

DEMSOC

Delaware Emergency Medical Services Oversight Council



2007

Annual Report



The Honorable Ruth Ann Minner, Governor



DELAWARE EMERGENCY MEDICAL SERVICES OVERSIGHT COUNCIL



April 15, 2008

To the Citizens of Delaware,

On Behalf of Governor Ruth Ann Minner and the Delaware Emergency Medical Services Oversight Council (DEMSOC), I am pleased to present the 2008 DEMSOC Annual Report. DEMSOC was created in 1999 to promote the continuous development and improvement of our Emergency Medical Services (EMS) System. The membership of DEMSOC includes professionals from several EMS provider agencies, representatives from agencies that frequently work with and support EMS, and private citizens knowledgeable in the delivery of EMS care. The Council meets several times throughout the year to address current issues and provide support for developing workable solutions to those issues.

The purpose of this report is to inform others about Delaware's EMS system and increase awareness of the issues that most directly affect the delivery of EMS service and the quality of EMS patient care. Throughout the year we have witnessed great achievements in the EMS community and this report attempts to capture those successes as well as to build the framework for addressing the challenges that lie ahead.

2008 proved to be yet another challenging year for EMS on the national level. Most of the trends experienced nationwide are evident here in Delaware as well. The growth in Delaware's population presents the need to care for more patients and expand capacity. The competition to attract qualified EMS providers to meet our staffing needs is intense, as well. The costs associated with maintaining a competent EMS system are on the rise, and this has an affect on our provider agencies. Also, our focus on greater preparation for disasters and acts of terrorism is becoming more evident as EMS provider agencies move forward in their work with several federal partnerships. As our EMS system rises to meet these and numerous other challenges, DEMSOC will be integrally involved in the process, providing a venue for discussion and growth.

As you review this year's report, I encourage you to use the information provided to become more aware of the important role of our EMS system in Delaware, and I ask for your continued support for the dedicated professionals and volunteers that work hard to ensure that our EMS system remains a leader among its peers.

Respectfully yours,

David B. Mitchell, J.D., Secretary
Department of Safety and Homeland Security



DEMSOC ANNUAL REPORT - 2007

Executive Summary

The Delaware Emergency Medical Services Oversight Council (DEMSOC) presents this annual report in accordance with Title 16, Subsection 9703 of the Delaware Code. DEMSOC was formed pursuant to the Delaware Emergency Medical System Improvement Act of 1999 (HB332). The council is charged with monitoring Delaware's Emergency Medical Services (EMS) system to ensure that all elements of the system are functioning in a coordinated, effective, and efficient manner in order to reduce morbidity and mortality rates for the citizens of Delaware. It is also charged to ensure the quality of EMS services in Delaware.

The main purpose of this report is to inform those interested in our State's EMS efforts about current practices and initiatives and to provide measurements useful for monitoring the performance of our EMS system. Our inaugural report in 2000 allowed DEMSOC to begin the process of establishing a baseline from which to measure the impact of future changes and growth in Delaware's Emergency Medical Services (EMS) system.

This report addresses EMS system oversight, EMS system performance, EMS system costs and Medical Direction. In addition, this report will cover an overview of EMS as part of an intricate system of agencies and organizations and their commitment to the coordinated system of care that is EMS in Delaware. EMS is integrated with other services and systems intended to maintain and enhance community health and ensure its safety. As defined in this years report you will see the EMS Continuum of Care model as described by National Highway Traffic Safety Administration (NHTSA).

It is our vision that Delaware's Emergency Medical Services represents true excellence in out-of-hospital, community health based care. Delaware's EMS is integrated across the full continuum of community health services beginning with emergency dispatch and including emergency response, community health interventions, injury and illness prevention efforts, and facilitation of access to health services.

The ongoing challenges seen by the Delaware EMS system are consistent with those seen nationwide. These challenges include: addressing the increased call volume related to the aging of our state's population, increases in the development of our counties and population growth. Issues with system finance and sustainability will continue. Many agencies receive funding through state and federal sources. Current federal funding cuts may adversely impact our system. In general, EMS systems nationwide are facing issues with personnel recruitment and retention. Our system must take a proactive approach to this issue if we are to maintain the quality and efficacy of our EMS services.

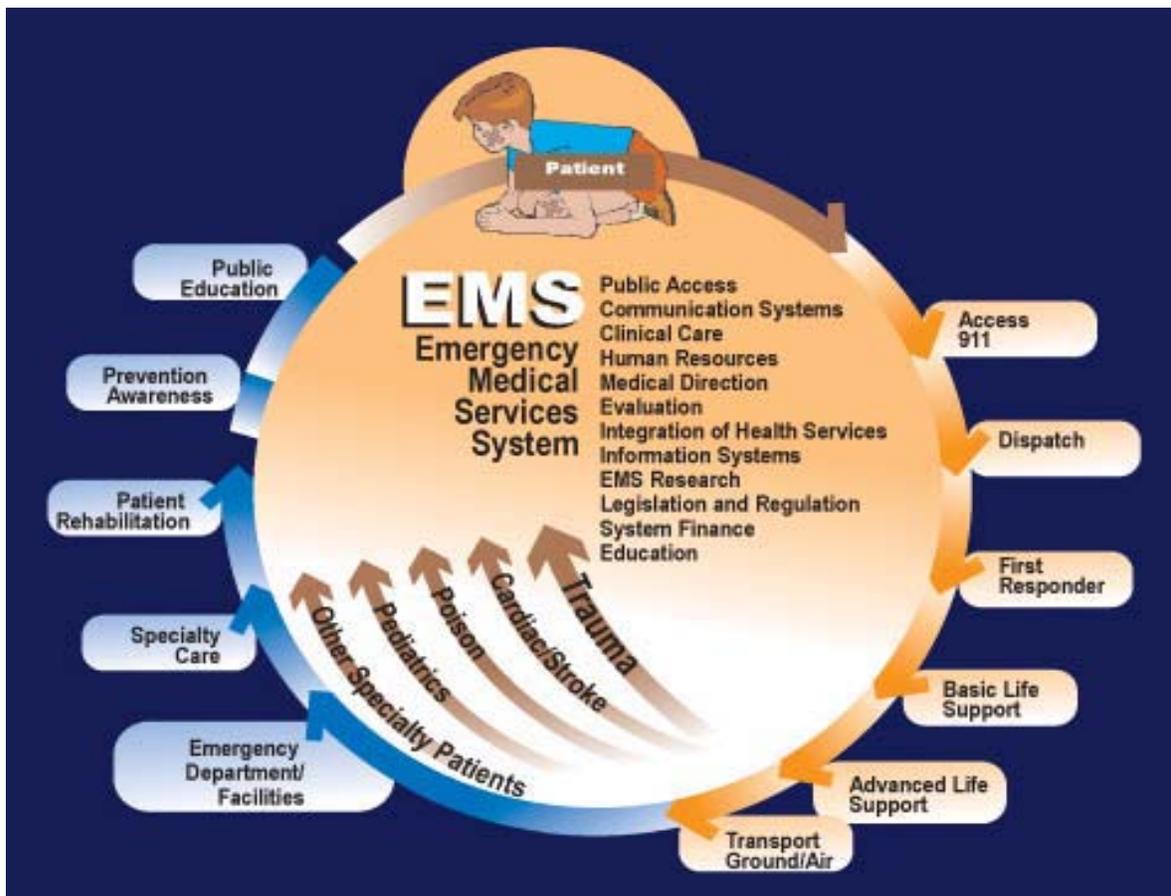
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NATIONAL EMS ISSUES, HOW IS DELAWARE AFFECTED?

Emergency Medical Services is a system of care for victims of sudden and serious illness or injury. This system depends on the availability and coordination of many different elements, ranging from an informed public capable of recognizing medical emergencies to a network of hospitals capable of providing highly specialized care to the most seriously ill or injured. The 9-1-1 emergency number, local dispatch centers, rescue teams, and prehospital and emergency department personnel are some of the critical elements necessary for the EMS system to work.

24 hours a day, 7 days a week, EMS takes no holiday. Emergency Medical Services is there...



EMS CONTINUUM OF CARE

The EMS Continuum of Care is the cyclical process used to describe the delivery and constant improvement of EMS care. An EMS event usually begins with the onset of illness or injury in a patient and a call to the dispatch center through 911. The call is then triaged and dispatched and the appropriate providers arrive on scene to provide care. The patient is then delivered to the hospital, where they receive specialty care (cardiac, trauma, pediatrics) as appropriate and ultimately may enter rehabilitation if needed. The event is then analyzed and lessons learned are shared with providers and the public in the form of awareness campaigns and educational programs in the hope of reducing the potential for further events. Events are analyzed by looking at the 12 main attributes of an EMS system (Public Access, communications, clinical care, etc) so that all aspects of the EMS system benefit from the lessons learned during a given event. Each modification or improvement to one aspect of the EMS system has an impact on the rest of the system.

INTEGRATION OF EMS WITH HEALTH SYSTEM

Integration of Health Services: Integration of health care services helps to ensure that the care provided by EMS does not occur in isolation, and that positive effects are enhanced by linkage with other community health resources and integration within the health care system (NHTSA).

Just as there is a continuum of EMS care, there is a larger continuum of general medical care. One of the great philosophical issues faced by EMS leadership today is "where exactly does EMS fit in the overall continuum of medical care?" EMS is indeed a part of medical care, but is it a true medical field? Are EMS providers true medical professionals? This question takes us back to the very beginning of EMS care in the 1960s. EMS care began primarily as a response, or public safety entity, and was almost entirely supported through the efforts of dedicated volunteers. Over time, the role of EMS has clearly evolved into a medical role, and with that comes training and skill demands making it clear that EMS providers are indeed healthcare providers. The technical expertise and knowledge required to meet the demands of the job have caused EMS provider roles to evolve in many cases from volunteer positions into full-time professional positions. The evolution of EMS over the past four decades has indeed led to better patient care, longer life spans, and better overall health for our citizens. This evolution has not been without its share of issues, however. Rapid growth and expansion of the industry, and the move from "local" EMS, where practices were suited to the needs of the community, to "regional" EMS or "national" EMS, where continuity and standards for interoperability are suited to the needs of many jurisdictions has caused much debate, and EMS leadership today struggle with how to best meet professional standards set at a national level, while providing care specifically suited to their local community.

SCOPE OF PRACTICE

In the 1970s and 1980s, standard provider levels, such as EMT-Basic and EMT-Paramedic were established to address EMS growth as a healthcare profession, and to establish national baselines for education, standards of care and provider certification. However, local needs or lack of standards in certain areas led to the morphing of national baselines to create provider levels that met local needs and standards. The result was that there were over 125 different levels of EMS providers in practice across the US. For instance, EMTs in Delaware did not train to the same standards or skills as EMTs in say, Utah or Montana. This made it difficult, if not impossible to create uniform standards, protocols or practices that could be professionally recognized in our nation's healthcare system. In the aftermath of our national tragedy on September 11, 2001, it became much clearer that EMS care must be better defined, and the need for much clearer national standards for EMS professionals must be established to ensure smooth transition of care from one jurisdiction to another. This must be applied not only during disaster, but in day to day EMS operations as well in order to bring the greatest benefit to the health of our citizens nationwide.

Thus began the National Scope of Practice project. The project is the joint effort of federal government agencies such as the Department of Homeland Security, the National Highway and Traffic Safety Administration, and the Health Resources and Services Administration, in conjunction with numerous professional agencies such as the National Association of State EMS Officials, the National Association of EMS Physicians, and the American Ambulance Association. The project is an attempt to redefine the existing 125+ levels of EMS providers nationwide into four distinct professional levels: Emergency Responder, Emergency Medical Technician, Advanced Emergency Medical Technician, and Paramedic. It is the ultimate goal to have these four levels recognized by all US states and territories, and have a unified system of certification and credentialing for these four levels. In order to do that, a unified curriculum must be established for each level and used by all, and institutions teaching the curriculum should ultimately be accredited to common standards as well. It will take a long time and much work to achieve the ultimate goal described here, but the final result will be uniform EMS care throughout the country, ability for jurisdictions to provide reciprocity to providers, EMS provider recognition as true health care professionals, and a well-defined role for EMS in the continuum of general medical care.

FUNDING

***System Finance:** Emergency medical services systems, similar to all public and private organizations, must be financially viable. In an environment of constant economic flux, it is critical to continuously strive for a solid financial foundation. (NHTSA)*

The original EMS System finance discussion most likely surfaced about the time that the first EMS run was made in our state. The system finance issue came to the forefront during the 1999 statewide EMS assessment and the subsequent EMS Improvement Act, and again in the 2004 NHTSA system review. Unfortunately, little has changed in the way that we finance our state's EMS system and the cumulative effects of a number of

factors are quickly moving us into a potentially dangerous situation. Increased growth in Delaware's population, and the overall aging of the population are combining with a rapidly escalating overhead costs and a slowed economy to present tremendous challenges to our state's EMS agencies. A nationwide healthcare crisis is developing and many citizens do not have access to primary care. When this happens, EMS and our hospital emergency departments become their source of primary care, creating even greater strain on our emergency care system.

The 2002 DEMSOC report showed that our EMS system handled a total of 48,930 ALS runs and approximately 59,000 BLS runs. Data from 2007 shows significant increase in the number of runs, to 60,894 for ALS, an increase of 20%, and 99,171 for BLS, an increase of 40%. Estimated system costs reported for ALS service in 2002 totaled \$14.9 million for ALS and \$15.5 million for BLS. In 2007, costs skyrocketed to an estimated \$27.1 million for ALS (47%) and \$39 million for BLS (60%). Agencies must increase capacity to meet the growing demands for EMS care, and the cost of providing that care is rising concurrently at a rapid pace.

Delaware's EMS system is facing tremendous challenges in the area of system finance. Some of the most notable challenges come from the front lines, where our provider agencies must answer a rising number of calls and overcome shortfalls in available personnel. Personnel and equipment costs, include rising costs for salaries, benefits, retirement, training and equipment purchases, are outpacing budget growth and revenue from sources such as billing and donations. Other challenges such as rising fuel costs are taxing our EMS agencies.

Recruitment and retention are issues of national significance, and Delaware is particularly challenged on the ALS side as many of our first paramedics near retirement age. As EMS skills evolve and the technical nature of the medical skills performed increases, the costs for training and equipment rise, and the pool of viable candidates available to perform necessary tasks diminishes. Personnel shortages fuel a competitive and costly race by provider agencies to recruit and retain a sufficient workforce.

Several federal sources of EMS system funding have dried up as the national economy has slowed. Budget cuts at all levels of government have put even greater pressure on our system. At one time, the office of EMS received nearly \$500,000 in federal funding to support various aspects of our system. This funding support has dwindled to less than half that amount, and trauma system development has been left completely unfunded at the federal level.

Hospitals, which are an integral part of the EMS system, are suffering coverage shortfalls in key areas, such as orthopedic surgery, and this is cause for some institutions to no longer participate in the statewide trauma system and accept injured patients from EMS. Often the hospital emergency department is the safety net for citizens who have limited or no health insurance, and their care needs flood available capacity while simultaneously increasing the amount of uncompensated care that must be provided. The legal

environment surrounding our healthcare system has led significant increases in malpractice costs.

Costs in other areas, such as dispatch and EMS aviation, have nearly doubled since 2002, and again, the sources of revenue and support for these important aspects of the system are limited.

There is no simple solution to the EMS fiscal crisis. For the past several years, the various components of the system have streamlined and focused on efficiencies that could keep pace with the demands of our population and rising costs. We have done more with less to a great extent in many aspects of our system. In 2008, DEMSOC will be exploring other system finance options to bolster the urgent needs of our EMS system. Research shows that citizens are willing to pay to have a competent and complete trauma system, and they are willing to pay to have sufficient EMS coverage and support. When they call 911, they want us to respond, quickly and competently. It is therefore the role of DEMSOC to explore system funding options such as those used in over 20 other states, and all of our neighboring states, such as specific EMS fees added to motor vehicle fees, fines and penalties. We must prepare to support both progress and development of the EMS system through diverse funding sources. If we do not proactively address our system funding issues, it is a certainty that the quality of care for which our system is renowned will suffer and impact quality of life issues of those we serve.

WORKFORCE DEVELOPMENT

Work continued in 2007 on recruitment and retention of EMS providers. There is a national shortage of EMS providers and a need to solidify EMS as a recognized medical profession. The national trend is toward the creation of a National Scope of Practice, which would standardize the provider levels recognized in each state and enhance interoperability, mutual aid and licensure reciprocity. Many states have also moved to mandate accreditation of their paramedic initial training programs (Delaware's paramedic training program was re-accredited during 2006).

Although Delaware is also affected by a shortage of EMS providers, our agencies across the state have worked hard to improve recruitment and retention, compensation, work conditions, training and diversity. The demand for EMS services is also expected to increase, as the states population ages. The Delaware Population Consortium projects that from 2005-2015 Delaware's population will increase by 15%, and the number of residents 60 years and older is expected to increase 27%. Sussex County is in position to be extremely hard hit by the aging population.

While the aging population is increasing, the volunteer population is beginning to decrease. Information from the National Registry of Emergency Medical Technicians shows that the majority of EMS responders nationwide are between the ages of 20-45. Many people within this age range are finding it more difficult to volunteer their time with the increases in dual income and single parent families, and the fact that many people are working longer hours.

DEMSOC created a workforce diversity subcommittee in 2006 to address issues with the recruiting and retention of a more diverse EMS workforce (see article from El Tiempo Hispano in appendix). This subcommittee will work closely with the NAEMSE group to address this critical issue within our State. As part of this effort, the Office of Emergency Medical Services is working with technical high schools throughout the state to develop an EMS program that would increase the availability of training and allow students to transition to the Delaware Tech program upon graduation.

