



Texas Fire Chiefs Association

EMS Committee

Fire-Based EMS in Texas and Healthcare Reform: Impacts and Recommendations

January 2014



(consider including pictures of some ambulances from around the state that would represent large, mid-size and small agencies along with volunteer organizations?)

Executive Summary

In the mid-1960's the modern concept of delivering emergency medical treatment in the prehospital arena was established. In the ensuing decades many of the fire departments in the State of Texas have adopted the EMS concept into their departments and have excelled in the delivery of emergency care to sick and injured citizens, and visitors of their cities. Over the past forty years the technology, procedures and medications have changed but the determination and commitment of the personnel assigned to the EMS function within these departments to provide a high level of service has not changed.

The healthcare industry in the United States is currently undertaking an effort to revolutionize its practices. Over the past few years news reports have been full of stories related to healthcare reform and many of these stories have evoked a great deal of controversy. The healthcare industry in the United States today is the most expensive system in the world with an average annual per capita expenditure for healthcare at \$8,400, according to the Centers for Disease Control. Many argue that this system has become full of inefficiencies and is not the most effective or efficient healthcare delivery model. Due to a number of reasons, many Americans are over-utilizing the 9-1-1 system and emergency departments for their primary healthcare needs rather than utilizing primary care physicians. The healthcare reform initiative seeks to redirect patients away from the very expensive hospital-based treatment option and back toward community-based options. The reform initiative also seeks to direct hospital-based caregivers, EMS agencies and others to seek alternative, innovative solutions to meeting patients' needs at the community-based level in a proactive manner. Through these initiatives, the traditional reimbursement models will be reduced and funding streams will be redirected toward these alternative solutions.

Due to these factors, and many others, the fire-based EMS delivery model in the state of Texas and in the United States is at a critical juncture in its history. Decreasing reimbursement rates, increasing call volumes, increasing utilization rates, costs to add resources and increasing employee workload together are creating a need for change to the existing system of service delivery. Even though EMS calls have become the primary majority of fire department responses, in many departments as much as 80-85%, most administrative effort is focused on the other critical functions of a departments operations. In many fire departments the EMS bureau or division is understaffed and under-equipped to lead the agency into this new environment that is ever changing. While tradition in the fire-service is a wonderful centerpiece it is imperative that fire department administrative officers are able to release tradition when necessary to embrace and understand the new landscape that is being presented by healthcare reform. Strong, educated leadership will be required to successfully navigate the new realities that are now in existence.

The Texas Fire Chiefs Association has created an EMS Committee that is tasked with educating all Fire Chiefs in the State of Texas on the current and predicted state of prehospital care. Additionally, this EMS Committee will present educational opportunities and make recommendations for consideration by all Fire Chiefs in regards to the administration of their EMS agency, if applicable. This report has been created for the express purpose of providing valuable information to the administrators of all fire-based EMS agencies in our State.

State of the National EMS Industry

While the modern EMS industry came into existence in the mid-1960's it is still a relatively young field. It has been primarily in the past two decades that most of the major advancements to the industry have occurred. These advancements have been the result of the dedication of many healthcare experts across the nation. During these four decades much has changed and advanced in the field of emergency medical care. Long held medical theories have been proved or disproved through numerous studies and research programs. Technological advances have been numerous and dramatic. Today's prehospital provider can truly provide advanced level treatment that forty years ago were undreamed of in the prehospital arena. Concurrently, EMS systems have consistently promoted the use of the 9-1-1 system. Couple this with societal changes through which many people have come to rely upon EMS systems and hospital emergency departments for primary medical care and a national shortage of primary care physicians, and it is understandable why today's national healthcare system is strained to a point of unprecedented levels in the nation's history.

