supports 65% of the instructional costs incurred in training an Emergency Medical Technician at any level.

Importantly, the EMS-Funding Assistance Program (Act 102) provides tuition reimbursement only for those people enrolled in EMT-Basic and EMT-Basic Refresher courses, and only for those people who are sponsored by EMS-FAP eligible provider organizations. The commitment to EMS education by the Technical College System goes

far beyond this relatively small group of students. In a typical year, in excess of 46,000 students will enroll in EMS-related courses ranging from four-hour community-based CPR courses through 1,200-hour EMT-Paramedic Associate Degree programs.

In addition to traditional instructional costs, EMS courses and programs are, by their very nature, exceptionally high in comparison**.** In excess of 80% of the EMS courses offered through the Technical College System are offered in off-campus locations. Six-to-one student to instructor ratios are mandated by the US Department of Transportation (DOT) National Standard Curriculum constitute an extraordinary of added expense. The cost of equipment and supplies and the amount necessary to maintain adequate inventories to allow training to exist simultaneously in hundreds of locations in the state is staggering.

As the sophistication of instruction has evolved, so has the need for courses designed to provide certification and recertification of the added advanced levels of knowledge and skills. These courses invariably include high-cost technological advancements and clinical components that require direct patient contact, and therefore, low student to instructor ratios, in a supervised clinical or field environment, thus also adding to the cost of training.

As concerns about rescuer and patient safety have evolved, so have the number and sophistication of training courses intended to ensure competency in dealing with blood-borne pathogens, air-borne pathogens, communicable diseases, and, most recently, weapons of mass destruction and terrorist acts of violence.

In summary; the Technical College system, and the few hospital-based training centers willing to take on the financial burden of providing EMS training, invest millions of dollars annually to train, retrain, certify, and test the laypeople, first responders, and EMTs that meet the prehospital patient-care needs of the citizens of Wisconsin each year. While enrollment, costs and sophistication of training have risen tremendously, there has been virtually no increase in the meager **[??????]** appropriation devoted to supporting only a small fraction of the cost of providing this training in the last 13 years. The ability to continue to keep pace with the evolving sophistication and increasing demands for training is seriously in question unless adequate resources in support of education and educational leadership can be found.

XI. Current Uses of Revenue / Costs

1. Distributions

Estimates of how the revenue was spent were a major objective of the study conducted by the Committee. Because of expected differences in distributions, the results were grouped into those for services whose staff primarily were paid for their services and those whose staff primarily consisted of volunteers. The only major differences were in proportion of revenue spent for personnel and training. As expected, the proportion of income committed to paying personnel was greater in the paid services (33%) than in the volunteer services (22%). One of the paid services committed >80% of its budget to paying personnel. Actually, it was anticipated that a much higher proportion of the income generated would be distributed to the paid services. Furthermore, it is important to note that 20% of the revenue obtained by the volunteer services is used to pay the volunteers. Many of the services pay personnel either an on-call minimum amount or pay a minimal amount per call to which they respond. Moreover, due to increasing difficulty staffing services with volunteers, many services have had to hire full time, paid emergency medical technicians to cover daytime shifts. However, the bulk of the personnel still covering these services is made up of volunteers who cover evenings, night, and weekends. These services were included in the volunteer group.

The other difference of note was that the volunteers invested a greater proportion of their smaller revenue base into training (15%) than did the paid services (10%). The remainder of proportions was not different between the paid and volunteer groups. Importantly, the administrative proportions of the budgets were the same. It would have been anticipated that the administrative costs would consume a larger proportion of the total revenue for the volunteer services as the revenue base is smaller. Thus, the total amount of resources invested by the volunteer services is very small. This is consistent with the failure of many of the smaller services to bill for their services.

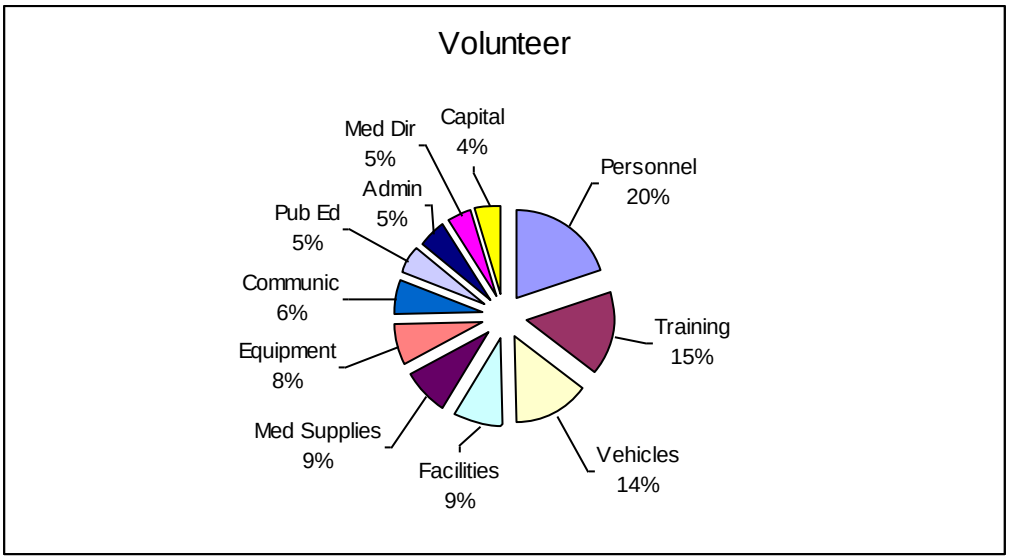


Figure XI.1A.1—Distribution of uses of revenue obtained by those services whose staff primarily is paid

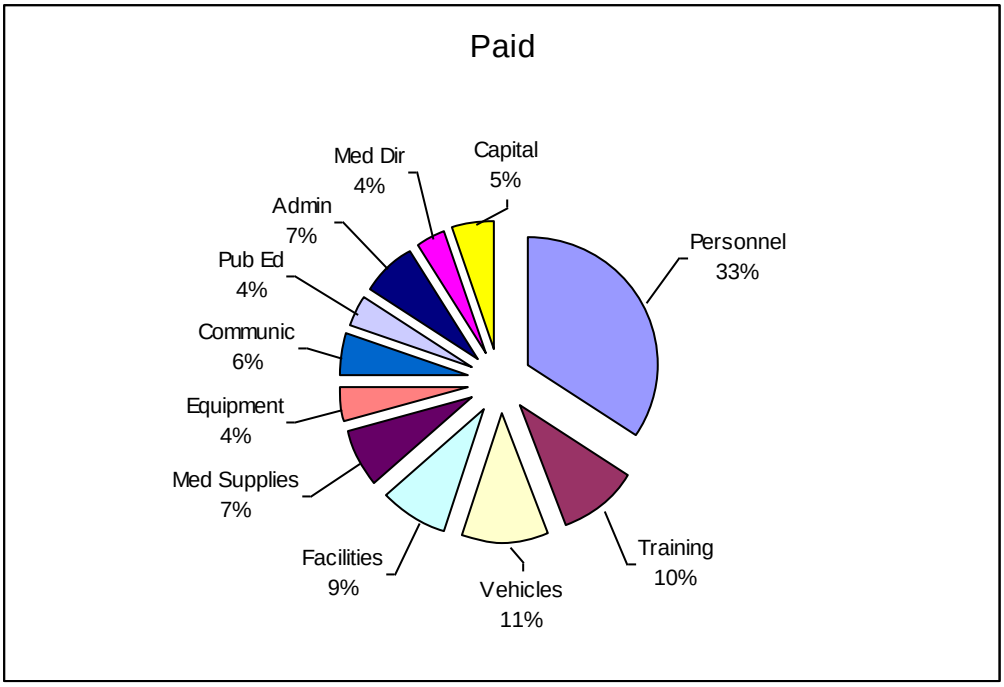


Figure XI.1A.2— Distribution of uses of revenue obtained by those services whose staff primarily are volunteers

2. Distribution of Uses of FAP Funds

Data obtained from the first 72 alpha-ordered EMS Providers that had received FAP support were analyzed. Data were provided to the EMS Section that described the broad categories of expenditures that the funds provided through FAP were used. The total of the awards for the 72 providers was $476,121 or 21.4% of the total of $2.2 million awarded. Amounts awarded averaged $6,642 with a standard deviation of $4,046 (range: $560 to $19,638). Of the 72 providers included in the analysis, 43 (60%) were between $4,000 and $5,000, and 69% were between $4,000 and $6,000., Of the total amount, $436,696 or 91% of the funds awarded could be accounted for in the distribution shown in Figure XIV-2-1. 27% was spent on the purchase of equipment24% towards the purchase or maintenance of vehicles/ambulances, 19% was placed into an escrow account, and 11% went towards the purchase or maintenance of communications equipment. More than half (52.2%) of the total funds distributed was applied to the purchase of hardware (supplies, equipment, vehicles). Only 10% of the FAP resources were spent for education/training!