EL TIEMPO HISPANO
Gratis - Complimentary Statewide Bilingual Weekly Newspaper Semanario Bilingüe para el Estado de Delaware
Delaware Año 2, No. 17, 25 de mayo de 2007 - Delaware Year II, No.17, May 25, 2007

PARAMEDICO HISPANO
JORGE VASQUEZ

**¿ QUÉ ESPERAR DE LA REFORMA MIGRATORIA ?
WHAT SHOULD WE EXPECT OF THE IMMIGRATION BILL ?**

**II PROMOCIÓN DE ASPIRA DELAWARE
ASPIRA DELAWARE CLASS OF 2007**

**AARP: EL FUTURO ES HISPANO
AARP: THE FUTURE IS HISPANIC**

EMPLEO 20-21

The image shows a smiling man in a dark blue paramedic uniform with a "PARAMEDIC" patch on his shoulder. He is standing in front of a white ambulance with a red and blue emergency light bar on top. The background is a blue and white geometric design.

EMS System Oversight



DELAWARE EMERGENCY MEDICAL SERVICES OVERSIGHT COUNCIL



The Delaware Emergency Medical Services Oversight Council (DEMSOC) was formed pursuant to the Delaware Emergency Medical System Improvement Act of 1999 (HB332). The council is charged with monitoring Delaware's EMS system to ensure that all elements of the system are functioning in a coordinated, effective, and efficient manner in order to reduce morbidity and mortality rates for the citizens of Delaware. It is also charged to ensure the quality of EMS services in Delaware.

Chairman: Hon. David Mitchell

Co-Chairman: Glenn Luedtke

Council Members:

Dr. Jaime "Gus" Rivera, FAAP
Dr. Ross Megargel
Dr. Glen Tinkoff
Dr. Tom Sweeney
Dr. Ed Alexander

Sgt. Ben Parsons
Colin Faulkner
Lawrence Tan
Kenneth Dunn
Wayne Smith
Bill Bush

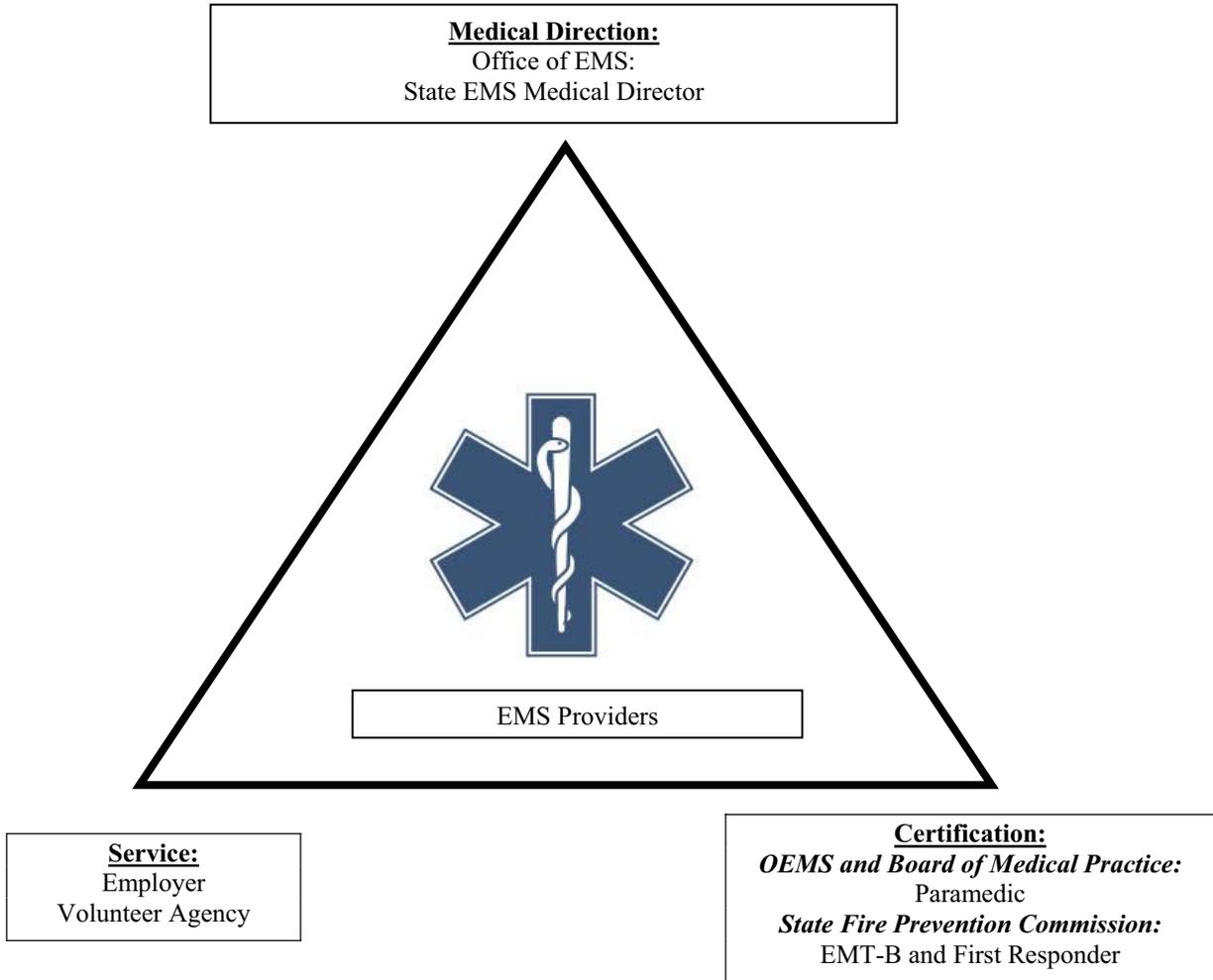
Ron Marvel
Doug Butler
Robert Ricker
James J. Cloney
Robert Coyle, Jr.

DEMSOC consists of 19 members appointed by the Governor. The Secretary of The Department of Safety and Homeland Security, David B. Mitchell, J.D., serves as the Chairman. Also serving on the Council is the Secretary of Delaware Health and Social Services, Vincent P. Meconi. DEMSOC also includes representatives from the following agencies: the Governor's Office, each County government, the Delaware State Fire Prevention Commission, the Delaware Volunteer Firemen's Association and its Ambulance Committee, the Delaware Healthcare Association, the Delaware Police Chief's Council, the Delaware Chapter of the American College of Emergency Physicians, the State Trauma System Committee, the Medical Society of Delaware, the Delaware State Police Aviation Section, and the State EMS Medical Director. There is a representative for practicing field paramedics and there are three at-large appointments for interested citizens, one from each county. The Delaware Office of Emergency Medical Services provides staff support for DEMSOC. The Office of Emergency Medical Services is assigned to Delaware Health and Social Services' Division of Public Health, and is responsible for coordination of the state's EMS system. The Office of Emergency Medical Services is the regulatory authority for the paramedic system and provides medical oversight to the state's EMS system.

Delaware is a frontline leader in prehospital emergency care through comprehensive coordination, development and evaluation of the statewide emergency medical services

system. There are two agencies that share oversight of the EMS system in our state, The Office of Emergency Medical Services oversees Advanced Life Support services and the State Fire Prevention Commission oversees Basic Life Support Services. The EMS Improvement Act articulates the roles of the two agencies.

DELAWARE EMS OVERSIGHT TRIANGLE



There are two separate oversight agencies within Delaware for EMS providers.

The Office of Emergency Medical Services regulates ALS agencies in regards to certification, education and training and medical control. The EMS medical directors employed by the OEMS provide medical direction to both ALS and BLS services.

The Delaware State Fire Prevention Commission oversees BLS services through the Ambulance service regulations. The regulations address administrative, operational and provider requirements. This covers emergency as well as non emergency ambulance services.

OFFICE OF EMERGENCY MEDICAL SERVICES



The Office of Emergency Medical Services is a section within the Division of Public Health, Department of Health and Social Services. It plays a vital role in the integration of emergency medical services into the state's public health system.

Mission

The mission of the Office of Emergency Medical Services is to assure a comprehensive, effective and efficient statewide emergency medical care delivery system in order to reduce morbidity and mortality rates for the citizens of Delaware. The OEMS ensures quality of emergency care services, including trauma and prehospital advanced life support capabilities, through the coordination and evaluation of the emergency medical services system, within available resources.

Philosophy

The OEMS is committed to ensuring high quality prehospital care to the citizens of Delaware. This agency supports the concepts of continuous quality management for all services it provides. The OEMS believes that the personnel working in the prehospital system take pride in their work and are motivated by a desire to achieve individual and system-wide excellence in the provision of prehospital care. Quality management will be seamlessly integrated into the work of Delaware pre-hospital services to the extent that the concepts of quality management are indistinguishable from the daily work of the prehospital provider.

The Office of Emergency Medical Services administers and enforces emergency medical services statutes, regulations, programs and policies.

Responsibilities of this agency include:

Advanced Life Support Services (ALS): The OEMS ensures highly trained paramedics are providing quality emergency care to the citizens and visitors of Delaware. The OEMS is responsible for coordination of training, certification, financing and oversight of the state's paramedic system.

Statewide Trauma System & Injury Prevention: This program is responsible for coordination of hospitals and provider agencies to ensure optimal care for trauma patients and serves as a leader in statewide injury prevention efforts.

Emergency Medical Services Data Information Network (EDIN): This program is responsible for maintaining a system of electronic data submission for EMS patient care reports and is the basis for EMS quality assurance and assessment of training needs.

EMS Medical Direction: This program is responsible for providing medical oversight of the statewide EMS system (Advanced and Basic Life Support), review and modification of the statewide standard treatment protocols, oversight of medical command facilities, conducting research and oversight of the statewide EMS quality assurance program.

Emergency Medical Services for Children (EMSC): The goal of this program is to improve emergency care for children in the State Of Delaware through specialized activities.

First State, First Shock Early Defibrillation Program: This program is responsible for providing data collection, training and prevention activities in support of initiatives to reduce cardiac arrest deaths in Delaware.

Crash Outcome Data Evaluation System (CODES): This program analyzes data to gain a more comprehensive understanding of the causes and impacts, both medical and financial, of motor vehicle crashes, and is better equipped to develop injury prevention programs with demonstrated potential for improved outcomes.

Poison Control Center Programs: The OEMS administers Delaware's contract with the Poison Control Center (PCC) at The Children's Hospital of Philadelphia to provide a 24-hour-a-day emergency hotline for poisoning incidents and poison information for Delaware residents.

State Regulations promulgated through OEMS:

Delaware Trauma System Regulation: The State Trauma System regulations were first promulgated in 1997 to add detail to the Trauma System enabling legislation of 1996. Subsequent revisions were enacted in 1999 and 2001. The regulations include sections on the Trauma Center Designation Process, Trauma Center Standards, Triage, Transport, and Transfer of Patients, and the Trauma System Quality Management Plan.

Air Medical Ambulance Service Regulation: The purpose of this regulation is to provide minimum standards for the operation of Air Medical Ambulance Services in the State Of Delaware. It is the intent of these regulations to ensure that patients are quickly and safely served with a high standard of care and in a cost-effective manner.

Early Defibrillation Provider Regulation: The purpose of this regulation is to establish the criteria for training and the right for emergency responders to administer automatic external cardiac defibrillation in an out-of-hospital environment.

Advanced Life Support Interfacility Transfer Regulation: The purpose of this regulation is to permit the use of paramedics, under the oversight of the Division of Public Health, to manage patients while in transit between medical facilities or within a healthcare system. It includes approval of an organization to provide service using paramedics, as well as define their scope of practice and medical oversight. Data reporting to the Division of Public Health is included for the purposes of evaluating the performance of the State EMS system, of which Interfacility Transport is a component, regardless of the level of medical care provided.

Prehospital Advanced Care Directive Regulation: On July 10, 2003, legislation was signed into Delaware law to adopt a Pre-Hospital Advanced Care Directive (PACD). A Delaware Pre-hospital Advanced Care Directive is a specific order initiated by the individual and signed by a physician stipulating a specific authority to follow and adhere to a terminally ill patient's medical care and treatment wishes. The PACD form is a standardized document that can be immediately verified by pre-hospital personnel. In any situation where pre-hospital personnel have a good faith basis to doubt the validity of a signed PACD form, the provider is directed to resuscitate and contact on-line medical control. Should the PACD form be located and presented to pre-hospital personnel once life saving efforts have commenced, pre-hospital personnel will alter their course of action immediately based on information contained in the signed PACD form. The regulation also details the legislated immunity for certified providers honoring this order.

OEMS Board and Committee Memberships:

Organ and Tissue Donor Awareness Board: The Office of EMS provides staff support to the Delaware Organ and Tissue Donor Awareness Board. Created by Delaware Code, Title 16, Chapter 27, Anatomical, Gifts and Studies, Section 2730, this Governor-appointed Board has the responsibility of promoting and developing organ donor awareness programs in Delaware. These programs include, but are not limited to, various types of public education initiatives aimed at educating residents about the need for organ donation and encouraging them to become designated organ donors through the State driver's license program. An average of 400 Delawareans are waiting for organ transplants at any given time. In 2006, sixty-one Delawareans were organ transplant recipients and 30 patients' families gave the gift of life by donating their loved ones' organs or tissues at death. Approximately 279,700 (39%) of Delaware drivers have designated themselves as organ donors on their driver's licenses to date.

The Office of EMS is assigned within the Division of Health and Social Services and is committed to the overall mission of that agency: "To improve the quality of life for Delaware's citizens by promoting health and well-being, fostering self-sufficiency, and protecting vulnerable populations."

The Office of EMS brings life-saving medical care to the residents and visitors of Delaware by overseeing and ensuring that responders are fully trained and emergency systems are functioning efficiently and effectively. This ensures a safer and healthier place to live for all Delawareans.

Medical Direction

Medical direction involves granting authority and accepting responsibility for the care provided by EMS, and includes participation in all aspects of EMS to ensure maintenance of accepted standards of medical practice. Quality medical direction is an essential process to provide optimal care for EMS patients. It helps to ensure the appropriate delivery of population-based medical care to those with perceived urgent needs (NHTSA).

Medical Directors:

State EMS Medical Director - Dr. Ross Megargel,

New Castle County - Dr. Rob Rosenbaum, Dr. Timothy Shiuh,

Kent County - Dr. Dean Dobbert,

Sussex County - Dr. Kevin Bristowe, Dr. Paul Cowan

BLS - Dr. Patrick Matthews

Delaware's Emergency Medical Services (EMS) provides medical care to victims of illness and trauma through a coordinated medical system of EMS responders. EMS responders include 911 dispatchers, 1st responders, basic life support (BLS) providers, paramedics or advanced life support (ALS) providers and on-line emergency physicians who oversee individual patient care. All of these EMS responders are medically coordinated through protocols and training directed and overseen by Board Certified Emergency Physicians who practice in Delaware.

Legally, medical care is rendered by BLS and ALS providers under the medical license of the State EMS Medical Director. Delaware has a part-time EMS medical director and an associate EMS medical director for each County as well as a BLS medical director, who are responsible for medical oversight, medical protocol coordination and quality assurance at the County level. The medical directors meet regularly to review statewide treatment protocols, quality issues, new medical techniques and equipment in a continuing effort to provide the citizens of Delaware with the most up-to-date and appropriate EMS care possible.

Delaware's EMS Medical Directors insure quality care to our patients through interactions with other physicians, hospitals, citizen groups and organizations such as the American Heart Association and the Medical Society of Delaware. We review aggregate patient care data from our providers to determine the effectiveness of our treatment protocols. Our EMS Medical Directors often bring diagnostic and therapeutic modalities

that they have used successfully in the emergency departments and move them into the prehospital environment. They also monitor the medical literature for new developments that may help Delaware patients. If our Standing Orders and treatments options are not adequate in our opinion, we look for alternative techniques and when none exist, we will apply scientific techniques under very strict oversight to advance care.

Treatment Protocols:

Delaware's EMS system provides care through a series of treatment protocols that allow certain level providers to initiate life saving care en route to the appropriate emergency department. Delaware has several unique protocols that have significantly improved patient care.

Delaware's Emergency Medical Services, specifically Delaware's Paramedics have been performing 12-lead EKGs on patients with chest pain and other signs and symptoms of heart attacks for over ten (10) years. This program has allowed paramedics and emergency physicians to provide very high quality care for Delaware patients having heart attacks. Initially, emergency physicians used the paramedic's report of having a heart attack to prepare the emergency department to give patients "heart attack reversing drugs or clot busters" known as thrombolytic agents. Delaware is fortunate to have four hospitals providing emergent angioplasty, in which cardiologist may be able to "reverse or negate" heart attacks. Christiana Hospital, St Francis Hospital, Kent General Hospital and Beebe Hospital all provide this angioplasty service. Now emergency physicians can direct paramedics and our basic life support ambulances to transport a heart attack patient to a hospital that is able to perform an emergent angioplasty in a short time, hopefully, reversing a heart attack, allowing the patient to return to their previous lifestyle.

Endotracheal intubation consists of the passage of an artificial airway through the mouth or nose, into the trachea in order to assist a patient to breathe. While this may sound like a relatively simple concept, in practice, this procedure is actually a very complex task requiring advanced operator assessment skills, physical and coordination skills along with a cooperative patient. Over the last several years the Delaware emergency medical services system has tracked endotracheal intubations closely in order to maximize patient benefit.

Over the last ten (10) years Delaware Emergency Medical Services has improved the paramedic's available equipment with the addition of the pulse oximetry, electronic capnography, along with introduction of new airway devices such as the laryngeal mask airway (LMA), Combitube and emergency surgical airway techniques. These devices have improved airway management in many patients. We have found over the years that there is a group of critical ill and injured patients that would benefit from intubation, but are difficult to intubate. These difficult to intubate patients are alive (as opposed to cardiac arrest), but resist intubation efforts. Generally, these patients have suffered head trauma or an intracranial hemorrhage and present in coma with clenched teeth. To further improve intubation success rates, we instituted a "Drug Facilitated Protocol (DFI) which utilizes medications and techniques proven effective in emergency departments

across the country. Over the last several years Sussex and Kent County emergency medical systems (EMS) have implemented prehospital DFI programs with great success. During 2007, New Castle County implemented a DFI program to now give all of Delaware the same access to this important critical patient care airway technique. Given the high level of training of Delaware paramedics, current quality assurance programs within the Delaware's EMS system, our strong physician involvement and our advanced equipment, prehospital critical care for Delaware patients with prolonged prehospital transport times are benefiting from statewide implementation of our "Drug Facilitated Intubation Program" in Delaware.