While prehospital care has been in existence for over one hundred years, to limited application, the modern EMS movement began in the mid-1960's when the National Academy of Sciences, National Research Council issued their white paper titled "Accidental Death and Disability: The Neglected Disease of Modern Society". Lessons learned from battlefield trauma care in the Korean and Vietnam wars were brought back to the United States and implemented. In the ensuing five decades, EMS has become an integral part of the healthcare industry in this country. However, it has only been in the past twenty years that the EMS industry has truly been recognized by the traditional hospital based portion of the healthcare industry as a critical component of the overall industry. This recognition has been due to the work of many dedicated medical directors and academics across the country. Additionally, these researchers and academics have begun moving the EMS industry toward evidence-based procedures and practices that are founded in true state-of-the-art medical science. Agencies that are willing to be innovative and proactive in securing their role within the health care industry will be afforded many exciting opportunities that will help to overcome the challenges that will surely be presented by healthcare reform. Fire-based EMS agencies are perfectly positioned as the hub of public safety, public health and health care systems. In the remainder of this section we will examine major legislative initiatives that are having a great deal of influence on the industry today, along with several major policies that have been adopted as well as a number of technical publications that have been developed. This will be followed by a summary of the current and projected state of the national EMS industry and how these changes will impact the delivery of healthcare in America as well as within fire departments throughout the State of Texas.

National policy and literature review

There are three major legislative initiatives that have entered the national picture in the past seventeen years that have had a major impact on the EMS industry. Those initiatives are:

- Health Insurance Portability and Accountability Act (HIPAA): Enacted August 21, 1996. This piece of legislation was written to ensure a patient's right to privacy as it concerns their protected health information. The standards are also intended to improve the efficiency and effectiveness of the nation's health care system by encouraging the

widespread use of electronic data interchanges in the health care system. While this standard has increased the level of privacy afforded persons with healthcare issues it has also placed an increased administrative burden on providers of healthcare, including EMS agencies. Failures of an agency to adequately protect the health information collected during the course of treatment are termed 'breaches' and breaches may bring substantial civil penalties from the federal oversight groups tasked with enforcing this document. As a stand-alone document however the penalties for violations were relatively minor and there were very few enforcement mandates given. However, the enactment of the HITECH act in 2009 increased the penalties and increased enforcement efforts. The HIPAA legislation is under constant revision and numerous updates are released annually. Most recently, in the spring of 2013, over seven hundred new pages were added to this piece of legislation.

- Health Information Technology for Economic and Clinical Health ACT (HITECH): This act was included in the American Recovery and Reinvestment Act of 2009. This act was put into place to help ensure that as more medical records became digitized that they would also remain secure. HITECH also placed additional requirements on business associates of the healthcare provider. HITECH legislation provided funding for periodic audits by federal regulations, increased enforcement through civil action in federal court, increased the monetary level of fines levied and increased accountability requirements for providers of healthcare services. This legislation has impacted EMS providers by increasing their level of exposure to audits and subsequent fines that can be assessed for violations found through the audit process.
- Patient Protection and Affordable Care Act (PPACA): Signed into law in 2010 by President Barack Obama, this legislation, also known as 'Obamacare' or the 'Affordable Care Act', seeks to increase the level of healthcare provided to individuals through a number of initiatives that are incrementally put into place over a ten year period. There has been a growing awareness at the federal level over the past ten to fifteen years that the current state of healthcare delivery in this country is in need of a major overhaul. This controversial piece of legislation attempts to redirect the medical community in the provision of healthcare. Due to a decrease in the numbers of individuals protected by insurance coverage coupled with a decreasing number of primary health care physicians, many individuals have transitioned to utilizing the hospital-based emergency department system for primary health care. PPACA provisions will incentivize transportation by EMS agencies to alternative destination locations such as freestanding "emergency" clinics. Accountable Care Organizations will be established to promote community-based care and these initiatives may be funded through various grant programs. Additionally, the PPACA also includes provisions to increase audit and enforcement actions being taken against all providers, prehospital and hospital based.