There was great variability between the providers as to how the funds were expended. For example, 47 of the 72 providers (65%) included did not allocate any of the FAP funds into training or education, while 4 (6%)used more than half of the funds for training and/or education. Similarly, 28 providers (39%) did not apply FAP funds to the purchase of equipment, while 9 (12.5%) applied all of the FAP funds to the purchase of equipment.

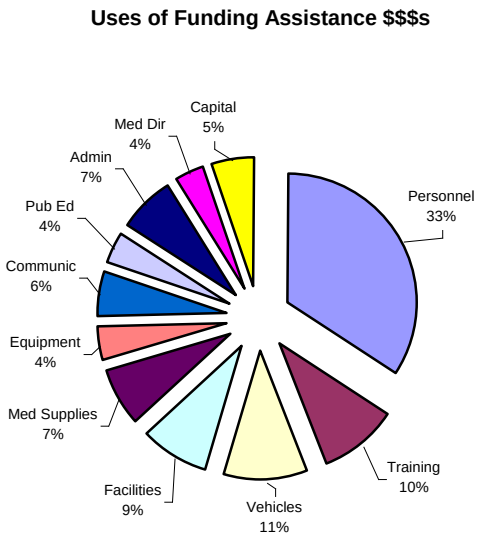


Figure XIV.2.11: Distribution of the use of Funding Assistance Program funds by 72 EMS Providers in Wisconsin

It was not possible to correlate these data with the other revenue sources that were accessed by the providers included in this analysis. However, using the data obtained from the structured interview component of this work, in 59% of the providers interviewed, the FAP funding comprised <2% of their total revenue stream. The highest proportion of the total revenue comprised of FAP funds was 50% in one service and 20% in another service. For all other services, FAP funds comprised <10% of their total revenue.

3. Comparison with Other States

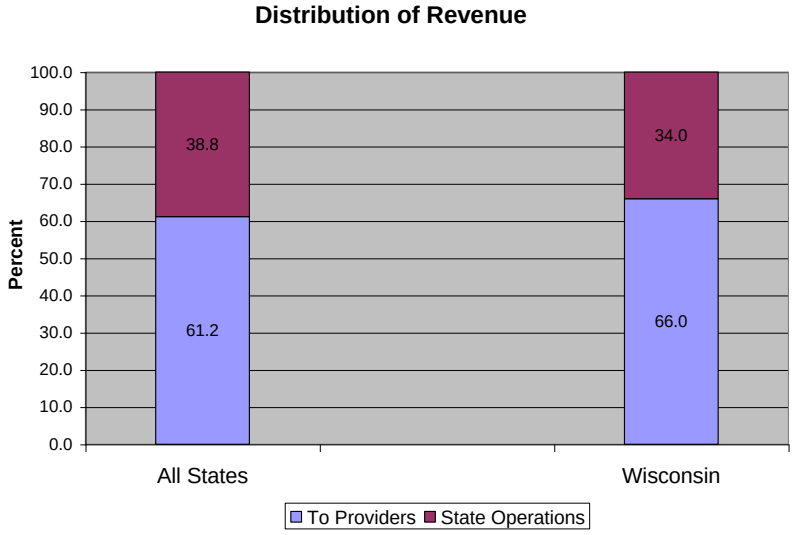
In its survey of 24 states, the NASEMSD sought to identify the overall distribution of the revenues obtained by the respective states. The figures do not reflect the revenues collected by the individual services within the respective states. The Report separates the revenue distribution into two categories: 1) Support of the providers; and 2) Funds encumbered in operating the lead agency within the state. As noted above, the combined total revenue obtained by the 24 states was $112,250,000. Of this total revenue, $68,599,000 (61.2%) was distributed to the EMS providers within the states, and $43,554,254 (38.8%) was retained for use by the states in support of the EMS system.

Proportions of the revenue distributed to the providers ranged from 0% (Montana, New Hampshire, Rhode Island, and Vermont) to 84% (New Jersey)

In Wisconsin in FY 2000, 66.0% ($2,200,000) of the $3,334,000 was distributed to the providers and 34.0% ($1,134,000) was retained for use within the Bureau of EMS and Injury Prevention. Thus, although the total revenues collected ranked 12th (Again I would go with the per capita number =18) among the 24 states for which data were available, the proportions were distributed were similar. The total revenue distributed ranked 8th of the 24 states. The amount distributed to the EMS providers by the FAP formula equates to $0.42 per capita! This ranks as 13th (median) of the 24 states studied. Nine of the states provided between $0.34 and $0.51 per capita to the EMS providers.

Wisconsin fared even poorer on per capita revenue to support State office administrative functions. Wisconsin ranked 21 of 24 at $0.22 in per capita spending. That figure is considerably lower that $0.73 per capita average for the 24 state

Figure XIV.2.2—Proportion of Revenues directed to providers and retained by the lead EMS agency



EMS Communications

In May 2001, the EMS Board forwarded to the DHFS, a White Paper titled "Emergency Medical Communicators, Dispatchers, and Communication Centers in Wisconsin". In this paper, the Board recognized that Emergency Medical Service Communications is an

essential component of any EMS System. For the most part, the communications component has been ignored in Wisconsin. The White Paper reviews the national standards for emergency medical dispatch, certification of dispatchers, instructors, training agencies, and management of EMS Communications agencies as promulgated by the EMS Committee of the American Society for Testing and Materials (ASTM). Eighty percent of the States currently have or plan to implement training standards and more than half currently are planning to regulate emergency medical communications in accordance with such standards. Previous attempts by the Wisconsin EMS Board to establish standards, certification of communicators, the use of sanctions, and regulation of emergency medical services communications have been ignored by the Legislature and have not been given appropriate priority by the Department of Health and Family Services. No such standards have been established in the State of Wisconsin. Further, a position paper of the National Association of EMS Physicians established that the medical directors are responsible for the medical aspects of EMS Communications. The data collected in the surveys indicate that medical director involvement in EMS Communications is rare, the communications agencies have little contact or even can identify their medical director, and that medical directors have not been trained in the quality management agencies for providing EMS Communications.

Law enforcement agencies or agencies with combined law enforcement, fire, and EMS responsibilities provide the bulk of EMS Communications. Many (approximately half) of the persons providing these services have completed some type of formal training as an EMS Communicator. However, continuing education and CQI activities have been limited primarily due to inaccessibility to continuing education and inadequate funding to facilitate such activities. Similarly, initial training opportunities are difficult to access due to staffing limitations, inadequate funding, and too few training opportunities. Funding for such training and quality assurance activities generally are buried in the budgets of the responsible agencies. Specific funds directed to the support of EMS activities are rare, and hence, EMS communications must compete for training funds and time with those of all of the other functions of the responsible agency.

Given that pre-arrival instructions are an important aspect of EMS Communications, the provision of such instructions requires specific training and quality improvement

activities. The positive value of such activities has been repeatedly demonstrated. However, the provision of pre-arrival instructions by persons inadequately trained to provide them is hazardous and could do more harm than good. Furthermore, it is difficult for a communicator in a multifunctional agency to provide pre-arrival instruction while simultaneously being responsible for other functions. The provision of pre-arrival instructions constitutes indirect patient care, and therefore, persons providing such instructions must be licensed as competent to practice these skills by the State. In addition, agencies providing EMS Communications should be licensed as meeting established standards of practice.

The Board suggested a set of minimum standards for all aspects of EMS Communications. These standards were derived from the national standards promulgated by ASTM and NAEMSP.

The establishment of standards and licensing of EMS Communicators, agencies, and certification of instructors and training agencies will require new enabling legislation. The EMS Board and the DHFS must pursue such legislative initiative. The details should be defined in the administrative rules necessary to implement these standards. Training and continuing education must be made accessible within the limitations of the agencies providing the services. This will require development and implementation of innovative methods for the provision of such education and training. The agencies will need an extended period of up to five years to comply with the proposed standards. Upgrading EMS Communications will require substantial resources. Some of these resources could be provided by access to the EMS Funding Assistance Program. Other sources of funding will be required including commitment of additional resources, grant applications and solicitation of support from private industry and endowments.