Research:

Research involves pursuit of the truth. In EMS, its purpose is to determine the efficacy, effectiveness, and efficiency of emergency medical care. Ultimately, it is an effort to improve care and allocation of resources (NHTSA).

Delaware remains among the leaders in EMS research. Research allows EMS managers to make decision based on solid evidence derived through scientific method. Science based decision making has been difficult to do with the worldwide lack of EMS research in general. Research from international and national literature is sought to answer EMS system questions and problems, but when not available has been developed in state. Delaware's EMS physicians, along with many of our emergency and trauma physicians and nurses have been involved in research that has had a national impact.

P. Matthews, D. Hainsworth, R. Megargel, C. Durie, "Public Access Defibrillators: Are They Used by the "Layperson" Public? an Observational Study from Delaware". Prehospital Emergency Care. Vol. 12, No. 1, pages 95 – 139. Jan 2008. Poster Presentation NAEMSP Meeting, Phoenix AZ, Jan 2008

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STATE FIRE PREVENTION COMMISSION



The State Fire Prevention Commission is charged with the protection of life and property from fire for the people of Delaware and to oversee the operation of the Delaware State Fire Marshal's Office and the Delaware State Fire School.



*Kenneth H. McMahon
David J. Roberts
Alan Robinson
W. (Bill) Betts, Jr.
Marvin C. Sharp
Douglas S. Murray, Sr.*

Not Shown: Bob Ricker

The Statutory responsibilities of the Delaware Fire Prevention Commission are to promulgate, amend and repeal regulations for the safeguarding of life and property from hazards of fire and explosion. The Statutory responsibilities of the State Fire Prevention Commission may be found in Title 16, Chapter 66 & 67 of the Code.

On July 1, 1972, the State Fire Prevention Commission was also given the mandate under Delaware Code, Title 16, and Chapter 67, §6708 – 6714, to regulate the ambulance service in Delaware. The Commission assigned to the State Fire School the added duties of inspecting and licensing ambulances and the training and certifying of ambulance personnel.

Ambulance Service Regulations – This regulation is to ensure a consistent and coordinated high quality level of ambulance service throughout the state focusing on timeliness, quality of care and coordination of efforts. This regulation addresses BLS Ambulance Service as well as Non-Emergency Ambulance Service. It clearly defines the administrative and operational requirements for such entities.

The SFPC adopted a statewide Basic Life Support quality assurance/quality improvement (QA/QI) program in June of 2007. *Quality Assurance* is the retrospective review or inspection of services or processes that is intended to identify problems and *Quality*

Improvement is the continuous study and improvement of a process, system or organization. The QA/QI program will incorporate a committee that shall be comprised of BLS organizations/representatives from the entire state. The purpose of this program is to assure and improve the quality of Basic Life Support within EMS systems that are served by the State Of Delaware. The overall goals of this program are:

1. To conduct medical incident reviews (QA)
2. To collect patient care statistics to evaluate system effectiveness and identify trends (QI)
3. To provide constructive feedback on quality improvement to all EMS professionals within the State Of Delaware
4. To coordinate the findings of quality assurance activities with the content of EMS continuing education programs
5. To provide assistance to EMS providers with local agency QA/QI programs
6. To make sure BLS is meeting all State standards and is providing the best patient care to the citizens and visitors of Delaware.



DELAWARE STATE FIRE SCHOOL

The Statutory responsibilities of the Delaware State Fire School are to : (1) provide firefighters with needful professional instruction and training at a minimum cost to them and their employers; (2) develop new methods and practices of firefighting; (3) provide facilities for testing firefighting equipment; (4) disseminate the information relative to fires, techniques of firefighting, and other related subjects to all interested agencies and individuals throughout the state; and (5) undertake any project and engage in any activity which, in the opinion of the State Fire Prevention Commission, will serve to improve public safety.

In order to comply with the statutory mandate, the State Fire School established a goal “to provide fire, rescue, emergency care, and related training to members of the fire community, industry, agencies, institutions, and the general public requiring specific programs and any program which will serve to benefit the safety of the public”. The primary activities center on operations at the State Fire Training Center west of Dover. Other activities are consolidated into in-service fire department training courses, training programs for state agencies, institutions and industrial facilities, public education programs, and emergency care and first aid courses.



OFFICE OF THE FIRE MARSHAL

In 1953, at the urging of the Volunteer Fire Service, the State Legislature created the Office of the State Fire Marshal and directed that regulations, reflecting nationally recognized standards, be promulgated to enhance life safety and property conservation for the citizens of Delaware.

The State Fire Marshal's Office functions as an independent state agency under the State Fire Prevention Commission, which promulgates the State Fire Prevention Regulations, as enforced by the State Fire Marshal's Office. As the law enforcement agency charged by state statute with the suppression and investigation of arson, the State Fire Marshal's Office provides the lead role in fire and arson investigations, statewide. The agency is charged with assisting the Chief of any fire department on request, inspections and code enforcement in health care facilities, educational occupancies, public assembly, public accommodations, flammable and combustible liquids, flammable gases, explosives and fire works.

The State Fire Marshal's Office is responsible for the comprehensive compliance with the state statute for the installation of smoke detection devices in all residential occupancies, which will greatly reduce the likelihood of injuries and deaths from fire.

The objective of the State Fire Marshal's Office is to provide a fire safe environment for the citizens of Delaware and all who visit and carries out its mandate for Public Service, through the work of three divisions, Administration, Field Operations & Technical Services.

Number of Fire Fatalities	12
Number of Burn Injuries Investigated by SFMO	33

2007 Delaware State Fire Marshal's Office Data

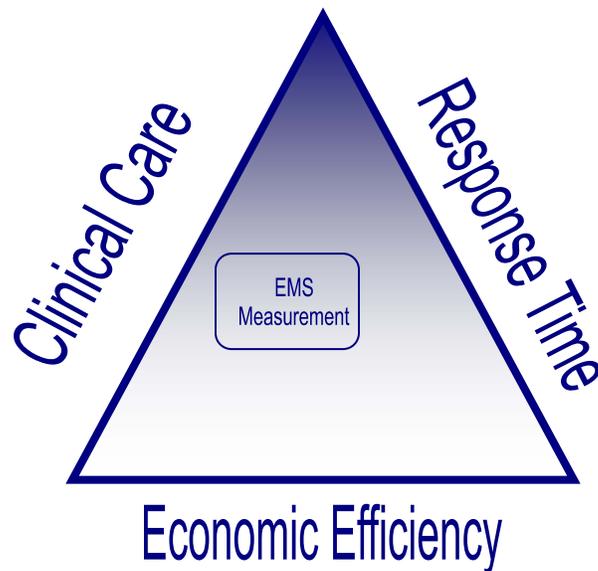


EMS SYSTEM EVALUATION AND EDUCATION

Evaluation is the essential process of assessing the quality and effects of EMS, so that strategies for continuous improvement can be designed and implemented (NHTSA).

As EMS care continues to evolve and become more sophisticated, the need for high quality education for EMS personnel increases. Education programs must meet the needs of new providers and of seasoned professionals, who have a need to maintain skills and familiarity with advancing technology and the scientific basis of their practice (NHTSA).

The National Association of Emergency Medical Services Physicians (NAEMSP) has identified three related variables for measuring EMS system performance; clinical performance, response time reliability and economic efficiency. These variables are interdependent for overall system success. Focusing the majority of resources on any one variable is done at the expense of performance potential in the other variables. For example, extreme cost cutting measures will have a detrimental impact on clinical performance and response time reliability. Also, if a system places all of its efforts on response time performance will result in a significant increase in costs as well as a decrease in clinical performance.

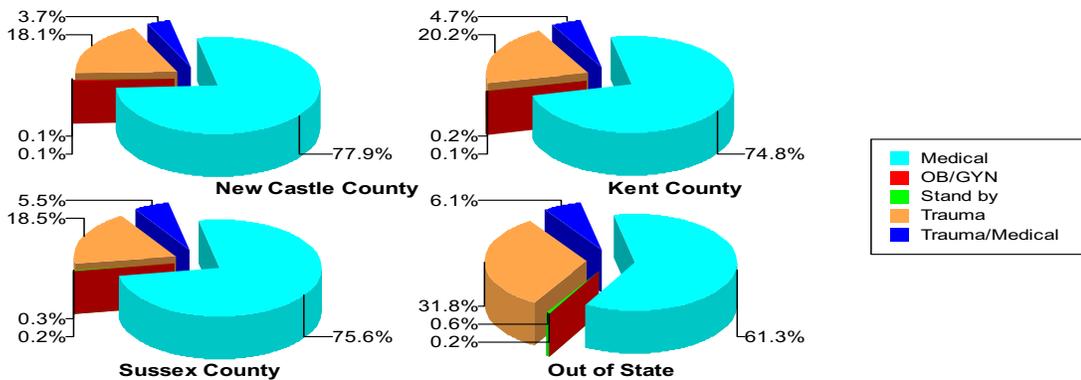


Medical Director's Clinical Performance Report

EMS provides care to those with perceived emergency needs and, when indicated, provides transportation to, from, and between health care facilities. Mobility and immediate availability to the entire population distinguish EMS from other components of the health care system (NHTSA).

All data used for this section was extrapolated from the EMS Data Information Network (EDIN). Please note for this report, Advanced Life Support (ALS) and BLS data are separately reported. While reading this report please do not combine the ALS and BLS data. Doing so would lead to inaccurate totals.

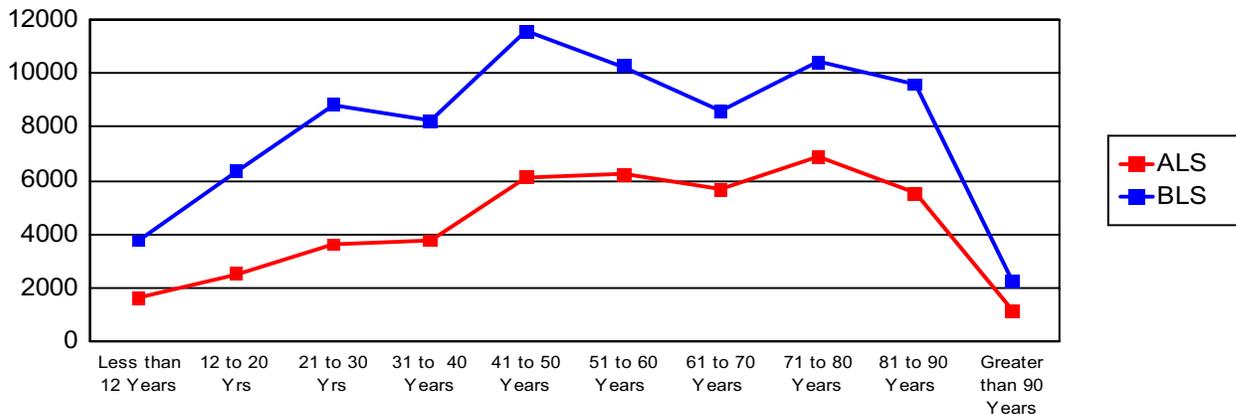
Types EMS Patients by County



Types of patients:

Examples of medical patients include chest pain, heart attacks, respiratory problems, altered mental status, seizures, strokes and infectious disease. Trauma patients include motor vehicle crashes, gunshot wounds, stabbings, industrial accidents and falls. Trauma/Medical patients often include patients who had a medical condition that caused them to suffer a trauma such as a faint related to a heart problem that caused the patient to fall, suffering a serious head injury

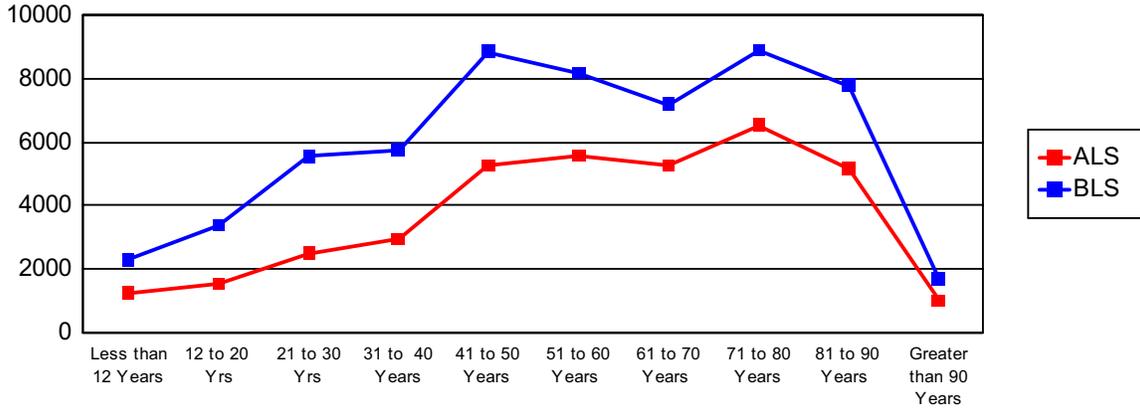
ALS and BLS Patient Age Comparison 2007



Age: Note peaks at 41-50 and 71-80 years of age, etiology uncertain.

ALS and BLS Patient Age Comparison 2007

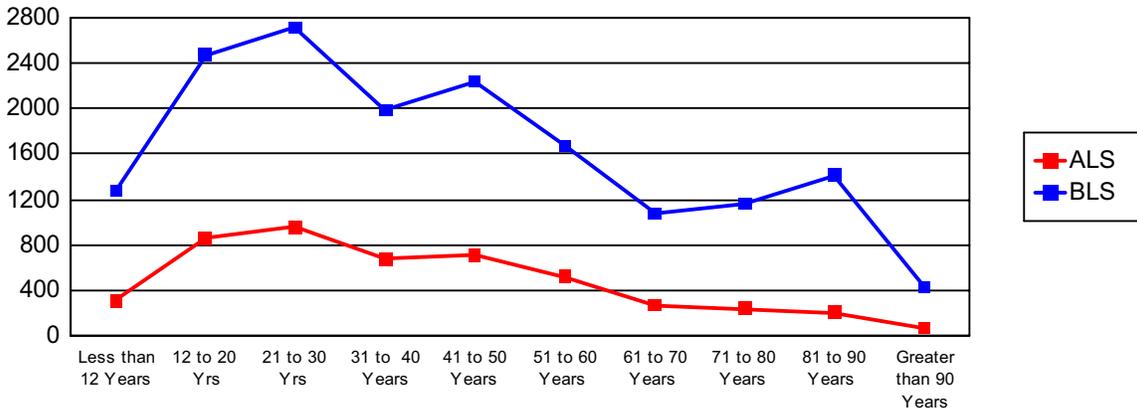
Medical Patients



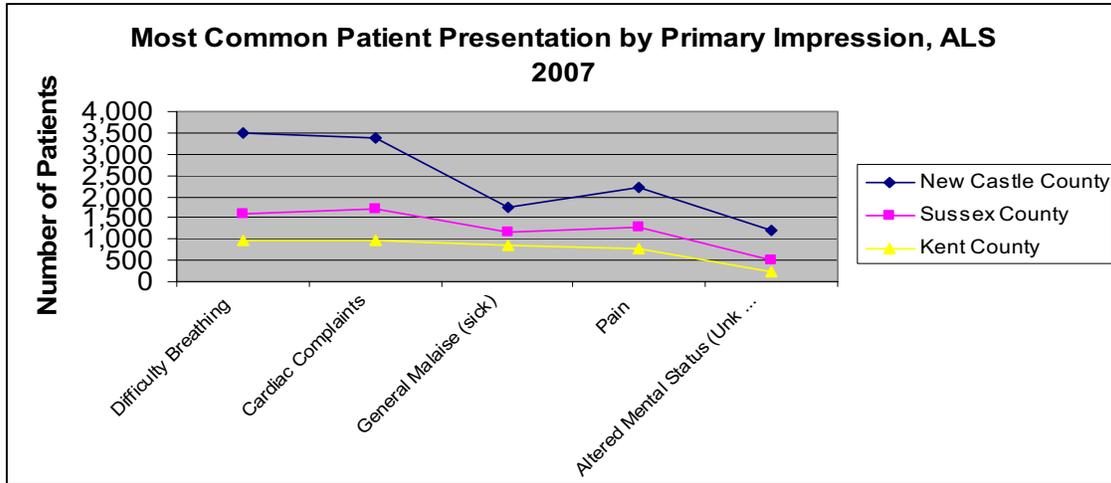
This graph depicts two age group spikes, 41 – 60 years of age and 71 - 80 years of age. There are many theories as to the etiology of these spikes; however more detailed analysis is required to determine which factors contribute greatest to these spikes. The most likely scenario for many in emergency medicine is that these spikes represent cardiovascular disease presentation groups, heart disease and stroke.