Two major industry policy papers that help to define the future of the EMS industry in the United States were reviewed. These papers were:

- Emergency Medical Services Agenda for the Future, National Highway Traffic Safety Administration, 1996: "The *EMS Agenda for the Future*, supported by the National Highway Traffic Safety Administration, the Health Resources and Services Administration, and the Maternal and Child Health Bureau, has come to be known by EMS stakeholders as the "Second White Paper", a reference to the 1966 report "Accidental Death and Disability: The Neglected disease of Modern Society" (NAS, 1966). The purpose for developing the EMS agenda was to determine the most important directions for the future of EMS by incorporating input from a broad, multidisciplinary spectrum of EMS stakeholders. *The EMS Agenda*, written by

consensus and funded by the National Highway Traffic Safety Administration, brings together input from virtually all EMS stakeholders, including the IAFF, emergency physician groups, state and federal agencies, hospital representatives, EMS education groups, EMS medical representatives, EMS consultants, and private industry. *The EMS Agenda* is intended to guide EMS policy-makers at all levels of government as they plan for the future.

The EMS Agenda discusses fourteen attributes of EMS that should be developed to enhance the service delivery of these services. The development of such attributes as follows would lead to increased service delivery to the citizens we serve: integration of health services by creating linkages with other community health resources; research; medical direction development; improving public education efforts; improving communication systems; development of research based clinical care initiatives; the collection and analysis of data to enhance system planning and design.”

- Emergency Medical Services - A Guidebook for Fire-Based Systems, 4th Edition, International Association of Fire Fighters, 2008: “The information in this manual is designed to provide background on EMS systems necessary to bring understanding of system components and system design models. It will guide local fire department leaders in analyzing their EMS systems by presenting experiences of fire departments, current technical knowledge, and a vision for the future. This manual will also provide direction for system evaluation, allowing leaders to justify their status quo or highlight areas for proposed enhancement.”

There is a great amount of literature readily available that discusses the healthcare reform initiative and its impact on the industry. Much of what follows is a general discussion based upon the review conducted by the authors of this paper. Most of these items can be found in a variety of published articles.

Results of Literature Review:

In 1973 the National Commission on Fire Prevention and Control released a policy paper titled “America Burning”. This comprehensive paper sought to detail the problems with fire protection and make recommendations to improve the industry. This paper has had a significant impact on the fire industry for the past forty years. At that time, over 6,200 lives were lost annually to fire in the United States along with over 300,000 injuries and \$11 billion (over \$54 billion in today’s terms) in fire loss. The recommendations made by the commission, and subsequently enacted by the industry, have had significant impact. According to numbers released by the Centers for Disease Control in 2010, these numbers had reduced to 2,640 lives lost, 13,350 injured and \$7.5 billion in fire loss. The aspects of the Nation’s fire problem, as identified by the Commission, were summarized as follows:

- “An increased emphasis on fire prevention was needed
- Better training and education for the fire service was needed
- An increased focus was needed for Americans regarding fire safety
- The environment in which Americans lived and worked in the 1970’s presented unnecessary hazards
- Fire protection features of buildings were in need of improvement
- Important areas of research were being neglected”

While no one position paper could be found to summarize the state of the EMS industry in such a succinct manner, the totality of research in the EMS industry today is recognizing many of the

same elements found in *America Burning*. An increased level of focus on the delivery of prehospital care of injury and illness has produced more “evidence-based” treatment options. Studies, such as those being conducted by the Resuscitation Outcome Consortium, are identifying scientifically sound methodology that enhances the ability of the healthcare industry, both prehospital and in-hospital, to care for critically ill or injured citizens. An increasing level of training and education for providers and citizens alike is being called for by industry experts. Some EMS agencies perform educational sessions for the citizens in their communities on injury prevention and CPR training. Paramedics are being utilized in innovative new ways that are outside of the traditional paramedic role to provide proactive health care in addition to the traditional emergency response model. A wide array of options are available for today’s prehospital provider to enhance their level of operational effectiveness and efficiency, as well as increasing their level of community involvement, with the desired goal of improving the health and well-being of the individual citizens within the community. If the healthcare reform movement continues on its current path it is hoped that results in the health of our communities will be similar to those seen in the fire prevention movement started in the 1970’s.