In summary, the funding of training and quality management programs for EMS communication personnel and operations must be considered an important element in the overall funding of EMS. Currently, no financial support is directed from EMS into communications.

4. The National Perspective

At the request of Senators Feingold and Collins, the United States General Accounting Office conducted a review of Emergency Medical Response in the United States using the methods and resources outlined above. A draft of the report was provided to the Systems Management Committee by Senator Feingold's staff. Interestingly, the report is subtitled: "Reported Needs Are Wide-Ranging, with Lack of Data a Growing Concern."

The concluding observations of the GAO are:

> *Surveys and assessments of EMS systems have identified broad categories of limitations and needs, showing that basic issues in such areas as staffing, training and equipment, and financing are considered to be day-to-day challenges of local EMS systems and state efforts to coordinate these systems. Determining the magnitude of these problems and how to resolve them, however, is a challenge because of the lack of information that allows a basic understanding of how these systems perform. Federal agencies have had a significant role in gaining consensus on the long-term national strategic goals and priorities for EMS. With available resources, they are attempting to develop strategies for addressing information needs. Progress in this area, however, is likely to remain slow because EMS systems have few incentives to devote limited resources to data collection efforts.*

The identified needs reflect a diversity of environments in which EMS is provided. These differences affect what officials perceive and report as key needs. Recruitment and retention of EMS personnel is becoming an increasing problem particularly for the rural, volunteer services that are faced with declining volunteerism and an increasing demand on personal time. There is a lack of training and educational opportunities related to limited availability and an inability to access sufficient resources to attend such training. A wide range of equipment needs was reported especially for rural areas in which 73% of the services reported a need for communications equipment, 68% needed medical equipment, 54% needed ambulances, and 34% needed building structures. A survey of 27 State EMS Directors estimated an average cost of $12.2 million/state is required to meet just the capital needs of the EMS community in the states.

The additional financial needs is summarized as follows:

> *Both urban and rural systems reported examples of tenuous financing. In rural areas, officials reported that it is difficult to fully support the high fixed cost of operating around-the-clock EMS services because the number of calls is generally smaller in sparsely populated areas, limiting the opportunities to bill for services. This difficulty has resulted in some communities going without local EMS coverage. For example, one county reported going without the services of a dedicated EMS provider for the past several years and needs to rely on ambulance response from other communities that can be located as far as 20 miles away. According to officials, this county, with a population less than 3,000, no industries, and a relatively small number of businesses, has an insufficient tax base to support such services. Other states have reported increased*

> *response times in their rural areas due to lack of funds to maintain greater capacity. Urban systems reported financing problems caused by growing demand for services combined with tight community budgets. Officials from systems that relied heavily on local government funds and levies to support their operations said they were considering billing health insurers to supplement the income of their EMS services. At the same time, some systems that were relying on income from billing health insurers reported concerns about declining reimbursement levels from these sources due to possible changes in reimbursement rules.*

Lastly, the GAO pointed out that no single agency has the lead responsibility for EMS activities. Four federal agencies help to support and promote EMS improvements, acting primarily as facilitators through the provision of activities such as technical assistance, development of standards and guidelines, and promoting data collection.

> *In 1995, two of these agencies facilitated an effort to gain EMS stakeholder consensus on a comprehensive national strategy to improve EMS, called the "EMS Agenda for the Future." While progress in implementing the Agenda has been made, federal EMS officials told us that a 1999 effort to revisit the Agenda goals and set major priorities for achieving them highlighted a need for improved EMS information and information systems. This gap was further highlighted when the HCFA, the agency administering the Medicare health insurance program, changed the manner in which it reimbursed EMS providers for ambulance services. Federal officials said progress in implementing this agenda has been affected by the lack of consistent information about EMS systems, and as part of their attempts to act as facilitators, they have all initiated attempts to collect or promote consistency in EMS data. Several local agencies we contacted also reported needing improved EMS data and information to monitor and improve performance, but recognized that data collection and reporting is sometimes a low priority and an administrative burden in the face of competing demands on EMS providers' time. Federal agencies, in different ways, are working to collect or promote improved EMS data with available resources.*

The National Highway and Traffic Safety Administration (NHTSA); 2) The Health Resources and Services Administration (HRSA); 3) The Centers for Disease Control and Prevention (CDC); and 4) The U.S. Fire Administration (CUSFAZ). Together, these agencies provide some $30 million in grants for Emergency Medical Services. The HRSA provided $9.8 million into the EMS for Children's Program and the Office of Rural Health Policy administered $3.8 million in grants.

Terrorism, Bioterrorism, and Disasters

The sudden increase in concerns about terrorism in this country has raised several issues that impact EMS in Wisconsin. It is clear that when such an event occurs, EMS along with the lay public will constitute the first line of medical defense. However, it is likely that an EMS that has been programmed to respond to everyday emergencies will become overwhelmed, both in the prehospital and in-hospital settings. Further, it will be critical that EMS will not operate in

isolation in any disaster or multi-casualty event, but will need linkages and interactions including communications with each of the other agencies and societal functions involved. Furthermore, especially in terms of bioterrorism events, detection of the event will be key, and mechanisms must be in place to provide accurate and rapid identification of the agent(s) involved.

Disaster responses regardless of the cause, by definition require assistance from outside of the area impacted by the event. This assistance cannot be willy-nilly, but must be well-coordinated as it involves many of the components of the affected society. Since such an event requires outside assistance, a structure must be in place that facilitates the delivery of needed human and material resources. Thus, the local emergency services are rendered inadequate to cope with the situation, and must depend on such outside resources. Initially, such resources will need to come from the region in which the event occurs. Later, responses from outside of the regions may be requested. Such a regional structure must be in place prior to the event and must be well-trained and exercised to come to the aid of the area impacted. Thus, a regional infrastructure for EMS and other agencies must be defined as part of preparedness.

The interfaces between the prehospital and in-hospital emergency medical services with the public health sector also must be well-developed. Emergency medical services have been designed to cope with the medical problems of one or maybe even a few persons in need of assistance. Public health deals with populations and not individuals. Thus, the interfaces between public health and the EMS must be well exercised and practiced. Detection of bioterrorism events or biohazards is dependent upon a public health infrastructure essential to identify the offending material and how such an event must be managed. This requires interaction between EMS and the public health sectors as well as with all of the other agencies that play a role. For example, in the event of such a circumstance, security is essential for the care-givers as well as the patients, transportation capabilities will need to be mobilized, sanitation facilities and water supplies must be made available, public works and engineering will be needed to provide ingress and egress routes and sanitation, patients will require inter-facility transfers, food will need to be provided, etc. Currently, substantial resources are available for use in development of preparedness though federal grant programs. The Wisconsin DHFS has received at least one major grant for $19 million for the development of the public health aspects of terrorism. Moreover, the Department of Emergency Government (DEG) receives ongoing federal support for disaster preparedness and management. However, until recently, the EMS component of the training, response, and coordination has been ignored by Emergency Management. It has been assumed by Emergency Management and other agencies involved, that EMS was adequately trained and ready to respond.

Other grants have been awarded to the State in the name of preparedness and terrorism, The cities of Milwaukee and Madison have been awarded grants from the US Department of Justice (DOJ) for the development of Metropolitan Medical Response Systems (MMRS), Milwaukee is in its 5th year of the grant and Madison is entering its second year. In addition, several local areas have received grants from the Federal Emergency Management Agency (FEMA). Importantly, in general, there has not been coordination in the use of these funds.

Significantly, the current availability of grant support has two diverse implications.

1. Funds are available for training, the purchase of equipment and supplies, performance of drills and exercises, increase coordination between states and regions within states. Training opportunities include programs for EMS workers, the lay public, managers, etc.

2. Sustainability—The downside of this type of funding is that it is likely to be transient. Of substantial concern is that whatever is developed using such grant funds will be sustainable when the federal resources disappear, Remember that EMS in Wisconsin almost collapsed when the Federal funds no longer were available in the 1980s, a problem that still plaques the organization of EMS in the State. Thus, when grant funds are used, the State assumes the responsibility that such programs will be sustained, as the threats for which we are preparing will be ever present.

Thus, though it seems that some resources currently seem to be readily available, the responsibilities associated with accessing such funding are substantial. There is no such thing as a free lunch!

XV. Unmet Needs

1. Actual

Needs that could not be satisfied were assessed in two different surveys: (1) Structured interviews of randomly selected services conducted by members of the Systems Management Committee; and (2) From the database of the Wisconsin Emergency Medical Services Association (WEMSA).