ALS and BLS Patient Age Comparison 2007

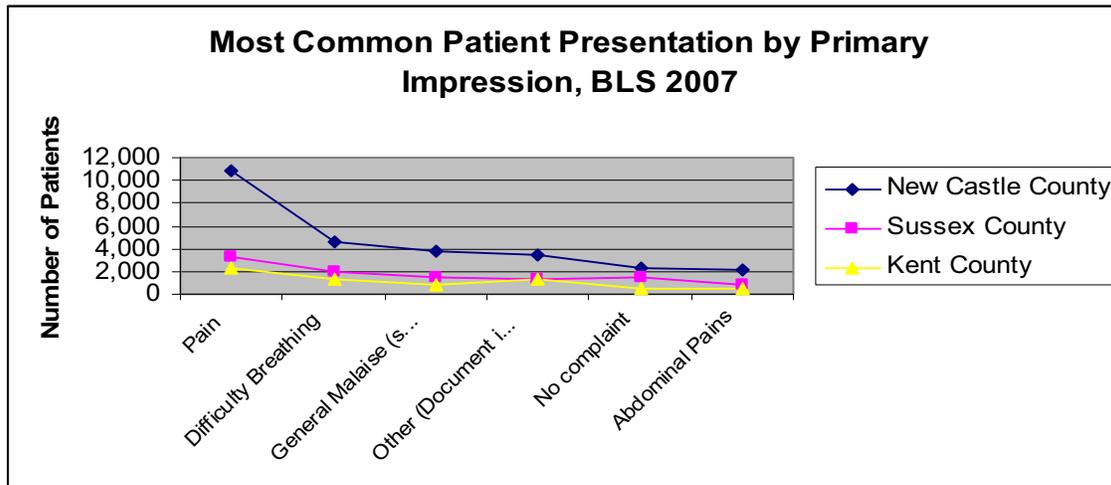
Trauma Patients



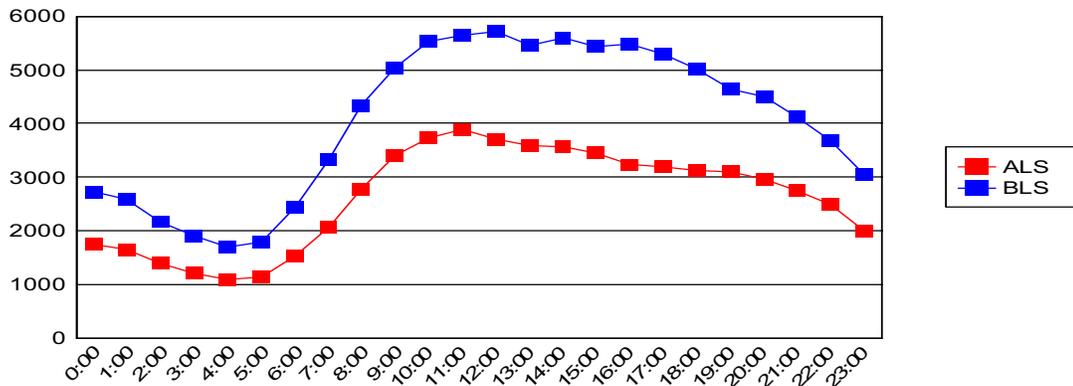
The three age spikes in this graph may be supported several theories, but more detailed sub-analysis is required to determine the actual causes. Delaware's most common trauma types are motor vehicle and falls. One could conclude that the 12 – 30 year old spike is motor vehicle and the 71 – 90 year old spike is most likely related to falls.



Primary Impression is the EMS provider's evaluation of the patient based on: signs, symptoms, patient's chief complaint and other factors. These graphs do not take into account the type of patient (medical, trauma). The primary impression of other is defined in the patient narrative and not able to query.

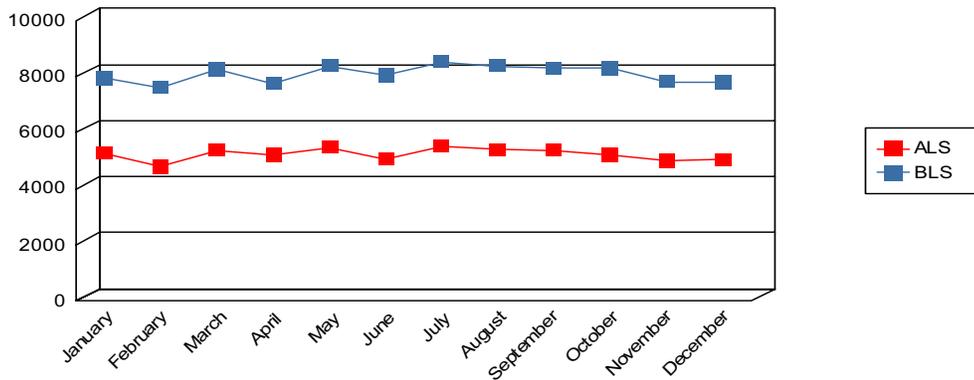


Time of Day When EMS Incidents Occur

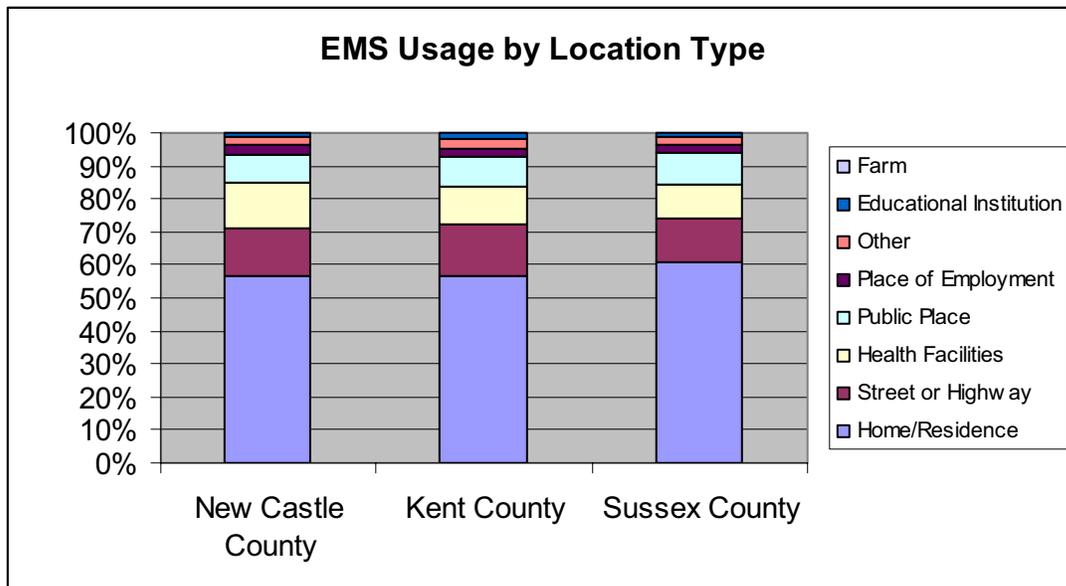


*Note surge in call volume upswing at 7:00 am and comes back down at 11:00 pm

ALS/BLS Incidents by Month-2007



Monthly data statewide is consistent; variations are seen however in Sussex County in the summer months and in the other counties during special events such as Race Week in Dover.



EMS usage by location type:

These graphs show the location of EMS calls which is helpful in designing dispatch protocols, developing operational systems to assist EMS providers in the rapid location of patients and to develop programs to reach critically ill and injured patients as quickly as possible with life saving treatments of which the Automatic Defibrillator program is an example.

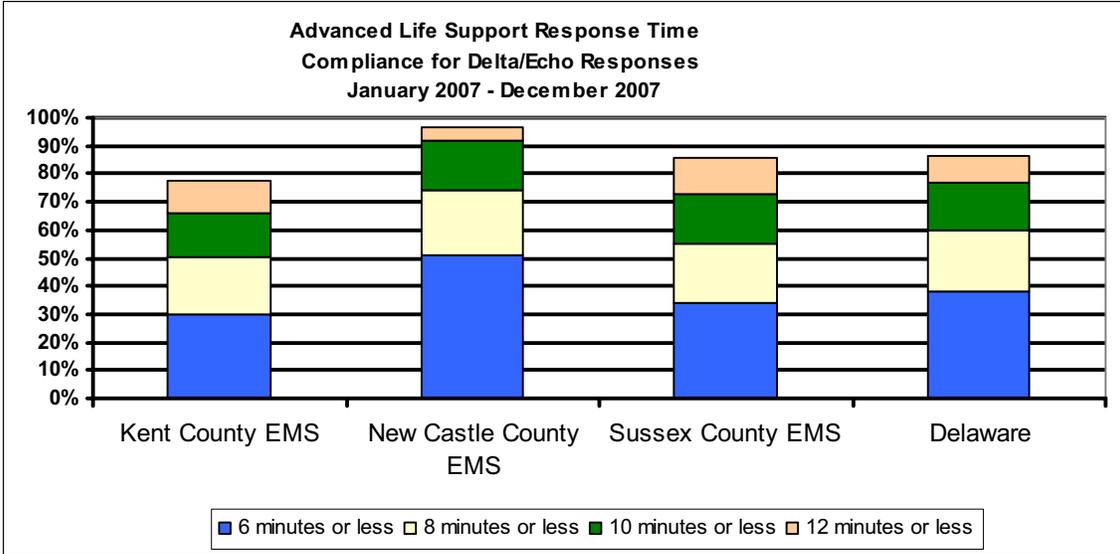
Statewide EMS System Response Time Performance

The Delaware EMS system measures response time performance in fractiles. Fractile response refers to how the response time is measure against an established performance goal. For example, if a response goal is 8 minutes, the fractile response is a percentage of the responses within that 8 minute goal. A 90% fractile response indicates that 90% of the time the response time was within 8 minutes or less. Numerous factors affect response time performance including; geography, baseline resource availability, call volume and deployment strategies

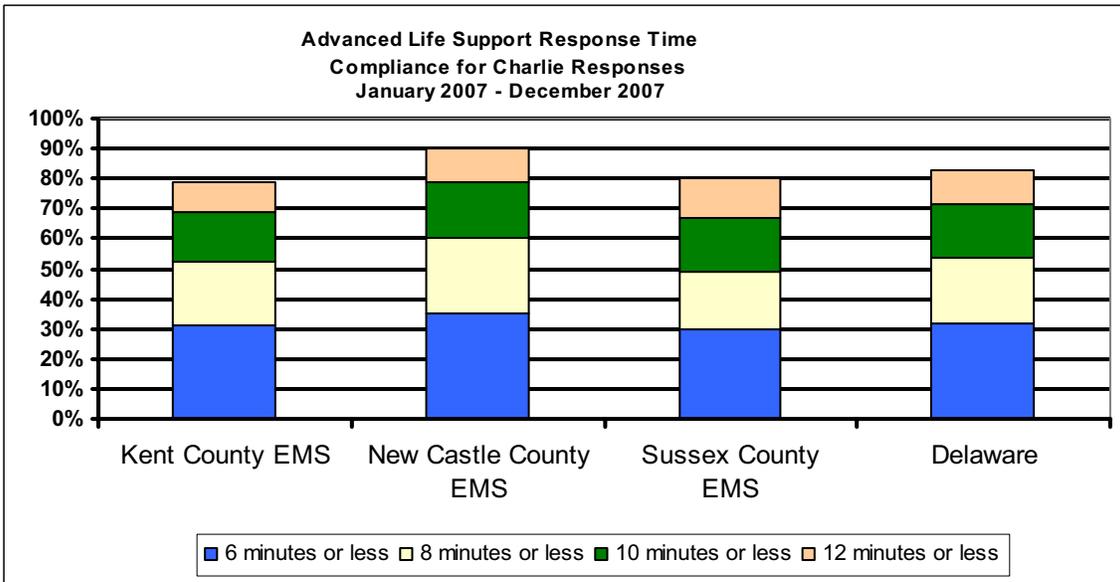
The response time goals for the Delaware EMS system adopted by the EMS improvement Committee are based on Cardiac Arrest survival research. These response goals are nationally recognized and cited by both NFPA (1710) and the American Ambulance Association guidelines. It is recognized that these are IDEAL goals. Using response time performance as the primary measure of EMS system performance has come under scrutiny.

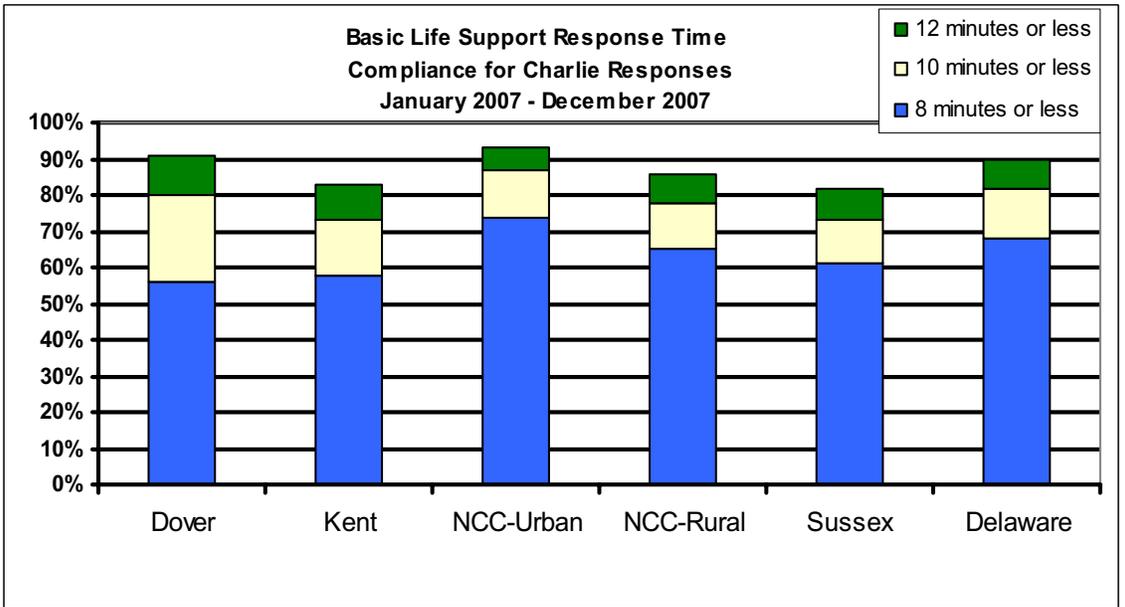
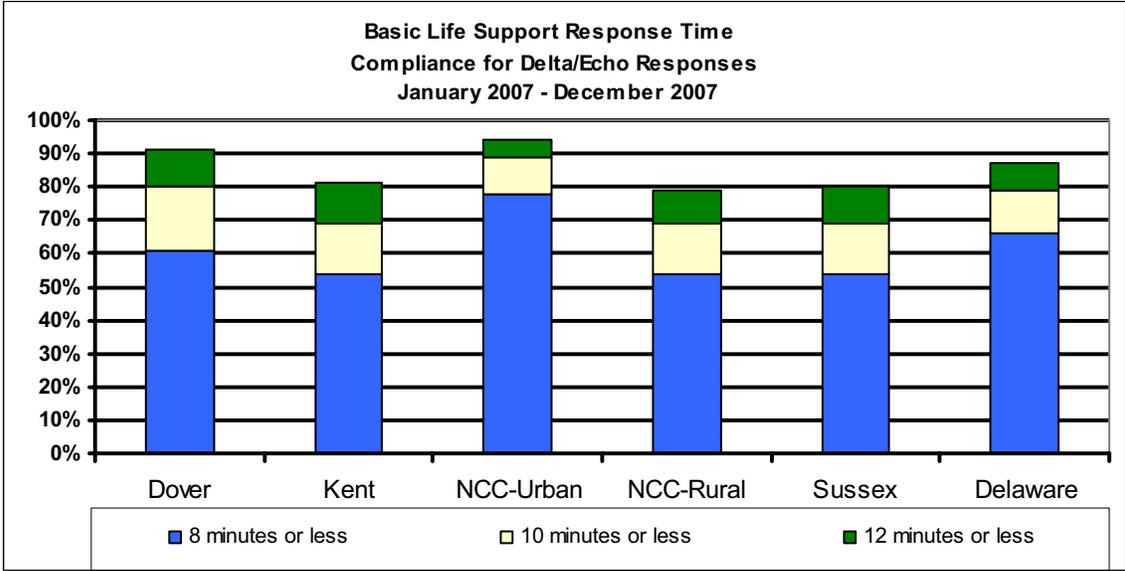
The performance goals for Delaware's EMS System recognize that not all emergencies are life threatening and do not require maximum resource response. The Emergency Medical Dispatch system is a systematic approach (protocol) that assists dispatchers in identifying which 911 calls require maximum response, and identifies calls as:

- **Alpha** – Requires a BLS response. Example is a minor burn.
- **Bravo**- Requires a BLS response. Example is with unknown patient status.
- **Charlie**- Requires ALS and BLS response. Example is burns with difficulty breathing.
- **Delta**- Requires ALS and BLS response. Example is an unconscious burn victim.
- **Echo**- Response type not addressed in the legislated response time goals, but it requires a maximum response to include available first responders. Example would be a cardiac arrest.
- **Omega**- Response type not addressed in the legislated response time goals. An example of an Omega response is a dispatcher assisting a caller to contact poison control.



These two (2) charts show response time performance for county ALS agencies.





Data used for this section of the report is from the EDIN system, it is notable that EDIN does not calculate seconds, therefore all times are recorded as whole numbers.