Along with these increased opportunities to enhance service delivery, there have been developments throughout the nation that are having a negative effect on the healthcare industry. These trends, as indicated in the literature review, include:

- A decreasing number of primary care physicians in the United States
- Health care costs per capita have grown an average 2.4 percentage points faster than the GDP, since 1970
- Half of health care spending is used to treat just 5% of the population
- Increasing age of the population will place additional burdens on an already strained healthcare industry. The percentage of the U.S. population 65 or older is currently about 12.5 percent [in 2008] and is expected to reach 16 percent by 2020 and 21 percent by 2050
- Increasing per capita cost of healthcare delivery, currently estimated by the Center for Disease Control at \$8,400
- Insurance coverage with Medicaid is expected to increase by 10-15 million people during the next decade and may increase overall health care and emergency department utilization
- Increasing usage of 9-1-1 systems are placing a large burden on agencies and municipalities to match resources to demand
 - 9-1-1 system provides the “easiest” but most expensive form of transportation to the emergency department
 - The cost of delivery of this transportation model is very high for municipalities and other agencies that provide EMS service
- Changing reimbursement models
 - With the advent of the sequestration legislation that occurred in February 2013, EMS agencies experienced a 2% decrease in Medicare reimbursement effective April 1, 2013. Additional reductions in reimbursements are expected
 - Shift to “value based” reimbursement models in the next few years that will be based on quality measures which include customer satisfaction surveys
 - “Bundling” of reimbursements – Medicare is moving away from paying each provider individually for services delivered and is moving toward reimbursing the treating hospital, who will then be responsible for distributing the monies received to all agencies that participated in the care, including EMS agencies
- Added opportunities for EMS agencies: It is anticipated that opportunities will be presented for EMS agencies to increase their level of service to areas outside traditional

models. The two concepts described below provide practical approaches designed to increase the level of service delivery to the local community while providing individualized care in a non-emergent setting. These concepts, if implemented, also afford EMS agencies an opportunity to diversify funding streams to offset predicted reimbursement reductions.

- **Community Paramedic Programs:** These programs involve utilizing paramedics in a non-traditional role of delivering individualized care to high-risk patients in a scheduled, in-home visit. Community paramedic programs are also known as Mobile Integrated Healthcare programs or Mobile Community Healthcare programs. While such programs have been in existence for over a decade the fire-based EMS portion of the industry has only adopted the concept within the past few years. There are many variants of these programs in existence around the country but all operate on the principle of defining the true need of the individual and meeting that need. These patient-centered programs have proven to be effective at steering patients toward better health, thereby decreasing their dependence on 9-1-1 and hospital emergency departments. These programs have been successfully implemented in all service region types, from super-rural to urban environments. Community paramedic programs truly focus on the small number of patients who account for over fifty percent of the annual healthcare spending in the communities where these programs have been enacted. Not only do these programs focus on the medical needs of the patients being served they also focus on social services and mental health care needs.
- **Community Education Programs –** Much like recommendations made by *America Burning* in the early 1970's for fire prevention, literature regarding the delivery of prehospital medicine indicates the need for increased levels of community education in matters related to healthcare. EMS agencies are perfectly positioned to meet this need. They are generally well respected by the citizens of their local communities and the personnel employed by these agencies are well educated in healthcare matters. Education programs that could be offered would include CPR training, injury prevention and basic first aid training. Additional training opportunities would include health education, nutrition courses and 9-1-1 utilization education.

Agencies that are unwilling or unable to modify their operations to take advantage of the opportunities available will jeopardize their position in the industry, and may be unable to sustain their operations in the future. Agencies, whether public or private, will be forced to identify efficiencies in their operational capacities to streamline their service delivery while also taking advantage of the opportunities being presented for non-traditional income streams in order to ensure future survivability in the industry. EMS agencies are also strongly encouraged to redefine their role in the healthcare industry and work to ensure cooperative partnerships with other healthcare agencies in their area in order to seize these opportunities.