1. Structured interviews

Questions asked during the interviews relative to unmet needs were couched in several ways: (a) general discussion of unmet needs; (b) what would $1,000, $2,000, $5,000, $10,000, $20,000, $30,000, and >$30,000 be used for if made available to the service; (c) where the service should be in five years; (d) Additional resources needed; (e) anticipated barriers; and (f) anticipated changes in reimbursement and their potential effects.

Analysis of the open-ended responses resulted in several important findings. First, almost all of the needs were defined by the basic, volunteer-staffed services. For the most part, paramedic-based services and those agencies serving the more metropolitan areas of the State expressed little in the way of needs at the current time. They did express concern over the impact that may result from the recent changes in Medicare reimbursement schedules. These changes include an annual decrease in the amount of reimbursement to be provided for the provision of their services.

The volunteer-based basic services expressed considerable concern in several areas. Two major areas stand-out: (a) They are encountering increasing difficulty in staffing their respective services; and (b) they do not have sufficient funds to sustain their service. Of these basic, volunteer-based services, 90% expressed that they were encountering difficulty with staffing with volunteers and that they would need to hire part- or full-time personnel to cover their services unless successful strategies could be developed to increase recruitment of new personnel or retain current personnel. They noted increased levels of retirement from the service due either to advancing age or increasing family responsibilities. This seemed to be distributed even to those services that pay a small on-call stipend of pay-on-a-per-run basis. They point-out that they do not have the resources to increase the outlay of funds to cover such costs. Typical responses included: "Paid staff is the only way to go!"; "Nothing works to get more staff."

The second observation from the responses bears substantial discussion. The discussion that follows uses the data obtained from the general needs query and the queries about what would be done other than support salaried personnel, with additional funds were they made available. Three areas stand out: (i) Inability to purchase a new ambulance; (ii) Upgrade of or new facilities; and (iii) Need for new or replacement of obsolete equipment. Seventy-five percent of the services expressed a need for a new ambulance, and 25% noted the need for facility upgrades or replacement. The first two of these represent capital investments, and most of the respondents would direct any additional resources obtained into escrow accounts to meet the needs for new ambulances or facilities.

Several services expressed that their ambulances were 10 years old and that there was no way for them to replace them. Equipment needs included defibrillators (25%), radios and pagers (25%), and extrication equipment (10%). Fifty percent of the basic, volunteer-staffed services would use sums of <$10,000 to purchase continuing education for their staffs. Lastly, 60% of the services expressed their desire to progress their services to a higher level of care, but were unable

to do this because of inadequate resources (material and human) to do so. Several services noted that there is occurring an "increased costs for everything."

Additional barriers to their sustainability included: Education is not available in remote areas, a lack of interest in EMS operations within the community, inability to obtain a computer to be used for billing purposes, and too much regulation by the State, especially in the increasing administrative load such regulation requires.

2. WEMSA Database

Interestingly, the findings of the analysis conducted by WEMSA from its database, echoes the finding outlined above (Table XV-1). In interpretation of these data, it is important to keep in mind that the numbers reflect the broad sweep of EMS in Wisconsin and have not been broken down for description of the volunteer-staffed, basic services. Given this constraint, the finding reflects what was identified in the above analysis.

Future Challenges	Percent Responses
Recruitment or staffing	47.5
Moving to a new EMS level	17.0
Medicare and budget cuts	9.0
Member/employee retention	6.0
Training	6.0
Capital purchase	5.0
Other responses	9.5

Table XV-1—Future challenges for EMS in Wisconsin (Source: WEMSA Database)

As noted previously, recruitment and staffing comprise the greatest concern of the EMS community for the future of EMS. Staffing issues far surpassed any of the other responses.

3. Costs for upgrading service levels

Although many services wish to upgrade the level of emergency medical services they currently are delivering, there are substantial costs associated with such actions. As services become more sophisticated medically, the costs for equipment and supplies rise substantially. In addition, increased levels of medical care are associated with increased responsibility of volunteers who require more training and continuing education. The time required of volunteers to meet such

requirements will increase and the time they already invest already is stretched to very high levels. Such activities may increase attrition rate. Also, more resources will be needed for the training. Lastly, it most likely will require additional resources to pay more highly trained staff. It is not clear whether volunteers will continue to volunteer if forced to a higher level. For many communities, such additional costs cannot be covered.

4. Volunteers

The current status of volunteers is tenuous at best. The attrition rates are greater than the ability to recruit, educate, and train new volunteers in their stead. There are many possible reasons for this decline in volunteerism. As the capabilities of the EMTs and medical first responders is increased, the time commitment required for ongoing education and training increases dramatically. The basic EMT course already has increased from its initial requirement of 80 hours to 120 hours plus additional time for each advance. Further, many long-time volunteers have had enough and wish to return to more normal lives. Lastly, medical first responders will need support for training, supplies, and equipment, and currently are not included in dispersement of FAP funds—inclusion will make less available to other levels of service.

5. Administrative training

Currently, persons who are assigned administrative responsibilities especially in volunteer, basic services have not received any training in the performance of such duties. Generally, they are assigned or voted into this position. Some receive minimal compensation for the performance of administrative activities. Most administrative personnel are volunteers.

Regional resources, state or private, may be required to perform such duties. As noted, most volunteer services currently do not bill for the services rendered. The paperwork associated with such processes is complex and lengthily—. The costs of providing such services regionally is substantial, but could be recouped in part, from collections generated.

Lack of training in the performance of administrative responsibilities is a cause of attrition. Currently, such a training course does not exist Therefore, there is a need to develop an administrative training course for the service administrators.

6. System Development

The development, implementation, operation, maintenance, and quality assurance of the Statewide trauma system mandated by the Legislature is not funded. Furthermore, funding of

this program cannot piggyback additional regional structures. Currently, bioterrorism planning and development are moving ahead without input from EMS (e.g., establishing 12 Public health districts, hospitals consortia away from rest of the programs). In addition, medical communicators must be trained and quality assurance mechanisms must be developed. Each of these developments require additional resources. Lastly, the grant monies currently available for the development of preparedness for bioterrorist and other mass casualty events are not likely to be sustained indefinitely. Such systems once developed will cost state resources, which, if not made available, will result in deterioration of preparedness and its eventual loss. The benefits associated with the development and implementation of regional EMS systems have been adequately discussed in the two Regionalization Reports generated by the EMS Board

7. Data Collection

The need for data collection and analysis has been outlined above in the discussion of the GAO report on EMS and in the Feingold-Collins Bill. Previous attempts to develop such a system (WIEMSIS) for Wisconsin have failed

8. Inability to Sustain Services

The principal problem provided by structured interviews was the inability to replace vehicles and equipment that are wearing out or to buy new state of the art equipment mandated by the expanding skills (rural). This is combined with the inability to fully staff rural services with volunteers and the inability to pay full-time personnel.

9. Training and operations of EMS portion of communication centers

Currently, EMS Communications are the weakest part of the EMS system No resources currently provided by State for training. Legislation currently is pending that will mandate training. No funding is attached to the proposed legislation.

XVI. Potential Sources of Additional Revenue

Given the defined needs for additional resources, the Systems Management Committee identified several potential sources of additional funding required to adequately support the operational and administrative aspects of a statewide EMS System. Several of the options that follow were

identified in the Second Regionalization Report submitted by the EMS Board to the State Legislature in 199X. It is not anticipated that exercising any of the options will produce the much-needed revenue. The options include but are not limited to the following (not in rank order of importance or likelihood of providing funding): (1) Billing and collecting all revenue possible from insurers (including Medicare and Medicaid) and from patients transported; (2) Establishing a User's Fee; (3) Expanded or Redistribution of Funding Assistance Program funds; (4) Traffic violations; (5) Driver License fee; (6) Vehicle registration fee; (7) Grants; (8) Fees for Training; (9) EMS Provider license fee; (10) EMT License fee; (11) Taxes (local; state) (budget); (12) Tax on health insurance; (13) Tax on alcoholic beverages; (14) Worker's Compensations (prevention); (15) 9-1-1 Access fee; (16) Life insurance premiums; (17) Ambulance driver license; (18) Donations and Endowment Fund; (19) Hospital user's fees; and (20) Bioterrorism grants at the state and local levels.

Each of these possibilities for covering a portion of the costs associated with the delivery of optimal EMS in Wisconsin was discussed at length. The over-riding opinion was that certain target groups should bear some of the expenses incurred through the provision of emergency medical services. Included within this group were portions of the penalties for traffic violations, especially seat belt violations, as these violations impact safety. Also, attachment to driving while intoxicated fines seemed quite reasonable.

Each of these options is discussed in detail. The text summarizes the discussions by the Committee members.