Estimate of EMS System Costs

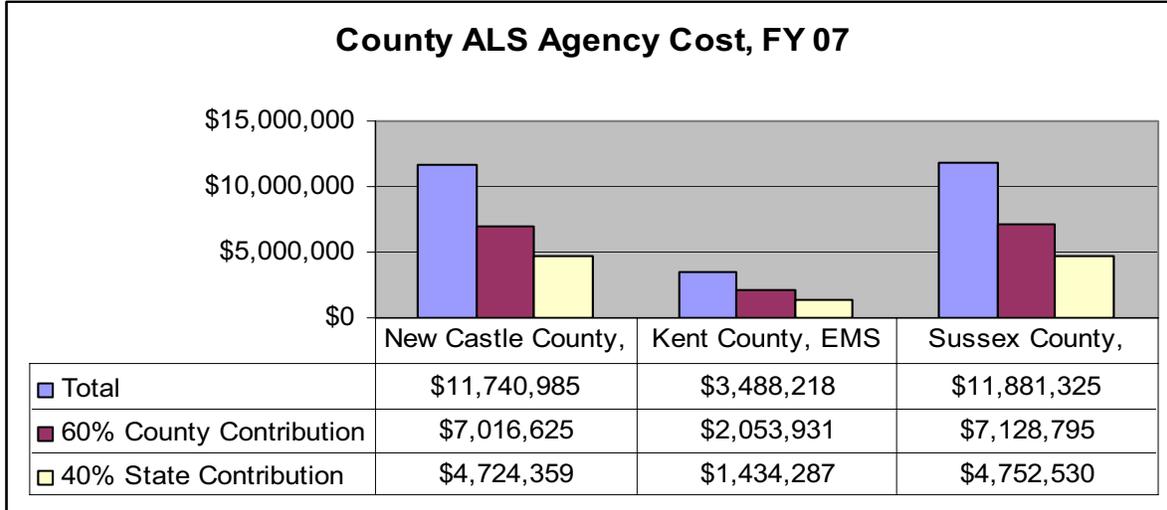
One important factor in measuring an EMS system is its efficiency, measured in terms of cost. Delaware continues to refine the process to accurately reflect total EMS system costs. The population figures below for 2007 were obtained from the **2007 Delaware Population Projections Summary Table**. The County Cost Per Capita was obtained by calculating the total population for 2007 by the expended budget for 2007 for each agency. The ALS Cost per Run was obtained by calculating the number of runs for 2007 by the expended budget for 2007 for each agency.

ALS PROGRAM COSTS

Area	Population (2007)	County Cost Per Capita*	ALS Cost Per Run	Geographic Size
Kent County	150,516	23.18	334.00	594 square miles
New Castle County	529,590	22.17	350.00	438 square miles
Sussex County	183,798**	64.64**	700.75	950 square miles
Delaware	863,904	31.38	445.00	1,982 square miles

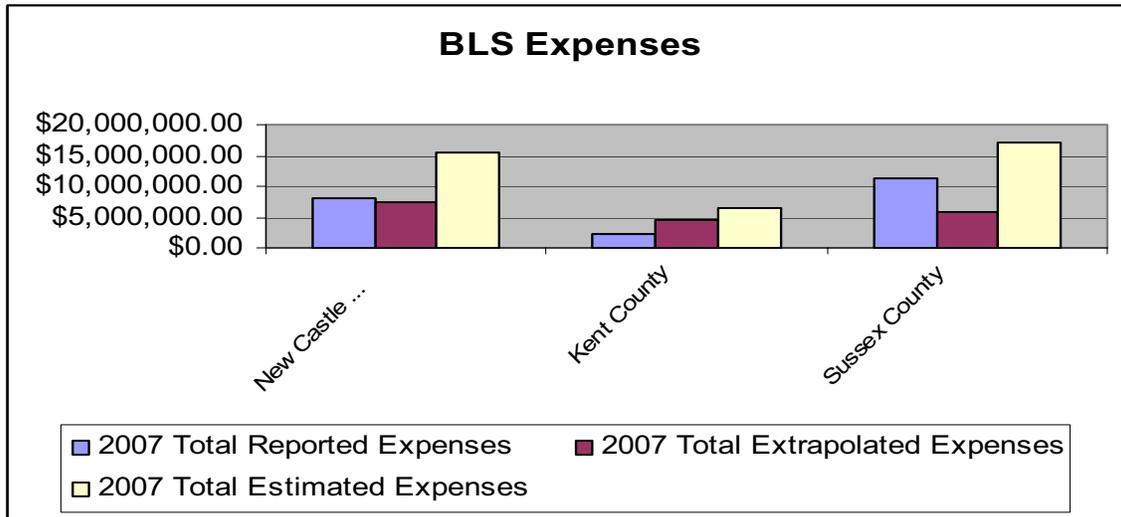
*Cost per Capita is unavailable for the BLS agencies.

**Please also note that the County Cost Per Capita calculation does not include the visiting population to the state, including: commuters in New Castle, racing fans in Kent, and beach visitors in Sussex.



BLS Program Costs

BLS agencies are requested to send fiscal sheets to the Delaware Volunteer Firemen's Association (DVFA), Delaware State Fire Prevention Commission, and the Delaware Office of EMS. The BLS agencies have up to 60 days after the end of their fiscal year to send their report. The last possible day of Fiscal Year 2005 was December 31, 2005. They had until March 1, 2006 to send in the Fiscal Year 2005 reports.



2007 Reporting	Agencies Reporting	2007 Total Reported Expenses	2007 Total Extrapolated Expenses	2007 Total Estimated Expenses
New Castle County	13	\$8,037,843.00	\$7,398,640.00	\$15,436,483.00
Kent County	8	\$2,114,903.00	\$4,439,190.00	\$6,554,093.00
Sussex County	13	\$11,233,770.00	\$5,918,912.00	\$17,152,682.00
Total for Agencies	34	\$21,386,516.00	\$17,756,742.00	\$39,143,258.00

Total Estimated Expenses for BLS agencies was derived by taking the *median* Expenses for agencies that reported in a given year. This was divided by the *median* transports to get the cost per transport. The extrapolated cost per transport was multiplied by the reported number of transports for an agency not reporting financial data to obtain estimated expenses. Estimated Expenses were added to actual reported Expenses to get Total Estimated Expenses for a given year. (In cases where there are no estimated Expenses for a county actual data was available for that period)

DELAWARE STATE POLICE AVIATION PROGRAM COSTS

Total Costs:	\$ 1,631,516.00
Personnel:	\$ 1,007,760.00
Helicopter Maintenance:	\$ 503,862.00
Fuel Costs:	\$ 114,894.00
Medical Supplies:	\$ 5,000.00

*only that portion allocated to EMS costs



DISPATCH CENTER COSTS

The costs listed below include the total cost and selected budget lines only.

New Castle County 911 Center: (Fire/EMS only)

Total Costs:	\$ 4,745,503.00
Personnel:	\$ 4,118,786.00
Equipment:	\$ 618,686.00
Training:	\$ 8,031.00

Sussex County 911 Center:

Total Costs:	\$ 1,803,124.00
Personnel:	\$ 1,550,324.00
Equipment:	\$ 135,000.00
Training:	\$ 33,000.00

Kent County 911 Center:

Total Costs:	\$1,218,578.00
Personnel:	\$1,196,315.00
Equipment:	\$ 11,294.00
Training:	\$ 10,969.00

Seaford 911 Center:

Total Costs:	\$ 501,386.00
Personnel:	\$ 405,543.00
Equipment:	\$ 65,000.00
Training:	\$ 2,500.00

Wilmington:

(EMS Dispatch is handled by New Castle County 911 center)

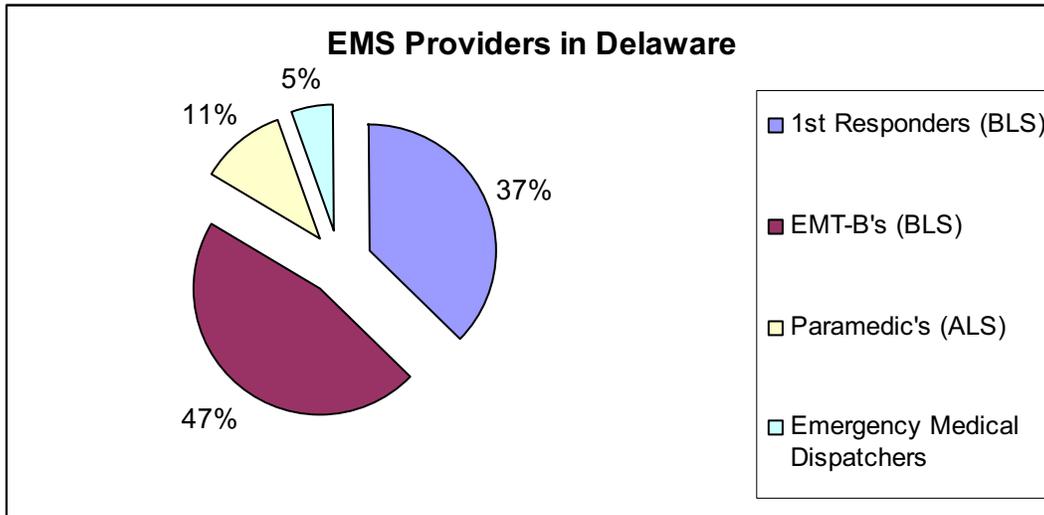
Total Costs:	\$ 0.00
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Rehoboth 911 Center:

Total Costs:	\$ 452,547.00
Personnel:	\$ 413,162.00
Equipment:	\$ 28,640.00
Training:	\$ 2,850.00



The task of providing quality EMS care requires qualified, competent, and compassionate people. The human resource, comprised of a dedicated team of individuals with complimentary skills and expertise, is the most valuable asset to EMS patients (NHTSA).



Above is a graph that shows the number of prehospital providers. These are the individuals that are responsible for “taking the calls”. In addition to the prehospital providers Medical Control Physicians are an integral part of the system. The medical control physician’s give “on-line” medical direction to the providers and are the receiving physicians within the emergency rooms of the state.



Increasing demand for services has placed many volunteer fire companies into a position of hiring staff to cover ambulance runs. Below is a listing by company of paid personnel.

New Castle County

AGENCY NAME	TOTAL PAID PERSONNEL	SHIFTS COVERED	RESPOND ON FIRE/RES CALLS	RESPOND ON EMS
Aetna Hose Hook & Ladder Co	8 FT - 40 PT	24 hour coverage	FT - YES	PT ONLY EMS
Belvedere Volunteer Fire Co. 30	N/A	N/A	YES	YES
Brandywine Hundred Fire Co. 11	8	24/7	YES	YES
Christiana Fire Co. 12	7 FT - 45 PT	24/7	YES	YES
Claymont Fire Company 13	8	24/72	YES	YES
Cranston Heights Fire Co. 14	8 FT - 8 PT	24/7	YES	YES
Delaware City Fire Company 15	4FT	24 On ~ 72 Off	YES	YES
Elsmere Fire Co. 16	4 FT - 25 PT	24/7	YES	YES
Five Points Fire Company 17	2FT - 20PT	24/7	YES	YES
Goodwill Fire Company	6FT 15PT	24/7	YES	YES
Hockessin Fire Co. 19	9	24/7	YES	YES
Holloway Terrace Fire Co.	30	24/7	YES	YES
MillCreek Fire Company, Inc. 2 & 21	9 FT - 20PT	24/7	YES	YES
Minquadale Fire Company 22	8 FT	24/7	YES	YES
Minquas Fire Co. 23	8 FT	24/7	YES	YES
Odessa Fire Co. 4 & 24	20 PT	6 AM - 6PM ~ 7 DAYS	YES	YES
Port Penn Vol. Fire Co. 29	1 FT - 16 PT	7 DAYS 2 PEOPLE 6AM - 5PM - 7 DAYS 1 PERSON 10PM - 6AM - FRIDAY SATURDAY 2 PEOPLE 6PM - MIDNIGHT	YES	YES
Talleyville Fire Co.	10	24/7	YES	YES
Townsend Fire Co. 26	2	M-F 5AM - 3PM	YES	YES
Volunteer Hose Company	8	5AM - 3PM - 8AM 6PM 10PM 6AM	YES	YES
Univ of DE Emer. Care Unit	N/A	N/A	NO	YES
Wilmington Fire Department 100	173	24/72	YES	YES
Wilmington Manor Fire Co.	9 FT - 5 PT	24/7	YES	YES

Kent County

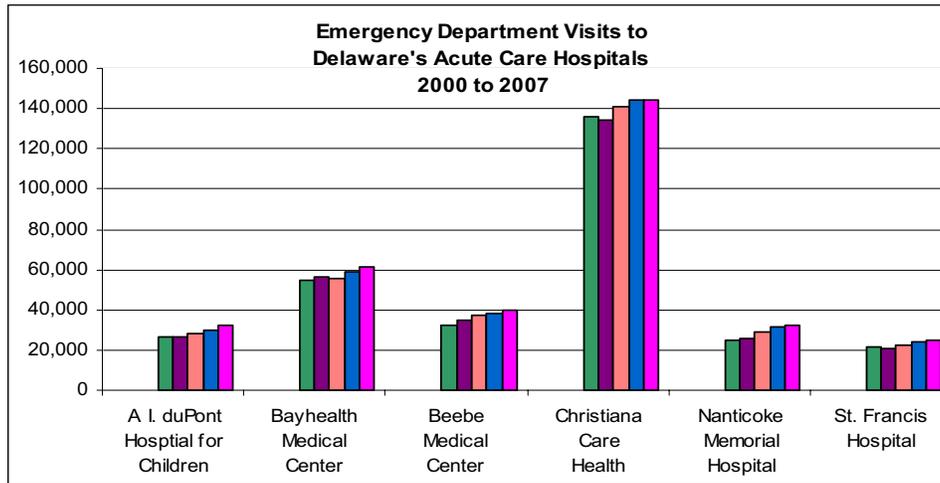
AGENCY NAME	TOTAL PAID PERSONNEL	SHIFTS COVERED	RESPOND ON FIRE/RES CALLS	RESPOND ON EMS
Bowers Fire Co. 40	2	6AM - 6PM	YES	YES
Camden-Wyoming Fire Co. 41	6FT & 12PT	24/7	YES	YES
Carlisle Fire Company 42	3 FT - 12 PT	24/7 EXCEPT WED 5PM-6AM	YES	YES
Cheswold Fire Co. 43	4FT - 10PT	24/7	YES	YES
Clayton Fire Co. 6	0	0	YES	YES
Felton Community Fire Co. 48	5	1 PERSON 24/7, 2 PEOPLE 12 HRS 7AM - 7PM	YES	YES
Frederica Vol. Fire Co. 49	2	6AM - 4PM & 8AM - 6PM	YES	YES
Harrington Fire Co. 50	2	6AM -6PM 7 DAYS	YES	YES
Hartly Fire Co. 51	1	M-F 8AM - 5PM	YES	YES
Leipsic Volunteer Fire Co. 53	0	N/A	YES	YES
Magnolia Vol. Fire Dept. 55	15	6 AM - 6PM ~ 7 DAYS	YES	YES
Marydel Fire Co. 56	0	N/A	YES	YES
Smyrna American Legion 64	5 FT - 5 PT	6 AM - 6PM ~ 7 DAYS	No	YES
South Bowers Fire Company	0	N/A	NO	NO

Sussex County

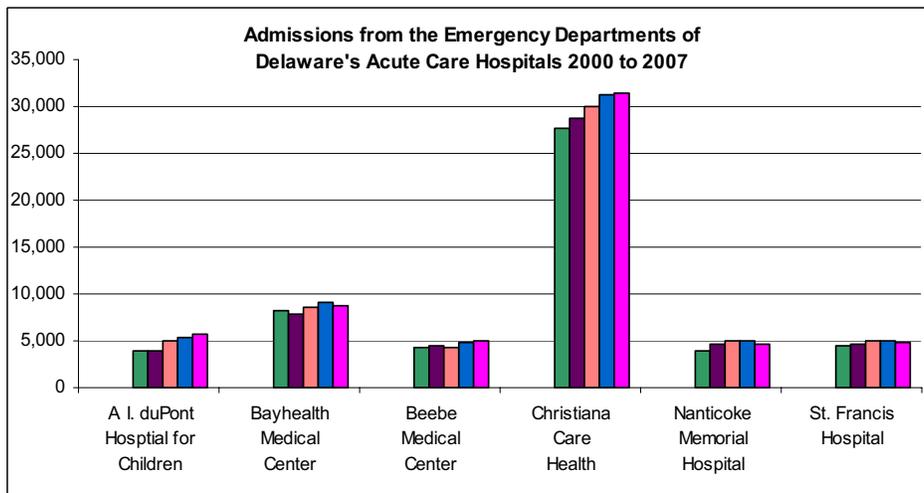
AGENCY NAME	TOTAL PAID PERSONNEL	SHIFTS COVERED	RESPOND ON FIRE/RES CALLS	RESPOND ON EMS
Blades Fire Co.	1	6AM - 6PM	YES	YES
Bridgeville Fire Company 72	2	6 AM - 6PM ~ 7 DAYS	YES	YES
Dagsboro Fire Co. 73	4	24/7	YES	YES
Delmar Fire Co.	8	24/7	YES	YES
Ellendale Fire Co 75	2 FT - 20 PT	M-F 6AM - 5PM/ SAT 6-5 Sun 24	YES	YES
Frankford Fire Co. 76	3	6 AM - 6PM ~ 7 DAYS	YES OCCASIONALLY	YES
Georgetown American Legion	15 +	6 am - 6 pm	YES W/ STATION 77	YES
Greenwood Fire Co. 78	2 FT	6 AM - 6PM 7 DAYS	YES	YES
Gumboro Vol. Fire Co. 79	4 FT	6 AM 6 PM	YES	YES
Laurel Fire Dept. 81	6	24/7	YES	YES
Lewes Fire Dept 82	10FT - 5PT	24/7	YES	YES
Memorial Fire Co. 89	1FT - 8PT	6AM - 6PM	YES	YES
Mid Sussex Rescue Squad Inc.	12 FT	24/7	YES	YES
Millsboro Fire Co 83	6 FT - 4 PT	24/7	YES	YES
Millville Vol Fire Company 84	9	24/7	YES	YES
Milton Fire Co. 85	1 FT - 9 PT	24/7	NO	YES
Rehoboth Beach Vol. Fire Co. 86	7 FT	24/7	YES	YES
Roxana Vol. Fire Co. 90	2	6 AM - 6PM ~ 7 DAYS	NO	YES
Seaford Vol Fire Co. 87	6	24/7	YES	YES
Selbyville Fire Co. 88	3	24/7	YES	YES