Specific Areas of Concern/ Opportunity for Fire-Based EMS Agencies

The healthcare reform movement has created an ever-shifting landscape that must be tracked by EMS agency administrators, including Fire Chiefs. Fire-based agencies are not exempt from the new regulations, threats or opportunities presented by healthcare reform. Therefore, it is the recommendation of the Texas Fire Chiefs Association EMS Committee that all Fire Chiefs

and/or their designated EMS administration, focus on the following areas of concern or opportunity as they move their agencies into the future:

- HIPAA compliance: While the original HIPAA document was enacted in 1996 it has been updated several times. Most recently, in September 2013, a document titled “The HIPAA Omnibus Rule” went into effect. This rule placed additional burdens on agencies in regards to business associate agreements. While this rule is the most recent revision it is doubtful that this will be the final revision. Non-compliance with HIPAA provisions can prove to be very costly and may even prevent an agency from providing services. It is strongly advised that agencies hire a HIPAA compliance officer or contract these services to a reputable third party vendor. It cannot be emphasized strongly enough that this is a very critical component of an EMS agency today. HIPAA compliance programs should provide oversight for documentation, billing, data transfer and record keeping systems, at a minimum.
- Medical Director Involvement: State law requires on-line and off-line medical direction for all EMS agencies. It is recommended that all fire-based EMS agencies in the State of Texas have Medical Directors that are heavily involved in the operation of that agency. The Medical Director should attend appropriate seminars and conferences to ensure that all current regulations are being met along with maintaining an awareness of the current and projected trends in the EMS industry.
- Dedicated EMS Chief: While it is understood that many, if not most, departments in the state have tremendous struggles with staffing, especially at the administrative level, it is recommended that any fire-based EMS agency have a dedicated, full-time officer that is responsible for the EMS operation, to include staying abreast of all of the rules and regulations being enacted at the state and federal level. These changes are happening at a fairly fast rate and are difficult to follow without constant attention.
- Enhanced EMS Education for Chief Officers and EMS Administrators: There are many avenues for fire-based EMS agency administrators to keep tabs on the most recent healthcare reform driven developments in the EMS industry. It is absolutely imperative that key administrators stay in-tune with the ever shifting landscape. There are several conferences that offer educational opportunities related to EMS operations, such as: EMS World Expo; Pinnacle, hosted by Fitch and Associates; the Executive Institute hosted by Page, Wolfberg and Wirth; and many more. It is recommended that EMS administrators attend at least one of these each year to stay current with new regulations and trends in the industry. In addition to conferences there are a host of other educational opportunities. There are many webinars and articles in all fire-related trade journals that discuss at length the issues that face our agencies.
- GETAC involvement: GETAC is the Governor’s EMS and Trauma Advisory Council. This organization makes recommendations to the Department of State Health Services (DSHS) for the future delivery of prehospital care in the state of Texas. Currently there is a very low participation rate from the fire-based EMS component in the state. Participation at this event should be a “must-do” item for every EMS Chief in the State or at a minimum from each region. These meetings are held quarterly and are usually in Austin. Involvement at the GETAC meetings allows EMS administrators to keep current with regulations within the EMS industry in Texas but also many national level topics are discussed during sessions and in the informal meetings held over meals or in the hallway.
- Local RAC involvement: The state has been divided by DSHS into 22 regions called “trauma service areas”. A Regional Advisory Council was formed in each region to develop and implement the trauma system for that region. There are a number of important reasons for all fire-based EMS agencies in the state to be involved with the

RAC in their area. State funds are passed through the RAC's to agencies; regional disaster response efforts are coordinated through the RAC's; data collection is often funneled through the RAC; and a host of other critical functions are performed through the RAC's. Often the local hospitals groups are heavily involved in the RAC operations but fire agencies are underrepresented.