1. Billing and Collection of All Revenue Possible

As noted above, many of the services do not bill payers for services rendered, and many others do not bill or collect the maximum amount that could be collected for their services. Although substantial revenues could be added for many services, such revenues will not fully cover the increasing costs of providing these services. Most services are not blessed with the administrative know-how to wade through all of the regulations and paperwork to generate maximal revenues and alternative mechanisms such as contracting with the private sector or provision through regional offices will be required.

2. User's Fee

Currently, most of the EMS units in Wisconsin charge the patients conveyed or their insurance carriers a fee for the service they provide. These fees help to support and pay for continuation of

these services. However, no part of these fees is directed to the provision of the services currently provided by the State or possibly provided by the State in the future. A surcharge on these fees collected could provide substantial revenue in support of regional offices. For example, last year, there were **xx,xxx** EMS conveyances conducted in Wisconsin. If a $5 surcharge was levied on each of these conveyances for which fees were collected either directly from the patient or the payers, this would generate more than sufficient revenue to offset the costs encumbered by implementation of the regional infrastructure. It is believed that such a charge is not appropriate to support the need for EMS to be ever ready to respond. Many Public Health Services are funded using a similar mechanism.

3. Financial Assistance Funds

Of the $2,200,000 currently provided to the services and training institutions by Act 102 funds, a portion could be diverted to cover part of the costs of regional offices, since the implementation and development of the Administrative Regional Offices should result in decreased training expenses for services within the region. However, these funds are used to help support training and currently do not even approach the true expenses associated with training. It is held that the Act 102 funds, as currently appropriated, have assisted in the retention of many volunteers and in the perpetuation of the volunteer and municipal segments of out-of-hospital emergency medical services.

4. Traffic Violations

Several other States support their entire EMS systems through a surcharge on all moving traffic violations in the State. This method is justified on the basis of the costs encumbered by maintaining an EMS in the readiness state 24 hours a day to help victims of motor vehicle trauma. This requirement is different than the costs actually encumbered through the provision of the transport of patients to a receiving facility. A $5 surcharge would generate approximately **$xxx,xxx** which would more than offset costs associated with regionalization. This would be attractive particularly if seat-belt violations were changed from secondary to primary violation status and part of the fees collected for such violations would be designated to support EMS. Of note, Minnesota supports its entire EMS system through seat-belt fines and seatbelt usage violations are primary offenses in 11 other states. Illinois was the last state to adopt designation of a portion of its moving violations fines as a partial mechanism for funding EMS. Currently, 25% of the fines collected for driving under the influence are directed to the support of emergency

medical services. Primary violations such as driving under the influence have major implications for emergency medical services, and it appropriate for such fines to include some support for EMS.

5. Driver's License Fee

Many states add one or two dollars to the driver's license fees. Recently, Virginia increased its surcharge to $2. Attempts to add such a surcharge for EMS have failed in Wisconsin. Such charges could generate as much as $5 million for the support of EMS activities each year.

6. Vehicle Registrations

Several states support major portions of their EMS expenses through a surcharge of $1–$5 added to the fees for obtaining or maintaining driving licenses or vehicle registrations or licenses. In Wisconsin, a $1/license would generate some **$xxx,xxx** in revenue that could be applied to support the readiness state of EMS, a sort of insurance policy.

7. Grants

Although grant funds are diminishing, the potential exists for obtaining part of the funding necessary to implement regionalization, especially, the evaluation component of the impact of regionalization on outcome. Grant funds to support specific projects remain available in the form of federal block grants, funds from the National Highway Traffic Safety Administration and the subsidiary state Office of Highway Safety, EMS for Children, and the like. Most of these require measures of impact on patient outcome. So far, good measures of outcome that reflect the impact of emergency medical services have not been devised and validated.

Substantial resources have been granted to DHFS for bioterrorism preparedness. Such grants have been provided by the CDC and by HRSA, but no funds in these grants have been directed to EMS.

The potential for contributions of funds in the form of grants or gifts from foundations or from industry also exist. This possibility has not been pursued in relation to the provision of EMS. Unfortunately, currently there is little funding available for grants for emergency medical services. Furthermore, it would be hazardous to base the implementation and support of the Regional Administrative infrastructure on soft money that may disappear and result in collapse of the State EMS System as it evolves.

8. Fee for Training

For the most part, training in EMS is relatively free to the students. Training of personnel is the most expensive cost currently born by most emergency medical services Most basic services pay for the training of their students, at least in part. A *portion* of these costs is reimbursed by the funding from Act 102. Most services are unable to provide funding for all of the training required by the emergency medical technicians and first responders, and often, these personnel are required to invest their own funds to maintain the training mandated by the State. This has particular relevance for volunteer systems and may be a contributing factor to the rate of attrition. Currently, statute would need to be changed to enable the Wisconsin Technical College System to charge for its training.

7. Taxes (Budget)

It is possible that regionalization would be considered of sufficient value in Wisconsin that the Legislature would provide designated tax funds to support its implementation and continuation. The positions required for implementation could be added to the staff provided in the EMS Section Office. However, given the current economic environment, this option does not seem to have great potential.

8. EMS Provider License Fee

Currently, no fee is charged to the providers (ambulance operators) for their ability to provide services in Wisconsin. A fee could be charged to all non-municipal providers for the privilege of operating within the State and for having access to all of the services provided by the State EMS Section and the Regions. Currently, there only are xxx non-municipal services in the State. Even substantial provider's fee would net little significant income, certainly not of sufficient magnitude to support the regional infrastructure as there currently only are 35 non-municipal providers operating in Wisconsin.

9. *EMT License Fee*

Currently, there is no charge to the licensees for initial or continuation of their emergency medical technician licenses. Most other states charge a minimal fee for maintenance of this license. The principal reason for not charging for the processing of a license is that it did not seem reasonable to charge the volunteers for their ability to practice. If a minimal processing fee (e.g., $5) was charged for all EMS licenses, an estimated $100,000 could be generated in revenue to offset the costs of regionalization.

10. Taxes on Health Insurance

The fees collected from the insurers (third party) constitute partial payment for the costs of transporting a patient. There is no part of this reimbursement directed at the maintenance of the readiness of the service to respond or for non-conveyance responses. Insurers also could contribute to this component of the EMS System. It is not known whether this funding could be secured or the amount of revenue that could be generated from this source.

Generation of funds from involvement of EMS in disease and injury prevention should become a major function of EMS in the near future. These activities should generate strategies for prevention, which in turn should result in a decrease of costs associated with the care encumbered by the managed care organization, and part of these saving should be invested in the support of these prevention activities. Generation of funds from involvement of EMS in disease and injury prevention should become a major function of EMS in the near future. These activities should generate strategies for prevention should result in a decrease of costs associated with the care required by employees. The amount of revenue that potentially could be generated from this source is not known.

Furthermore, although managed care organizations do reimburse a part of the costs involved in the delivery of EMS, in general these funds are to support most services and the reimbursement schedules include payment for the transport aspect of emergency medical services and do not cover other portions of the services provided by the EMS providers.

11. Taxes on Alcoholic Beverages

Clearly, a substantial portion of the work required by EMS in Wisconsin is related to the use of alcoholic beverages. Therefore, like the moving violations defined above, it is logical to recoup some of the expenses generated secondary to the use of these beverages.

12. Worker's Compensation (for prevention strategies in the workplace)

Generation of funds from involvement of EMS in disease and injury prevention should become a major function of EMS in the near future. These activities should generate strategies for prevention, which in turn should result in a decrease of costs associated with the care required by employees. The amount of revenue that potentially could be generated from this source is not known.

13. 9-1-1 Access Fee

This fee is similar to a user's fee in that a charge would be rendered to all persons using a 9-=1-1 community access point for entry into the emergency medical services system. Although this makes some sense, it seems that it would be a nightmare to administrate.

14. Life Insurance Premiums

A surcharge on life insurance premiums to help support the readiness of EMS to respond portion of EMS also is a possibility. Emergency medical services are committed to the preservation of life and function, and thus, prevent much death and disability. There is no known precedence for such a surcharge.

15. Ambulance Driver's License

There is no special addendum to a driver's license for activities requiring piloting of an emergency vehicle. Persons or services so engaged could be levied an additional fee. The amount of revenue that potentially could be generated from this source is not known.

16. Donations and the Establishment of an Endowment Fund

This is related to the possibility of acquiring donations or grants from major industry and stakeholders in health care. These funds could be invested in an endowment fund the interest of which could be used to support the EMS System. Although this is an attractive long-range possibility, it will take substantial time to develop such a fund. It may prove to be a substantial contributor in the distant future.