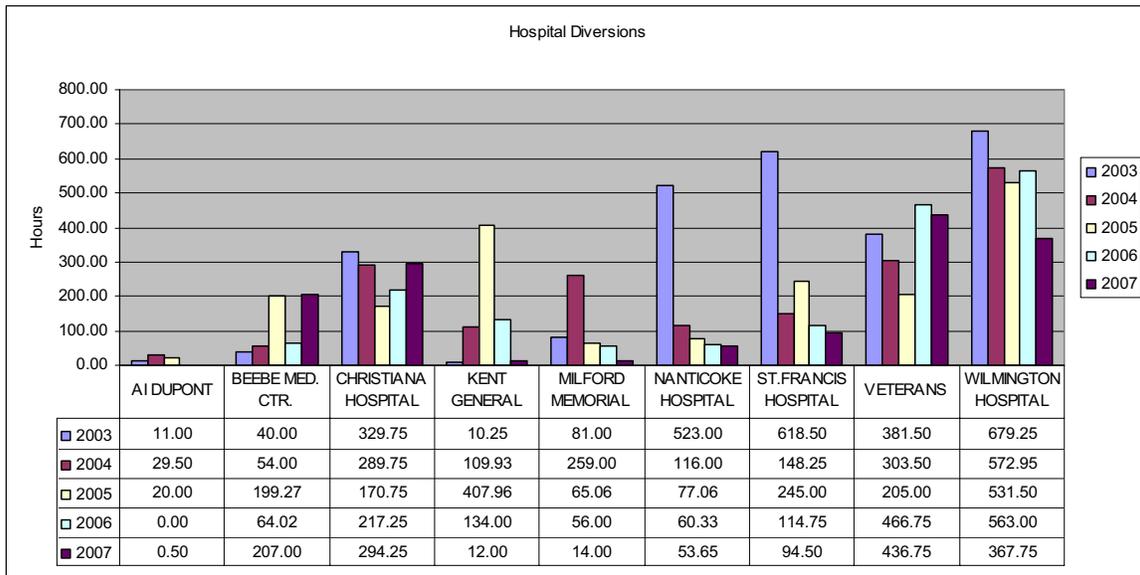
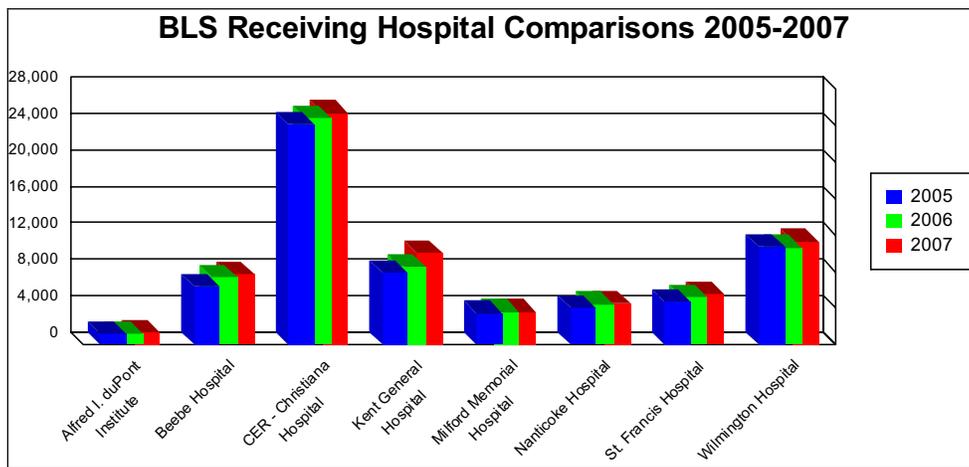
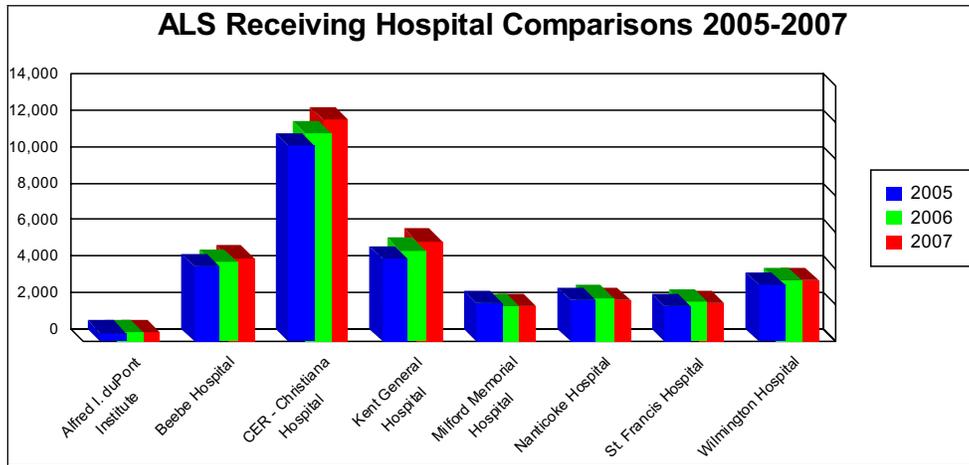
EMERGENCY DEPARTMENT AND HOSPITAL DIVERSION DATA

Information provided by the Delaware Healthcare Association indicates there were 335,236 visits to the Delaware acute care hospital emergency departments in 2007. This is an increase of 60,705 hospital emergency department visits (22.11%) statewide from the same period in 2000. Of those patients treated over 70,000 patients arrived by ambulance. EMS providers are tasked with treating patients with a wide variety of complaints, from generalized illness, victims of car crashes to patients who have suffered a cardiac arrest.

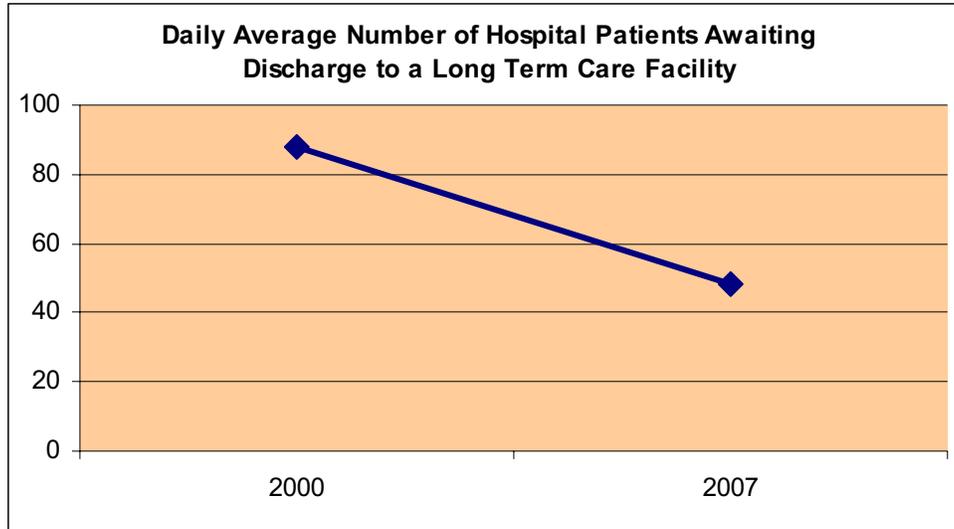


In addition, there were 60,389 patient admissions from the emergency department for 2007, an increase of 12,377 (25.78%) from the same period in 2000.





This graph shows EMS hours of diversions from hospital emergency departments. Delaware acute care hospitals continued to experience increases in emergency department patient visits during 2007, and in many cases overcrowding. This overcrowding has many times resulted in increased ambulance diversion to surrounding hospitals.



There were several long term care facilities along with a dedicated pediatric long term care facility which opened between 2000 and 2007. In addition, several hospitals are educating patients and their families about short-term alternatives to waiting for a long term care bed within the hospital. It has drastically reduced the number of patients waiting for long term care beds.

Although improvements have been made, there was still an average of 48 patients in Delaware acute care hospitals on any given day that no longer required hospital care, but the patient remained in the hospital awaiting discharge to post-acute care settings. This inability to discharge inpatients results in a shortage of inpatient beds available for the admission of emergency patients. This also has a direct negative impact on the frequency of hospital diversions and the BLS providers that must take patients to other hospitals outside of the BLS provider's immediate service area.

Improvements over the last few years has been the result of several long term care facilities along with a dedicated pediatric long term care facility that have opened between 2000 and 2007. In addition, several hospitals are educating patients and their families about short-term alternatives to waiting for a long term care bed within the hospital.

EMS EDUCATION AND TRAINING

As EMS care continues to evolve and become more sophisticated, the need for high quality education for EMS personnel increases. Education programs must meet the needs of new providers and of seasoned professionals, who have a need to maintain skills and familiarity with advancing technology and the scientific basis of their practice (NHTSA).

Emergency Medical Service (EMS) education in Delaware is provided at three nationally recognized levels. They are First Responder, Emergency Medical Technician-Basic (EMT-B), and Emergency Medical Technician-Paramedic (EMT-P). Registration through the National Registry of Emergency Medical Technicians (NREMT) is offered for each of these levels.

The First Responder, Basic and Paramedic programs provide for a gradual increase in the complexity and comprehensive knowledge level for the student. An individual may begin at any level of EMS education. Each higher-level program reinforces the basic skills and then adds additional advanced training.

In 2005 the National Highway Traffic and Safety Administration (NHTSA) developed *The National EMS Scope of Practice Model*. “The National EMS Scope of Practice Model is a continuation of NHTSA and the Health Resources and Services Administrations implementation of the *EMS Agenda for the Future*.” *The National EMS Scope of Practice Model* identifies and defines four levels of EMS licensure, with each level representing a specific knowledge and skills set that build upon each other.

According to NHTSA (2005); “the challenge facing the EMS community is to develop a system that establishes national standards for personnel licensure and their minimum competencies while remaining flexible enough to meet the unique needs of State and local jurisdictions.”

The Office of EMS in conjunction with DEMSOC will review *The National EMS Scope of Practice Model* to determine the feasibility of incorporating its concept/design into EMS practices in Delaware. Strong rationale for adopting *The National EMS Scope of Practice Model* is that it will increase public awareness and understanding of EMS personnel, and support the professional image of EMS providers. It will also better integrate EMS into the overall healthcare model practiced throughout the nation.

FIRST RESPONDER

First Responder training is a 40-hour program and is aimed primarily at police, firefighters and industrial first aid squads. The emphasis of this course prepares the responder to address immediate life threats and injuries until more highly trained personnel are available. The First Responder training follows a national standard curriculum established by the U.S. Department of Transportation (DOT). This program is offered through the Delaware State Fire School and a few private educational companies

in the state. A 12-hour DOT refresher course must be completed every two years to re-certify.



EMT-BASIC

The Emergency Medical Technician-Basic course is designed to prepare an individual to function independently in a medical emergency. The EMT-B certification is the basic life support (BLS) standard of care for the State Of Delaware. In 1998, the State Fire Prevention Commission adopted EMT-B as the primary certification required for care providers on Delaware ambulances.

The course requires a minimum of 120 hours of classroom and skills instruction and approximately 10 hours of clinical rotations. EMT-B follows a national standard curriculum established by the U.S. Department of Transportation (DOT). This course provides the students with in-depth knowledge and skill-based training to appropriately assess, stabilize, monitor, and transport the pre-hospital patient. In addition, the student will become familiar with medic assist functions and the use of an Automatic External Deliberator (AED). Delaware certification requires successful completion of a written (National Registry) and practical skills examination.

The lead agency for EMT-B education is the Delaware State Fire School. Medical oversight and curriculum review is through the Office of EMS. The cost of training is provided by the State for students affiliated with a volunteer provider agency.

To remain certified as an EMT-B in Delaware, providers must complete a state sanctioned 24-hour DOT refresher program every two years, as well as a healthcare provider level CPR/AED course. To maintain National Registry EMT-B certification the

provider must complete a 24-hour DOT refresher course, 48 hours of continuing education credits, and a healthcare provider level CPR/AED course.



EMT-PARAMEDIC

EMT-Paramedic (EMT-P) is the advanced life support (ALS) standard of care for the State Of Delaware. EMT-Paramedics are called to respond to the most life-threatening calls for help and respond separately from the BLS ambulances. EMT-Paramedic education consists of approximately 1500 hours of intensive classroom, clinical and supervised field experience. EMT-Paramedic follows a national standard curriculum established by the U.S. Department of Transportation (DOT). EMT-Paramedics are trained to assess, treat and stabilize ill or injured persons. Treatments include advanced airways, cardiac monitoring and defibrillation, and administration of lifesaving medications.

The paramedic program is offered through Delaware Technical and Community College as a two-year degree program. The program has undergone an extensive peer review process through the Committee on Accreditation of Education Programs for the EMS Professions (CoAEMSP) and has received accreditation through the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The mission of the CoAEMSP under the direction of CAAHEP “is to continuously improve the quality of EMS education through accreditation and recognition of services for the full range of EMS professions.”

EMT-Paramedics must successfully complete a practical and written examination from the National Registry of EMTs in order to receive Delaware certification. To remain certified as a Paramedic within Delaware, a provider must remain NREMT-P certified as well as maintain advanced cardiac life support (ACLS), pediatric advanced life support (PALS), and a specialized trauma certification (PHTLS or ITLS). National Registry requires completion of a 48-hour DOT refresher course and 24 hours of continuing education credits every two years to recertify.

DELAWARE TECH AND COMMUNITY COLLEGE PARAMEDIC PROGRAM

Class Year	Number of Students Beginning Program	Number of Students Completing Program	Number of Paramedics Employed in Delaware
1999-2000	3	2	2
2000-2001	20	15	13
2001-2002	9	4	4
2002-2003	14	11	11
2003-2004	13	13	11
2004-2005	19	12	11
2005-2006	20	18	17
2006-2007	19	16	15

EMS INSTRUCTOR COURSE

In Delaware, the instructor level or Methodology course trains individuals to teach the U.S. Department of Transportation (DOT) basic and advanced level courses. The course emphasis is on the development of teaching skills as opposed to emergency care skills. To enter into an instructor level course an individual must already have expertise in the subject matter and a strong EMS knowledge base.

The State of Delaware recognizes two instructor level courses. The National Fire Protection Agency (NFPA) instructor Level I and II which is taught at the Delaware State Fire School and the second a Methodology course based on the NHTSA National Guidelines for Educating EMS Instructors which is taught by many EMS agencies. These two courses prepare the EMS instructor for the specific and unique subject matter that faces the emergency medical system. Delaware Technical and Community College requires an Associates Degree and 6 years experience or a Bachelor Degree and 4 years of experience to instruct at the EMT-Paramedic level. All Paramedic Instructors must hold a Paramedic or RN, who practices in a related field, license.



FIELD TRAINING OFFICER (FTO) PROGRAM

Each Advanced Life Support agency in Delaware has developed a FTO process to meet their needs. The FTO programs for the ALS agencies are the joint responsibility of the medical director and the agency. The agency and the agency's Medical Director have the flexibility to design their process to meet the needs of their organization, i.e., the requirements to be a flight medic, SORT medic, or an interfacility medic which may be different from a traditional "street medic." The agency's Medical Director is responsible to certify to the State Medical Director, the Board of Medical Practice and the citizens of Delaware the relative competence of the paramedic.

CONTINUING EDUCATION AND DISTANCE LEARNING

The Office of EMS approves all prehospital training conducted in the State Of Delaware. The most popular of this training is distance learning. Prehospital providers are taking advantage of the benefits of receiving continuing education training online. The internet has given prehospital providers the foremost source for current in-depth education and research regarding EMS. National Registry of EMT also allows EMT-Basic to count 24 hours of distance learning toward recertification and 12 hours for Paramedics.

CONTINUING EDUCATION AND DISTANCE LEARNING

In November 2007, the NREMT Board of Directors voted to require that paramedic applicants graduate from an "accredited" paramedic program effective January 1, 2013. This step is in accordance with the *EMS Education Agenda for the Future* and the Institute of Medicine Report; *EMS at the Crossroads*.

EMERGENCY MEDICAL DISPATCH

All public safety answering points (PSAP) that dispatch ambulance personnel are required to use the Priority Medical Dispatch System (PMDS). All dispatchers employed

at those PSAPs must be certified Emergency Medical Dispatchers (EMDs). EMS training is provided on an as-needed basis by in-state EMD trainers. The initial course is 24 hours in length and requires 24 hours of continuing education every 2 years, to maintain national certification.



NEW CASTLE COUNTY



NEW CASTLE COUNTY EMERGENCY MEDICAL SERVICES DIVISION

OVERVIEW

The mission of the New Castle County Emergency Medical Service, as an essential component of the New Castle County Government, is to provide efficient, compassionate, and high quality emergency medical care to the visitors and residents within New Castle County. Our delivery of paramedic service directly impacts the quality of life for all who reside, visit, and work in New Castle County.

The New Castle County Emergency Medical Service is a county municipal “third service” paramedic agency located within the county Department of Public Safety. New Castle County EMS has the distinction of being the “First Paramedic Service in the First State.”

New Castle County EMS operates in a “tiered response” configuration, and responds with basic life support (BLS) ambulances from the volunteer fire service, career fire departments, private ambulance service providers, and specialized EMS providers, such as the University of Delaware’s student operated BLS ambulance.