- Data exchange: The healthcare reform initiative has at its core a movement toward data and information exchange among various components of the healthcare delivery system. For the first time, major computer software companies are beginning to focus their efforts on the needs of EMS agencies. While this movement does present challenges in terms of HIPAA compliance, EMS agencies will be encouraged to build systems that allow for the exchange of their patient care report data directly and electronically into the hospitals electronic medical record system. This will bring about efficiency within the system that does not currently exist. However, in order to provide for the security of the data being transmitted as required by HIPAA and HITECH, many cities will need to upgrade the security capabilities of their current IT systems. This is another area that a HIPAA compliance program could provide guidance on in order to accomplish this task while staying within all applicable regulations.
- Integration with local hospital administrators: EMS administrators have always known that we were a part of the local delivery of healthcare to the areas that we serve. However, not all components of the healthcare industry have viewed our agencies in the same way. It is critical that EMS agency administrators educate local hospital leadership on the role of EMS and to forge those relationships into strong operational bonds. As reimbursement models change in the future it may become critical that those relationships exist. These relationships are also critical in the mitigation of localized disaster responses and should be formed ahead of the disaster response.
- Transforming agencies into streamlined, efficient operations: While healthcare reform initiatives are currently focused primarily on all other aspects of the healthcare provision industry, most experts indicate that EMS agencies can expect the same regulatory controls within the next few years. One key founding principle is at the heart of healthcare reform. This principle is known as the Triple Aim Initiative, as developed by the Institute for Healthcare Improvement and is composed of three elements:
 - Improving the patient experience of care (including quality and satisfaction)
 - Improving the health of populations
 - Reducing the per capita cost of healthcare

It is anticipated that EMS agencies will soon be held to these standards. Patient satisfaction surveys will be required on all patients contacted by EMS agencies. Regulatory and reimbursement agencies will more closely examine the activities of EMS agencies, and their billing companies. EMS agencies will also be challenged to reduce their cost of service delivery.

For-profit EMS agencies have long utilized business practices to streamline their operations. In the past few years fire-based EMS agencies have been challenged in determining how best to offer services and increase resources in a challenging economic time. The long held excuse that as a public service agency we should be given all of the resources that we believe we need is now being challenged. We will be forced to increase efficiency and resources without negatively impacting budgets. This is a challenging situation to be sure but can be accomplished through the implementation of certain key principles utilized by for-profit companies of all types. EMS administrators in the fire-based market will need to learn these skills and obtain

these knowledge sets. Today's fire-based EMS agency administrators must be willing to challenge long held beliefs and consider new ways of operating their agencies in light of the changing landscape of healthcare delivery.

Conclusion

The modern Emergency Medical Service (EMS) model was founded in 1966. Since that time, the practice of prehospital emergency medicine has evolved to levels undreamed of in the 1960's. Over the past decade the medical industry has begun the process of an in-depth review of all prehospital treatment practices and has developed evidence-based treatment options. These options have increased the capability of EMS providers to provide a higher quality of medical care. Advancements in technology have allowed prehospital providers to interface directly with hospital-based physicians in order to activate internal hospital procedures that enhance the care of some critical patients. In light of these advancements many emergency medical service providers across the spectrum are rethinking how first responders can provide more effective care to patients in a manner that increases efficiency and effectiveness. In addition, the Patient Protection and Affordable Care Act (PPACA), which was passed in 2010, emphasizes a shift in focus from reactive to proactive healthcare delivery, and subsequently rewards those agencies that are creative in seeking community-based solutions to help minimize the healthcare crisis in this country. Hospital emergency rooms are stretched beyond capacity, millions of Americans are uninsured or underinsured, and spending on healthcare in all sectors of the economy is escalating at an unsustainable rate. EMS agencies are perfectly positioned to take advantage of opportunities presented by the PPACA, and the ensuing healthcare reform initiative, to fill a number of voids which currently exist in the out-of-hospital care of patients that will help to minimize many of the problems that exist in the current healthcare delivery system.

While the threats presented by healthcare reform on EMS agencies may seem daunting they are certainly manageable. It is incumbent on the EMS administrator in today's fire-based EMS agency to stay current in the most recent information and be willing to "think outside the box". It is the belief of the EMS Committee of the Texas Fire Chiefs Association that these are very exciting times to be involved in the delivery of prehospital care to our customers. Age old beliefs are being challenged and redefined. New ways of providing care are coming to light. New technology and redesigned equipment is on the near horizon. Agencies that are willing to embrace these new concepts will be well positioned to weather the changes that are most certainly in our future. Those that do not may struggle to survive in the changing environment.

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