19. Hospital User's Fee

This option is a surcharge levied on hospitals for receipt of a patient from the out-of-hospital EMS System. The charge could be added to the patient's hospital bill if so desired by the hospital.

X. Summary

1. There exists a general perception that EMS is under-funded. This study was undertaken to determine if this, in fact, is true, and if so, to define the reasons for the lack of adequate funding, the extent of the funding deficit, and to suggest possible solutions to the problem.
2. Data obtained from more than 11 sources (see page) have been integrated into this report.
3. Currently 75% of the personnel providing EMS volunteer their time and skills. The proportions of volunteers progressively decline as the level of service increases with 87% of the first-responder services being volunteer and none of the paramedic services operating at the volunteer level. Of the volunteers, 47% receive no compensation and 53% receive a minimal stipend while on-call (54% ≤$1/hour, 10% $2-3/hour) or during responses and conveyances (78.5% <$15/hour).
4. Public expects all care to be at the paramedic level—perpetuated by media—not reality.
5. Regional trauma services are being developed and now hospital consortium and public health consortiums also are forming.
6. Sophistication of prehospital care and costs of equipment and supplies have been increasing and the number of responses have been increasing at a rate of 5–10%/year.
7. Administrative load on providers continues to increase.
8. Changes in re-imbursement schedules by private insurers, Medicare, and Medicaid likely will worsen the financial status of most of the emergency medical services.
9. Many "volunteer" services no longer are able to staff full-time with volunteers—must employ paid staff especially during weekdays.
10. There is a general shortage of nurses particularly prevalent in larger metropolitan areas. Such shortages result in diversions of ambulances to alternative hospitals in the region.
11. Diversions increase the time spent per call, increase the costs to the providers of prehospital emergency medical services, and place patients at an increased risk.
12. Numerous Mandates by state statutes designed to create improvements of emergency medical services, have not been funded from a ***stable*** funding source.
13. The number of services receiving Medicare payments is increasing—(possibly due to less non-billing services).
14. Number of EMTs licensed remained has not kept up with increasing number of responses—decrease of 11% since 1997.
15. Services that only provide non-emergency services bear less cost in that there is little need to stand ready for ***emergency*** calls.

16. The American Ambulance Association's study indicates that the costs for all but basic, non-emergency responses far exceed reimbursement as defined by Medicare (calculated average cost/calculated reimbursement = 1.7 to 2.9).
17. There exist major differences between the financial status of rural and metropolitan service areas:
    a. Overall, the average reimbursement to EMS providers in Wisconsin is less than the average level of reimbursement for Medicare/Medicaid at the national level.
    b. Funding Assistance Program (FAP; 1989 Act 102):
        (1) The actual total amount of funding has remained unchanged since 1989;
        (2) $2.2mil is provided from General Purpose Revenues (GPR); $800K is dedicated for education and testing (National Registry) of EMT-Bs only (initial and refresher education and training);
        (3) The FAP funds are "supplemental" to those provided by municipalities and for those privates services contracted to a municipality for provision of basic-EMT-level services;
        4) A total of $1.4mil is distributed to providers/year ($3,588 base + $0.03/capita) These funds are used for education, training, equipment, supplies, maintenance, and/or is deposited into escrow to help cover future capital expenses.
    c. Some hospitals contribute to education and training of prehospital EMS personnel. Some hospitals also support EMS Coordinator position for integration of prehospital and in-hospital activities.
18. Wisconsin in comparison to 24 other states:
    a. The proportion of state funds provided for EMS to providers in Wisconsin is at the median level for the 24 states ($2.2 million vs. $2.1 million);
    b. The proportion of state revenue (General Purpose Revenue (GPR; taxes)) compared to total revenue sources is 81% in Wisconsin compared with 54% for all of the states that participated in the survey.
    c. Special sources (moving traffic violations, seat belt violations, vehicle registrations, surcharges, etc.) in Wisconsin contribute only 2% of the total revenue vs. 32% in other states!
    d. In Wisconsin, Emergency Medical Services for Children (EMSC, a federal resource) contributes 12% of the total state EMS budgets compared to only 1–2% for other states.
    e. Revenue for EMS providers in Wisconsin:

(1) Direct or indirect billing by services provides 77% of the total EMS revenues in Wisconsin and taxes (local and state) provides = 23% of these revenues. On the average, only 5% of the total revenues to services is provided by the FAP;

(2) 32% of the services surveyed did not bill for services provided;

(3) 67% receive no reimbursement from HMOs/PPOs; no service >60% from HMO/PPO

(4) More than one-third of the revenues acquired result from direct billing by the serviced providers. These revenues account for 20% of the total revenues acquired by the providers.

(5) Most do not bill for **all** of the services they provide.

(6) Billing by services in larger population areas are twice the levels of billing by those serving smaller populations (<10,000 population).

7) 53% of the revenue obtained by the services for larger population areas comes from Medicaid/Medicare/HMO compared to 31 % for services in smaller population areas.

8) The proportion of revenues obtained from taxes is the same for services providing EMS regardless of serving large or smaller populations.

19. Wisconsin Technical College System (WTCS):
    a. Of the $800K for Basic EMT services, 95% ($760K) goes to the WCTS,
    b. The costs for the WCTS to provide EMT-basic training are increasing:
       1989: 110h (2.5 credits) = $115 tuition;
       Currently: 140h (4.0 credits) = $316 tuition (increase of 175%);
    c. Of the instructional costs, 14% are recovered from tuition mostly paid by the FAP; 21% is paid by state aid, and 65% is obtained from the local tax base.
    e. The WCTS trains some 46,000 students/yr in activities related to EMS!
    f. A 6:1 student/faculty ratio is mandated by USDOT, thus limiting the potential revenues.
20. Uses of Revenues by Providers
    a. The salaries by paid services = 33% total budget compared with volunteer services = 22% mostly used to pay full-time staff (unable to staff days with volunteers, or paid-on-call or by call (all still included in volunteer stats);
    b. Training: 15% volunteer to 10% paid from total budget
    c. The proportions of the total budgets committed to administrative duties are the same for volunteer services vs. that committed by the paid services. Volunteer services commit only 7% of their total budgets and given their relative small budgets, they are unable to

do billing and complete increasing loads of paperwork required by the insurers and by the State;

d. The contributions from the FAP averages $6,600 ±4,000/service.
    1) Equipment purchases = 50% of the total FAP contribution.
    2) Training/education costs average 10% of the FAP contributions.
    3) 65% of the services use 0% of the FAP contribution for training/education.
    4) For 59% of services, the FAP comprises <2% of their total revenue.

21. Other States (24 NAEMSD)
    a. Wisconsin ranks 18 of the 24 states surveyed in costs per capita ($0.22 vs. an average of $0.73/capita)
22. EMS Communicators—no support is provided from state EMS funds (FAP) for EMS communicator (EMC) training or support of EMS Communication Centers—all is provided at local level—Local resources have been unable to support EMC education and training.
23. Unmet needs
    a. The lack of funding is prohibiting the development of higher levels of services — unable to increase level of service provided outside of the immediate metropolitan area. Although larger services (often fire-based) generally have been self-supporting for the advanced services provided, threatened cuts in local budgets may negate this state and they may require supplementation in order to survive. Also, the larger services expressed concern over their status with the recent changes in re-imbursement mechanisms.
    b. Primary concerns of volunteer services relate to the need to hire full/part-time paid staffing due to inability to sustain services (especially during the day) with volunteers. This is coupled with the increasing attrition of volunteers due to retirement and loss of personnel due to other responsibilities and increased state mandates.
    c. Other than staffing, 75% of the volunteer services expressed the inability to replace their current ambulances, 25% need upgraded facilities, and most expressed inability to purchase state-of-the-art equipment and supplies (especially replacing obsolete stuff)
    d. The WEMSA survey defined recruitment and retention of staff as a future challenge in 47.5% of the services that responded. 17% were concerned with the challenge of increasing the level of service they are providing

24. There are no funds available for system development
    a. The lack of sufficient funding is prohibiting the progression of EMS agencies from moving to a higher level of service. Such progression requires more time, and many volunteers do not have the time to donate. In addition, the increasing costs of providing services have not been included in FAP contributions.
    b. There are no funds to train and sustain emergency medical communicators and emergency communication centers.
    c. There are no funds to support the development of a regionalized trauma system despite the mandate for same by the Legislature or for the evolution of a regionalized EMS system
    d. There are no funds to develop a statewide data collection system required for continued monitoring of quality, quality improvement, and documentation of accomplishments.
    e. Many services are having to decrease the level of services they can provide due to lack of sufficient levels of funding required to provide the higher levels of service.
25. The State Bureau of EMS and Injury Prevention is understaffed and is unable to meet many of the mandates directed to it by the Legislature. In addition, it cannot support the development of enhanced services, the development, implementation, and management of regional trauma systems, and is unable to provide the comprehensive technical support required by the services. In addition, it is unable to enforce the laws and regulations that currently exist.
26. Potential sources of additional funding of EMS