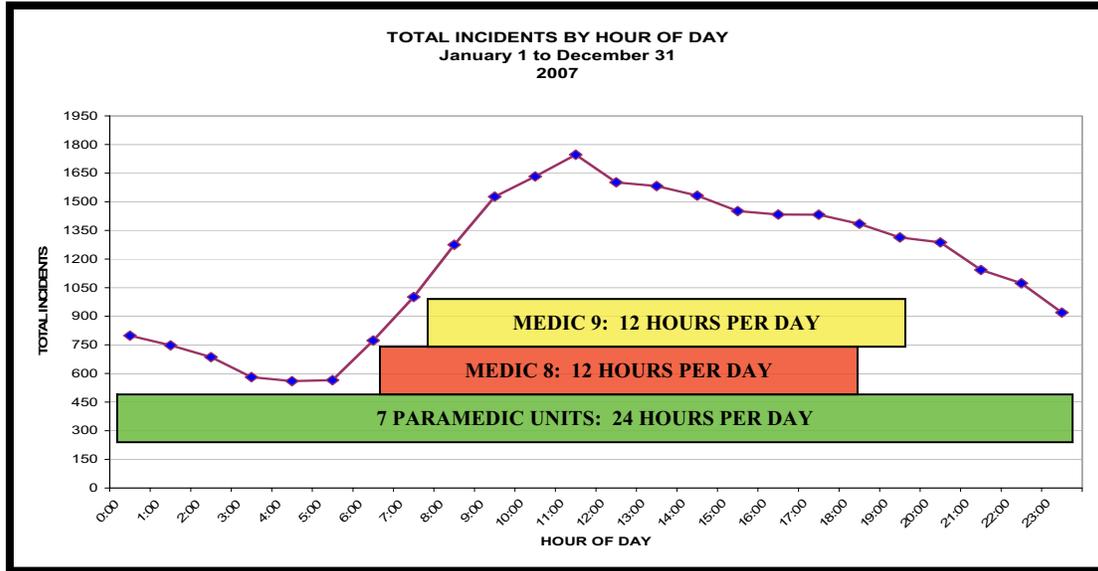
In 2007, New Castle County EMS deployed nine (9) paramedic units during its high call volume periods, and seven (7) paramedic units during non-peak operating hours. A Paramedic Sergeant is on duty as the field supervisor for each shift, with an EMS Lieutenant serving as the overall shift commander.

Our personnel strive to demonstrate our commitment to our motto each and every day: “Excellence in Service.”



Paramedic Unit Activity

New Castle County EMS has a clearly defined call volume pattern that begins to increase at approximately 0600 hours each day, reaches a peak at approximately 1100 hours, then steadily declines until after midnight.

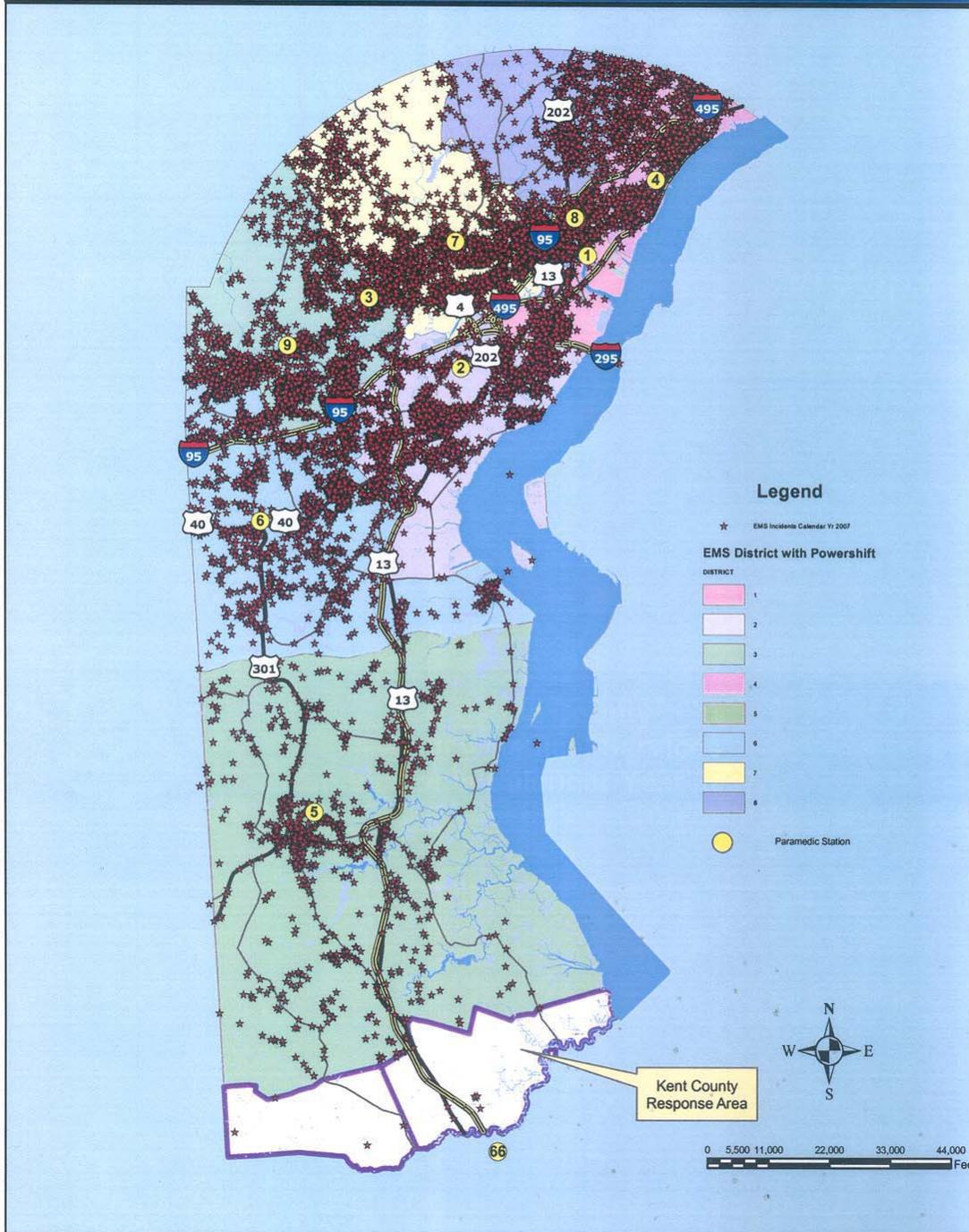


The EMS Division currently deploys seven (7) paramedic units on a 24-hour basis, seven days a week. Two additional paramedic units are operational during peak call volume periods on a “power shift” configuration (0700-1900 hours & 0800-2000 hours) seven days a week.

PARAMEDIC UNIT	2007
Medic 1 (Wilmington)	4500
Medic 2 (New Castle)	4299
Medic 3 (Newark)	3628
Medic 4 (Brandywine 100)	3891
Medic 5 (Middletown)	1699
Medic 6 (Glasgow)	3038
Medic 7 (Prices Corner)	4308
Medic 8 (12 hour/day unit)	2579
Medic 9 (12 hour/day unit)	1891
Medic 10	117
Medic 11	2
Medic 12	2
Medic 20 (Special Ops)	57
ALS Bike Team	12
Single paramedic ALS responses	2308
TOTAL RESPONSES	32,331



New Castle County Emergency Medical Services ALS Incidents Calendar Year 2007



Map of New Castle County paramedic service incidents during calendar year 2007.

EMS Supervisor and Staff Activity

EMS SUPERVISOR/STAFF	2007
ALS-11 (S/Lt. Seador)	153
ALS-12 (S/Lt. Dudley)*	167
ALS-13 (Lt. Pietrazak)	117
ALS-14 (Lt. May)	178
ALS-15 (Lt. Rombach)*	8
ALS-16 (S/Lt. Hitchens)	96
ALS-17 (Lt. Mark Allston)*	44
ALS-18 (S/Lt. Neil)*	29
ALS-19 (Acting Lt.)	59
ALS-21 (P/Sgt. Dunn)	554
ALS-22 (P/Sgt. Kennard)	128
ALS-23 (P/Sgt. Gulezian)	387
ALS-24 (P/Sgt. Starr-Leach)	493
ALS-29 (Acting P/Sgt.)	408
EMS-1 (Chief Tan)*	53
EMS-2 (Asst. Chief ~ Vacant)	0*
EMS-3 (Asst. Chief Krett)*	87
EMS-4 (Captain ~ Vacant)	0*
TOTAL STAFF RESPONSES	2,961

**Assigned to Administrative/Special Operations*

ACCOMPLISHMENTS

Deployment of Medic 9

New Castle County EMS deployed its ninth paramedic unit in a “power shift” rotation on January 10, 2007. The “power shift” schedule permits deployment of additional advanced life support resources during high call volume periods. Medic 9 is being deployed from the Newark area and made 1,891 responses during calendar year 2007. The deployment of additional paramedic units on a power shift schedule was a recommendation of the University of Delaware EMS Study.

Implementation of Drug Facilitated Intubation Procedure

New Castle County EMS completed their implementation of drug facilitated intubation protocols within the paramedic service during 2007. The deployment of this advanced airway procedure was completed following a request via DEMSOC for consideration of enhancing the clinical capabilities of the New Castle County paramedics. Preliminary data is indicating the new procedure is improving the ability of the paramedics to manage difficult airway situations with critical patients.

Moved EMS Division into New Public Safety Headquarters

New Castle County EMS moved into the new Paul J. Sweeney Public Safety Headquarters facility in May 2007. The new facility includes all administrative offices

for the Emergency Medical Services Division, in addition to the county emergency operations center (EOC) and 911 communications center.



The New Castle County EMS Paramedic Class of 2006-2007 celebrates in front of the new Public Safety Headquarters facility after participating in the annual EMS Graduation & Appointment Ceremony.

Deployment of EMS Honor Guard

The New Castle County EMS Honor Guard was unveiled at the annual NCC*EMS Graduation and Appointment Ceremony in May 2007. The EMS Honor Guard officially represents the New Castle County Emergency Medical Service at parades, sporting events, and public safety funerals with other agency honor guards.

On June 29, 2007 the NCC*EMS Honor Guard presented the colors in front of an estimated 3,900 attendees at a Wilmington Blue Rocks home baseball game. The EMS Honor Guard later presented the colors at the opening of the state Ambulance Association meeting during the 2007 DVFA Conference.



The New Castle County Emergency Medical Services Honor Guard leads off the Delaware Volunteer Fireman's Conference parade in Dover on September 15, 2007.

Domestic Preparedness

New Castle County EMS continues to make operational enhancements to improve its preparedness for major medical incidents and homeland security contingencies. The New Castle County paramedics have utilized federal funding for a variety of initiatives, including personal protective equipment, enhanced medical surge capability, interoperable communications, and enhanced medical incident command.

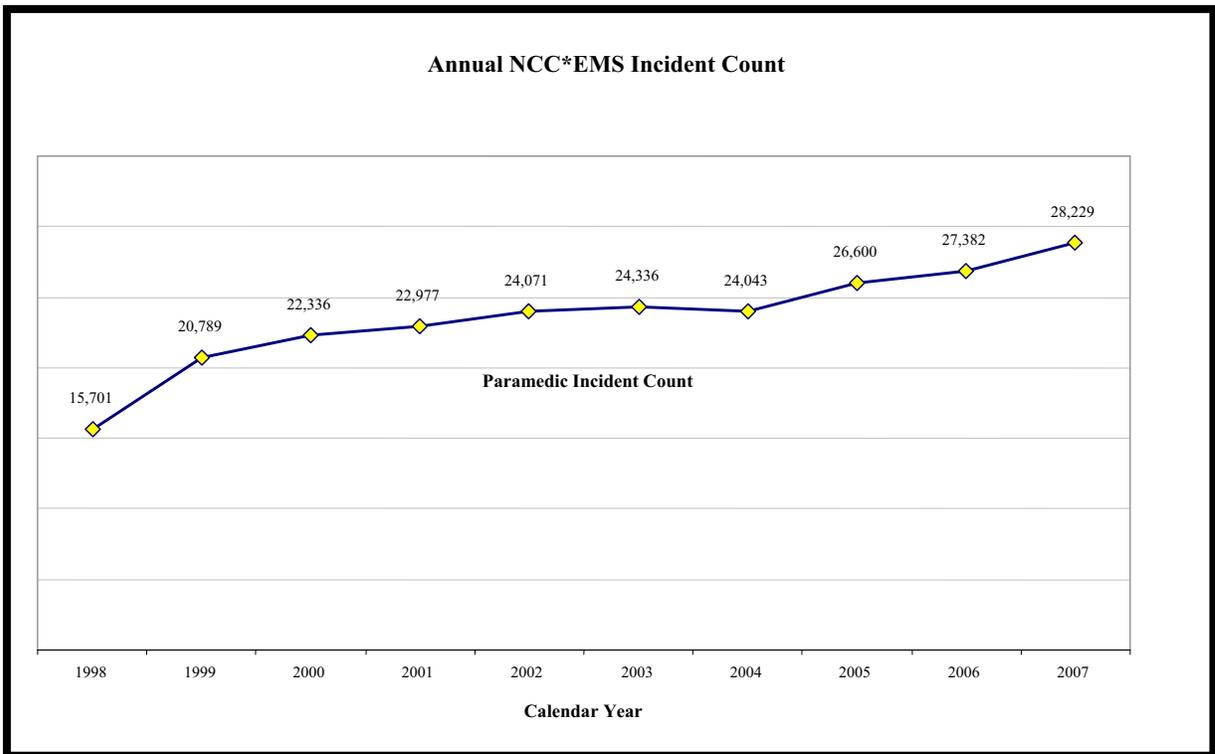
New Castle County EMS was a key participant in the “*Operations Acela*” full scale exercise conducted on April 14, 2007. The simulated terrorism incident involved a train derailment with multiple injuries.



National EMS Memorial Bike Ride

For the third year in a row, New Castle County EMS hosted the National EMS Memorial Bike Ride during its annual trek from Boston, MA to Roanoke, VA. New Castle County paramedics provided the riders and support staff an opportunity to rest, eat and utilize the facilities at EMS Station No. 6 (Glasgow) before they crossed the state line into Maryland to continue their annual effort to recognize those EMS personnel who paid the ultimate sacrifice.

*New Castle County EMS personnel pose with the participants of the National EMS Memorial Bike Ride during their annual stop at NCC*EMS Station No. 6 on May 22, 2007.*



ADMINISTRATIVE ACTIVITY



New Castle County paramedics visit the Grace United Methodist Church After School Program to provide an opportunity for the participants to tour a paramedic unit.

Public Education/Injury Prevention Programs

Public Education Activities

Child Seat Inspections	288 child seats inspected at NCC*EMS headquarters with replacement of 14 seats
CPR/AED Classes	51 courses conducted with certification of 1,202 persons
First Aid Classes	7 courses conducted with certification of 87 persons
CERT Training	Participated in presentation of 2 CERT classes for NCC Office of Emergency Management with 25 participants
Heroin Alert Program	Participated in 1 Heroin Alert Program presentation to 150 attendees
Paramedic Assist	Presented 4 Paramedic Assist courses to 52 participants
EMS Division Displays	Staffed 12 paramedic service displays or presentations reaching approximately 1,252 attendees
Read Aloud	Participated in 1 “Read Aloud” program to 50 attendees
Read with A Hero	Participated in 2 “Read with a Hero” sessions in area schools to 90 attendees

Mock Car Crash

Participated in a mock car crash presentation at the A.I. DuPont High School for approximately 1,200 students

Employee Recognition



Lt. Mark P. Allston

In August 2007, New Castle County Executive Christopher Coons, joined by Sam Beard, President and CEO of the American Institute for Public Service, recognized New Castle County EMS Lieutenant Mark P. Allston and five other county employees and county program volunteers with New Castle County's first Jefferson Awards for Public Service. Lt. Allston was cited for more than 15 years of organizing paramedics, friends and supporters to provide holiday meals and toys for people in need. His efforts have assisted the Ministry of Caring, Emmanuel Dining Room and Our Lady of Grace Children's Home. The Jefferson Awards Program is a national recognition system established in 1972 by Jacqueline Kennedy Onassis, United States Senator Robert Taft, Jr., and Sam Beard, and is designed to highlight public service at the local and national levels.



June 2007 NCC Department of Public Safety Awards Ceremony.

New Castle County EMS recognized the following personnel during the June 2007 Department of Public Safety Awards Ceremony:

S/Lt. Joseph J. Dudley, Paramedic Sergeant Kenneth N. Dunn, Paramedic Corporal Mark R. Logemann, Paramedic Corporal William C. Wagner, Paramedic Corporal Kenneth M. Sliney, Paramedic 1/C William E. Logan, Paramedic 1/C Jack W. Warrick, Paramedic 1/C Robert A. Taylor, Paramedic 1/C Justin E. Jackson, Paramedic Annette M. Tomasello, Paramedic Jorge H. Vasquez.



Chief Tan receives the NAEMT National EMS Chiefs Division Harvard Executive Fellowship in Orlando, FL.

Chief Lawrence E. Tan received an Executive Fellowship to the Harvard University John F. Kennedy School of Government *Senior Executives in State and Local Government* program from the National Association of EMT's, National EMS Chiefs Division. Chief Tan was selected from a pool of candidates from throughout the United States. He will attend the June 2008 session at Harvard University.



On May 21, 2007 New Castle County EMS hosted its annual Graduation and Appointment Ceremony at the new Public Safety Headquarters in New Castle. Nine members of the service were recognized for successful completion of the paramedic training program, or their appointment to the paramedic service.

The following individuals were recognized at the ceremony:



Paramedic Pamela L. Hartsky, Paramedic Matthew V. Mitchell, Paramedic Sherri R. Portello, Paramedic Christopher O. Rainey, Paramedic Brianne C. Sullivan, Paramedic Elizabeth A. Thompson, Paramedic Autumn M. Tuxward, Paramedic Jorge H. Vasquez, Paramedic David J. McKinney.

Paramedic Autumn Tuxward receives her badge from her daughter.