    The options include but are not limited to the following (not in rank order of importance or likelihood of providing funding): (1) Billing and collecting all revenue possible from insurers (including Medicare and Medicaid) and from patients transported; (2) Establishing a User's Fee; (3) Expanded or Redistribution of Funding Assistance Program funds; (4) Traffic violations; (5) Driver License fee; (6) Vehicle registration fee; (7) Grants (including bioterrorism grants); (8) Fees for Training; (9) EMS Provider license fee; (10) EMT License fee; (11) Taxes (local; state) (budget); (12) Tax on health insurance; (13) Tax on alcoholic beverages; (14) Worker's Compensations (prevention); (15) 9-1-1 Access fee; (16) Life insurance premiums; (17) Ambulance driver license; (18) Donations and Endowment Fund; and (19) Hospital user's fee.

XI. Conclusions

1. The majority of emergency medical services is under-funded for their mandate.
2. Although the public perceives that all of EMS in Wisconsin is provided at the paramedic level, 75% of the municipal services provide only first responder or EMT-basic levels of care. For the most part, these services are provided by volunteers; nearly half receive no compensation while the other half receive only minimal compensation for being on-call or on the basis of a minimal stipend during actual responses and conveyances.
3, Many of the volunteer-based services are in danger of collapse, as they do not collect sufficient resources to meet the challenges associated with the attrition of the number of volunteers, the increasing costs associated with the increasing needs for education, training, continuing education, supplies, equipment, and maintenance required to maintain their current levels of care, and the progressive and steady increase in the demand for their services. Many volunteer services no longer are able to staff full-time with volunteers and must staff with paid personnel especially during days. This problem will become more severe. In addition, the increasing requirements associated with preparations for bioterrorism and other potentially disaster-causing events will create an even greater administrative, educational, training, equipment, and supplies load and costs to these services.
4. Many communities are unable to pay staff to fill the gaps created by the lack of sufficient numbers of trained, volunteer staff. Such gaps will result in mandated coverage by mutual aid service areas. This, in turn, will result in unacceptably prolonged response times; any hence will produce increased costs to local communities. Mutual aid responses across districts also leaves the community providing such service uncovered during the period mutual aid is being provided.
5. The billing of payers by many services either is non-existent or grossly inadequate. Substantial gains in revenues can be obtained through the use of appropriate and timely billing and collection methods. Such billing includes direct billing to patients and insurers including private carriers, HMOs, PPOs, Medicare, and Medicaid. Seemingly, private, fee-for-services agencies are able to meet their expenses through the use of adequate charging, billing, and collection methods using the current re-imbursement schedules. However, most of the volunteer services lack the resources necessary to provide adequate administrative services. Alternative fund raising activities generated by the local services are essential to maintain the current level of services. Such activities include social events, direct funding appeals, door-to-door collections and prostitution. Some hospitals contribute through the

provision of free education and training. In general, private ambulance services will operate only in metropolitan areas where their services will generate profits. They are reticent to provide such services in rural areas as they will not generate sufficient revenues to create profits.

6. For most services, the local tax base contributes a portion of the total revenues collected by the services (in some services, comprise as much as 65% of the total revenue). Such funds help to support the stand-ready component of the emergency services provided.
7. The changes in Medicare and Medicaid reimbursement schedules threatens the continuation of these services to an even greater degree and now also may negatively impact the services that currently are adequately funded.
8. In general, fee-for-service reimbursements do not cover those costs encumbered by standing ready for emergency responses. This primarily affects the emergency responding agencies and not the private, non-contracted services.
9. Current Funding Assistance resources ($2.2 million/year) provided from state taxes comprise only a minimal portion of the expenses incurred by the delivery of these services. The level of resources provided to the services has remained the same since 1989 despite inflation and increasing requirements and service levels.
10. Towns are responsible by State law to provide emergency medical services to their respective communities. This mandate only includes basic-EMT-level ambulance services. Therefore, currently, the State has the responsibility to assist the communities with the delivery of basic-level services. It also follows that the communities are fully responsible for the progression of their EMS to levels above the basic level, and that such progressions must be determined by the specific communities, which therefore, must determine and support progression to levels above the basic level mandated by State statutes.
11. Given the above, the State should provide support to the local communities for the provision of the basic-level services. Clearly, the current level of support of the basic-level EMT ambulance services through the Funding Assistance Program (Act 102) is insufficient to be expanded to include medical first-responders, basic EMTs, and emergency medical communicators. Thus, the State has the commitment to assist the communities in the provision of all aspects of the basic-level services. The extent to which the communities and the State must share this fiscal responsibility must be determined. Currently, the level of support to basic services is in the low percentile of that provided by other states. This is

predicated upon the concept that as much income as possible must be derived from fee-for-service charges, billing, and collection.

12. Individual towns are not responsible for the development of regional systems other than for the provision of mutual aid agreements necessary to cover the specific townships when its resources are being occupied through the provision of such services at the time another request for EMS occurs within its service area. Individual towns are responsible for assuring that their respective communities are covered and must have mutual-aid agreements with services that surround their communities.
13. The development and implementation of county-wide systems that must operate in the setting of multiple casualty incidents or disasters are the responsibility of the respective counties. The respective counties must support such systems financially. As such, systems that relate to regional and statewide surveillance and disaster management are the responsibility of the State. The State must engineer, implement, and support financially and operationally all regional and statewide consortiums required to provide emergency medical services to regions and to the State as a whole. Such responsibilities include the development and implementation of plans to this end. Other than the resources provided by grants to the State, the only support for such activities is the provision of coordination and regulation by the Bureau of EMS and Injury Prevention, which, according to many sources, currently is not able to adequately support local efforts due lack of sufficient resources. This is exemplified by the failure of the State to provide the resources necessary to support the statewide, regional trauma system development mandated by state statutes. No state-level funding is provided for the development, implementation, maintenance, and quality management of the statewide trauma system. These functions can be seeded and implemented with the assistance of Federal funding through the CDC and HRSA bioterrorism grants, but the State must assume the responsibility for the sustenance of such systems. Therefore, the State must identify resources for the sustainability of such systems, especially recognizing that the windfall of resources made available from federal funds will be short-lived and not sustainable over the long run.
14. The State has mandated that the Bureau of EMS and Injury Prevention accomplish many actions, but has not supported such mandates with the resources required to carry-out such mandates.
15. Certain (most) aspects of the provision of EMS in the State must be common so as to facilitate inter-changeability of personnel and equipment especially when the local EMS

system is overwhelmed. The State is responsible for establishing, maintaining, and enforcing minimum standards for all levels of practice including system entry, communications centers and communicators, the prehospital system, in-hospital emergency medical services, and interfacility transfers between hospitals. Thus, the Bureau of EMS and Injury Prevention has the responsibility for setting these standards, and, as such, must establish minimum competencies for education and training at all levels of practice, provision of technical assistance to local, county, regional, and State levels, and for the operations, services, and coordination of all EMS systems that extend beyond counties. Currently, the Bureau is not adequately funded to provide such services, especially the coordination and control functions mandated by the legislature and for preparedness for bioterrorism and other disasters.

16. Although medical direction is required at all levels of EMS practice, most of the medical directors are volunteers and are not compensated for the responsibilities they carry. Local services must be able to reimburse their respective medical directors, but most of the volunteer services do not possess sufficient resources to do so. Either sources of funding such physician activities must be identified and sought by local services, or such activities should be provided at the county or regional levels with funds provided by the respective counties for countywide medical direction, or by the State for regional and statewide activities. Currently, the State financially supports a state-level medical director. Some hospitals contribute to the support of medical direction at the local level.
17. Data relative to the functioning of the individual emergency medical services and the county, regional, and statewide EMS systems are essential for the development of information essential for quality monitoring and performance improvement. In addition, real-time surveillance for actualization of hazards is essential and identification of patterns required for detection of events related to the hazards requires a statewide data collection and analysis system. No resources are available for the development, implementation, maintenance, and modifications of such systems.
18. Additional resources must be identified by local, county, and the State to allow the development of EMS in Wisconsin. Unfortunately, these various levels were lulled into irresponsibility through the provision of such resources by volunteerism, grants and other sources of funding, and generally, never have assumed the full responsibility for adequately funding EMS. At each level, the respective units of government must recognize and accept their respective responsibilities for the provision of EMS to its citizens and visitors.

Assuming such responsibility is an issue of public safety, which must be assumed at each level.

19. Potential sources of funding include, but are not limited to, the tax base at each level. Appropriate regional services clearly could markedly enhance the resources obtained from third-party payers and from those served by the system. However, any remaining deficits must be assumed by local, county and State resources just as they are for other public safety functions such as law enforcement, sanitation, assurance of the quality of potable water and safe food, and public health.
20. Some hospitals support the position of an EMS Coordinator to assist with quality management of the services provided by the prehospital system and for coordination of hospital activities with those of the prehospital system.
21. Without additional support to the basic services and the Bureau, the system is in danger of collapse particularly at the volunteer level, as well as coordination of regional and statewide activities essential for the management of overwhelming events, and will be marked by failure and extensive and unnecessary loss of life and limb. On a per capita basis, the state fares poorly in comparison to other similar states.
22. Currently, there is no funding mechanism in place that will support the essential activities of the first responder elements of prehospital EMS or for those provided or that should be provided by emergency medical communications centers and their staff. Since such activities are mandated by the State, the Funding Assistance Program should be expanded to include these essential elements of EMS.
23. Given the current level of support to the Bureau of EMS and Injury Prevention, it is not possible to develop, implement, maintain, regulate, and evolve the system structure so important for the integration of services and systems mandated by the Legislature in its Trauma System legislation. Further system development is needed for other aspects of emergency medical services as well. It is anticipated that there will be nine Regional Trauma Areas in Wisconsin. Each of these areas will require at least, one full-time staff person. This staff also must be able to provide support to other parts of the EMS Systems. In addition, some systems are being developed at regional levels in association with the bioterrorism program development by DHFS using grant funds. Unless additional resources are identified, such systems will not survive once the federal monies are discontinued. Therefore, additional sources of revenue must be identified to support these activities of the Regional Offices. In addition, this system will require the services of a registrar and an educator. In order to

develop such systems, then, 12 positions will need to be added to the EMS Section of the Bureau ($1.2 million/year).

24. The current staffing level of 10 FTEs in the EMS Section cannot meet the mandates directed to it by the Legislature. Another four FTE positions will be required to comply with the mandates ($320,000/year)
25. Proposed reductions and revenue caps imposed upon the Technical College system will greatly restrict its ability to expand instructional activities in response to increasing demands or even to maintain its current level of courses and program offerings. Either increased funding will be necessary or alternatives identified, or the staffing of services will become impaired further.
26. Members of the State EMS Board, its committees, and the State Trauma Advisory Committee all are volunteers, and as such, must be provided with adequate staff support in order to complete their respective missions. Currently, such support is buried into the duties of the Bureau staff including the Bureau Director and the Chief of the EMS Section. Such support activities interfere with their ability to accomplish tasks more in line with their responsibilities. Volunteer committees and boards cannot operate effectively purely on the efforts of the volunteers.

XII. Recommendations

1. Each level of government must recognize and support emergency medical services as a priority along with each of the other public safety agencies within their respective jurisdictions.
2. Assistance with billing and collection must be provided to volunteer services so that the reimbursement for services provided can help to meet some of their costs. This could be accomplished by county or regional administrative services that would off-load the individual services of such responsibilities and would lessen the deficits encumbered at the local level.
3. Although the State must assist local communities with funding of basic services mandated to be provided by the local governments, expansion of such services to higher levels of care are the responsibility of the local governments (including counties). If the citizens of an area wish to augment their current level of emergency medical services, local and county governments should provide the necessary resources to do so.
4. The Funding Assistance Program (FAP) should provide assistance to services that are essential for the provision of the minimal standards of practice at the first-responder and

EMT-Basic levels of service, and should be adjusted on the basis of needs present only after the services have exhausted all other means of financial support, especially as related to appropriate, maximal billing and collection of fee-for-services. Failure to bill for services and manage services with maximal efficiency does not merit assistance from the State. This should require re-evaluation of the distribution of FAP resources on the basis of defined needs. However, it seems unlikely that services already unable to complete the administrative tasks required for reimbursement will be able to complete the necessary needs assessments. Thus, currently, completing and submitting a needs assessment by local services does not seem probable.

However, the state should provide training for such administrative activities and even provide such services at the regional level. Such regional activities should be supported at least in part, by a proportion of the revenues collected for fee-for-service billed by regional services. Such activities also could be provided to the services by contracts with the private sector. It is not anticipated that fee-for-service collections will be sufficient to meet all of the expenses associated with the delivery of basic EMT-level services and some level of support from the FAP will be required.

5. All advanced-level services should be supported by fee-for-services revenues and local governments and other fund-raising activities. Continued support for basic-level services seems warranted. The State should not be responsible for the provision of such advanced services except for those activities that are involved in EMS system development and operations. Integration and standardization of these services into systems is the responsibility of the State if they extend into multiple counties. The latter activities should be supported by state resources.
6. It is not likely that medical first-responder services and communication centers will be able to recoup their expenses from a fee-for-service mechanism even when these components are recognized as an essential element in the delivery of emergency health care. Such mechanisms should be identified and negotiated with the payers for health care. Therefore, support will be required from the FAP. Currently, the resources necessary to support such services are not included in the current levels of FAP funding.
7. Given the foregoing discussions, FAP funding at least will need to double to $4.5 million. This will place Wisconsin’s aid to providers at a level similar to that in other states.
8. A statewide data acquisition, analysis, and feedback system must be developed, implemented, maintained, and the data collected must be analyzed for the monitoring of quality of care,

adjustments to enhance the EMS system, and for the detection of bioterrorism events and events related to other hazards that may result in mass casualties. Such a system must include data from communications centers, prehospital emergency medical providers, clinics, physician's offices, and hospital emergency departments and outpatient facilities. Most of these agencies will not be able to independently fund their respective components of such a data collection system. Potentially, the bulk of such a data collection system can be developed using resources from Federal grants to DHFS. However, the long-term operation of such a system including data analysis and feedback will fall to the State. It is estimated that such expenses will encumber about $500,000/year even when it is associated with the HAN. If funds for the initiation of the data collection cannot be extracted from federal funding, the development of such a system will require an initial will cost an estimated $10 million.

9. Stable sources of funding far in excess of the current FAP must be identified or EMS in Wisconsin is likely to deteriorate. Given the possibility that some of the start-up funds can be extracted from the federal grants to the DHFS and that all services optimally collect fees-for-service, at least another $4.1 million/year are required to adequately fund EMS (including the statewide trauma system) in Wisconsin.
10. Initial start up funds should be appropriated from Federal Grants and other donations. Such funds are not to be included as a stable source of funding.
11. A stable funding source(s) should be obtained from:
    a. The statewide trauma system should be funded in part by a tax on alcoholic beverages, a surcharge on moving traffic violations, seat-belt fines, driver's license fees, and motor vehicle registrations. Regional collection services should be funded from the funds collected from the payers.
    b. Augmentation of services to higher levels should be funded by the municipalities and counties.
    c. Augmentation of FAP by $2.3million should be provided by a surcharge on health insurance premiums, a surcharge on telephone (including wireless) use for support of EMS Communications, and from driver's license fees and motor vehicle registrations.
    d. Other than personnel for the trauma system, additional staff to the EMS Section ($320,000/year) should be funded from GPR.

The statement by the Technical Advisory Team of the National Highway Traffic Safety Administration following its evaluation of EMS in Wisconsin in 2001 best summarizes the financial needs of EMS in Wisconsin:

Despite the outstanding progress of the past eleven years, much remains to be done. Some of the barriers to progress that existed eleven years ago are still present today. Dedicated people throughout the state, both paid and volunteer, doing a job with little recognition and inadequate resources have created monumental achievements. But even dedication and hard work can carry Wisconsin only so far. Currently, resources are being cut and personnel and financial support to maintain and continue improving the EMS system in Wisconsin have eroded to the point that the system is in danger of collapse. Even with a host of volunteers, a stable, continuing funding source must be obtained for the Bureau of EMS and Injury Prevention and personnel resources must be allocated to meet the demand for services to the public, the EMS volunteer and career personnel and other EMS system partners. The political leadership in Wisconsin must address the real needs facing the Wisconsin EMS system and ensure that stable funding mechanisms and personnel resources are available to maintain a good system and make it even better.

APPENDIX

A. Glossary of Terms