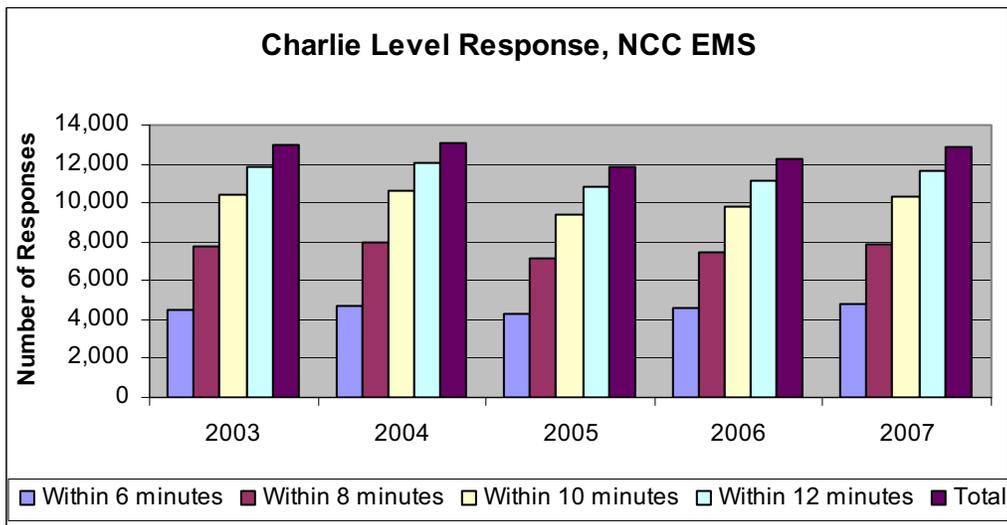
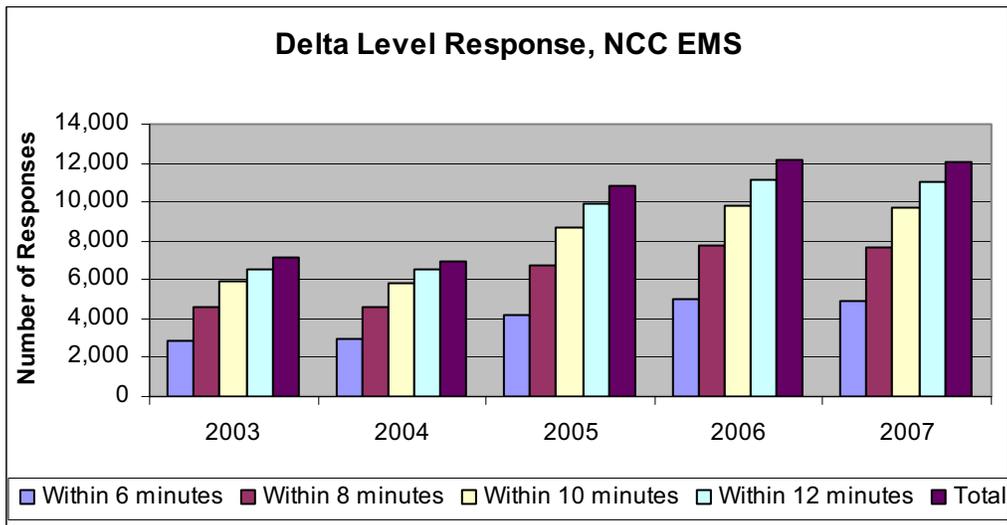
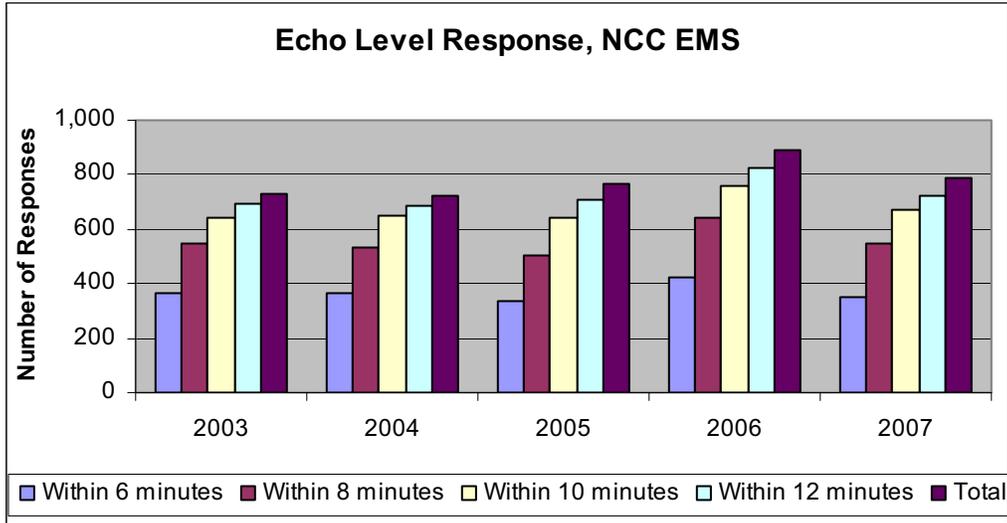


On December 7, 2007 New Castle County EMS held its second semi-annual Department Awards Ceremony. The following Emergency Medical Services Division personnel were recognized for notable performance:

S/Lt. Daniel G. Seador, Paramedic Sergeant Kenneth N. Dunn, Paramedic Corporal Kevin C. Cowperthwait, Paramedic Corporal Michael A. McColley, Paramedic Corporal Matthew W. Watson, Paramedic 1/C Aaron M. Tarpine, Paramedic 1/C James D. McCarnan, Paramedic 1/C Lorraine K. Williams, Paramedic 1/C Daniel J. Panaro, Paramedic 1/C Christopher A. Johnson, Paramedic 1/C Robert A. Taylor, Paramedic 1/C Christopher J. Schad, Paramedic Robert J. Sullivan, Paramedic Walter C. Wheaton, Paramedic Ruoy L. Koontz, Paramedic Candidate Allen C. Short, Paramedic Candidate David J. Traficante.

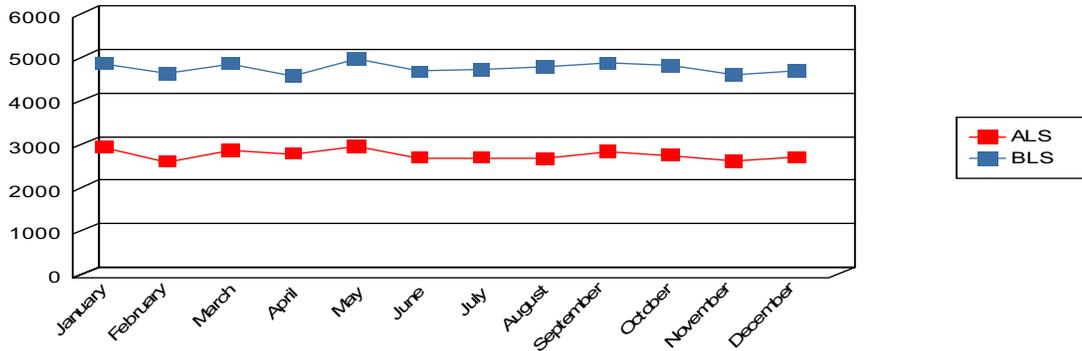


NEW CASTLE COUNTY EMERGENCY MEDICAL SERVICES



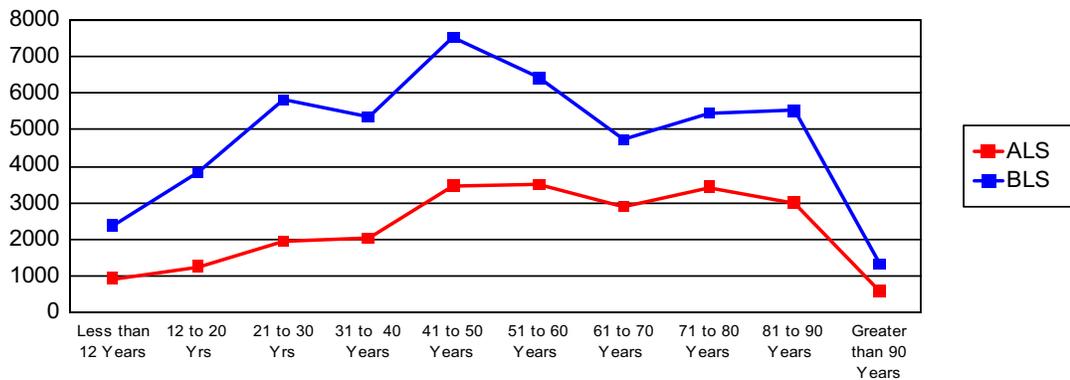
ALS/BLS Incidents by Month-2007

New Castle County

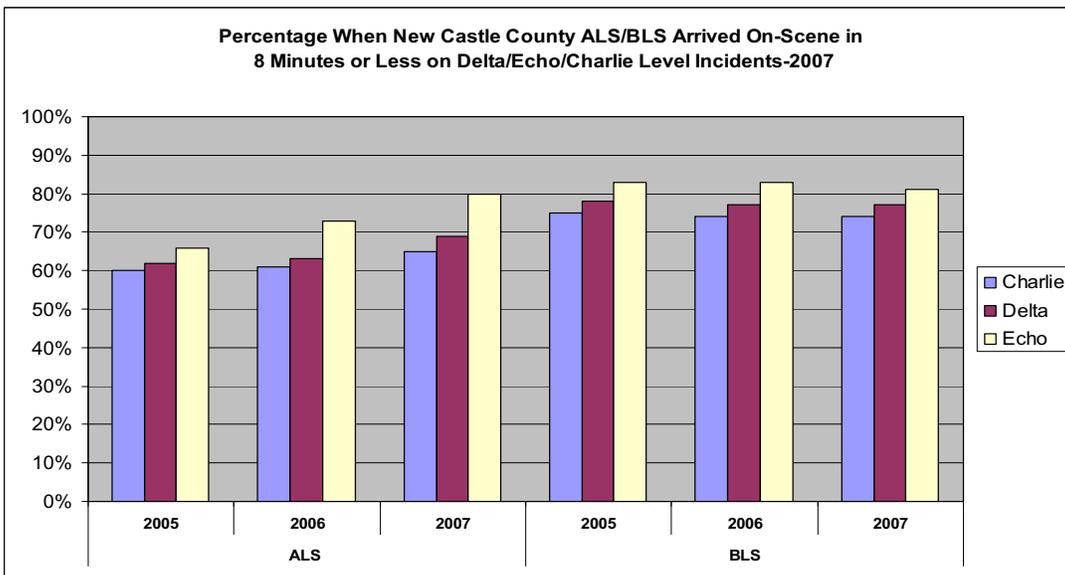


ALS and BLS Patient Age Comparison 2007

New Castle County



Percentage When New Castle County ALS/BLS Arrived On-Scene in 8 Minutes or Less on Delta/Echo/Charlie Level Incidents-2007



NEW CASTLE COUNTY DISPATCH

The New Castle County 9-1-1 Emergency Center receives 9-1-1 calls through a variety of phone exchanges and numerous cell towers throughout New Castle County. The total number of 9-1-1 calls processed in year 2007 was 411,900. Another 95,027 non-emergency calls were also processed by our Emergency Call Operators. The Center dispatched or processed a total of 111,107 fire/medical incidents and 304,567 police incidents in year 2007.

The New Castle County Emergency Communications Center was recognized as an Accredited Center of Excellence in Emergency Medical Dispatch by the National Academy of Emergency Medical Dispatch in October 2002 for a three year period. This agency was re-accredited in year October 2005 and we are currently working on re-accreditation in October 2008. Additionally, we utilize the National Academy of Emergency Fire Dispatch protocols.

The New Castle County Emergency Communications Center operates 24 hours a day on a year round basis. We provide Fire/EMS Communications to the City of Wilmington, twenty-one New Castle County Volunteer Fire Companies, 6 fire brigades and the New Castle County Paramedics. Additionally we provide Police Communications service to seven police agencies within New Castle County. The Center is staffed by 30 full and part time Emergency Call Operators, 24 New Castle County Police Communications personnel, 20 Delaware State Police Communications personnel, 29 full and part time Fire/Medical Communications personnel and an administrative staff of four personnel. Minimum staffing is as follows;

NCC Police personnel -	4
DSP Police personnel -	4
Emergency Call Operators -	4
Fire/Medical personnel -	5

This agency also operates a state of the art mobile communications van that is capable of taking over all operations, with the exception of phones, within the 9-1-1 Center at a moments notice.



On July 17th, 2007 all operations within the New Castle County Emergency Communications Center were transferred to the new Paul J. Sweeney Public Safety Building. This monumental task could not have been completed without the assistance of the many employees, vendors and consultants, and the many public safety customers that we serve throughout this county.



NEW CASTLE COUNTY BASIC LIFE SUPPORT

New Castle County is comprised of 21 Volunteer Fire Companies and one paid fire department, The City of Wilmington. Every fire company in New Castle County operates at least one basic life support unit and many fire companies operate multiple BLS units. There are two additional BLS units, owned by the county, that are used as “loaner” ambulances; these ambulances are placed into service when a fire company’s ambulance is placed out-of-service for any period of time.

Many volunteer fire companies in New Castle County are transiting from a predominately volunteer system to a combination system, which accommodates both volunteer and paid personnel. During a time when volunteerism is on a decline, fire companies must find alternative ways to provide a safe, quick, and professional service, while struggling with these personnel issues. BLS units need to be on-scene within an average of 8 minutes of most calls. This type of time demand as well as increased call volume has lead many volunteer companies to transition to paid personnel that work various shifts. The combination departments have shown to be a great improvement for many New Castle County Companies.

NEW CASTLE COUNTY AMBULANCE ASSOCIATION

The New Castle County Ambulance Association is designed to bring all EMS agencies together and to provide a forum for discussion on local and national issues that pertain to the pre-hospital field. Officers of the association are actively involved in EMS activities at the county and state level and are dedicated to providing EMS personnel with the most up-to-date information. To help increase attendance at these meetings, the association offers a 1-hour continuing education credit at every meeting.

ACCOMPLISHMENTS AND NOTABLE EVENTS

Grant awarded to Good Will Fire Company: Wednesday, August 8, 2007, Senator Tom Carper and Congressman Mike Castle stopped by Good Will Fire Company to recognize the company for receiving one of the largest fire service grants awarded to a Delaware volunteer fire company and commemorate their 100 years of service.



Two Members Nominated for Firefighter of the Year: The Officers and members of Minquas Fire Company are pleased to announce that both Fire Captain Joe Dierolf and Lieutenant Robert Harvey Jr. have been nominated for heroic firefighter of the year in the state of Delaware through the Delaware State Fire Chiefs Association. These two brave men risked their lives several months ago at a fire scene in Duross Heights. Upon arrival of E235, crews encountered heavy fire conditions with confirmed subjects trapped. Both Captain Dierolf and Lt. Harvey Jr. entered the house and quickly found handicapped elderly woman feet inside the front door. Both Dierolf and Harvey Jr. remained inside the structure with intense heat, freeing the woman from her wheelchair. The victim was removed from the structure in cardiac arrest. Both the Capt. and the Lt. stayed with the victim performing CPR all the way to the ambulance. Unfortunately, the victim died from her injuries a few hours later. On Sept. 10, 2007, these two men will accept their award for Heroic Firefighter of the Year at the annual DVFA conference. The officer and members of Minquas are very fortunate and proud of these men for what they did on that night along with everything they do day in and day out for the station and the community.

SIGNIFICANT EVENTS

Haz-Mat 14 protects the President: On January 25, 2007 the New Castle County Haz-Mat Team (Stations 14, 16 and 17) along with Wilmington Fire Dept. Engine 4 responded for a Haz-Mat detail to stand by while President Bush spoke at the Hotel DuPont in the City of Wilmington. Crews set up Decon showers in front of the old courthouse building on King Street, between 9th and 10th streets.



Polar Bear Plunge: Several members of the Minquas Fire Company went down to Rehoboth Beach to participate in the 2008 Polar Bear Plunge. This icy dip in the Atlantic Ocean was to help raise money and awareness for the Special Olympics Delaware. Congratulations to Deputy Chief Phil Young and Rescue Captain Daryl Haines for surviving the icy dip for 14 minutes. Eventually they were asked to exit the water due to the Divers getting cold.



History of the Goodwill Fire Company: 2007, marked 100 years for the GWFC, but 211 years of fire and EMS service in Old New Castle. The fire company in celebration of this great achievement opened a Fire Museum to the public in December. The display was housed at the Old Library Museum at 3rd and Harmony Streets in Old New Castle.

Explorer Post Competes in National Conference: Wilmington Fire Department Explorer's Post 100 attended this year National Explorer Conference held at the University of Illinois in Champaign Illinois. Eleven members from the post along with three adult Wilmington Fire Department advisors went to the five day event held from June 18th to the 22nd 2007. Members competed in several firefighting events including Personal Protective Gear and Self Contained Breathing Apparatus relay, CPR, Paramedic Biking, and Make and Break hose connection contest. There also were hands on seminars, classroom instruction, exhibits, and training information for the advisors. The Explorers Program offers young adults, ages 14 through 20, an opportunity to learn about special interests and vocational choices in association with business and community organizations. Fire/Emergency Services is a program for youth who are interested in a career in the fire and emergency services. The trip for the Explorers was made possible by a combination of private and corporate donations.

The Volunteer Hose Company of Middletown's annual picnic: The picnic is held each year to say thank you to all the volunteers and the career staff for their outstanding contributions to the Town of Middletown and surrounding communities. This event is not only to thank the Fire Fighters and EMTs, but also to thank their families for their support and sacrifices. 2007 turned out to be another record breaking year. As of June 30, members responded to 372 fires and 1,029 EMS runs. We are on track to hit 800 fire calls for the year; and from an EMS perspective, we will most likely exceed 2,000 responses

Minquas Fire Company's 100 year anniversary parade: The Minquas Fire Company held a parade to commemorate 100 years of continual service to the community. The parade was held on Saturday May 19, 2007 at 1pm.



Belvedere Participates in Black History Month Event at Biggs Visitor Center: As the year continues, activities promoting the Delaware Fire Service and its History go forward at the Delaware Visitors Center. On February 3rd in celebration of Black History Month representatives of Belvedere Fire Company staffed the Biggs Museum. A highlight of the day was the display of HazMat 30.

SUMMARY

New Castle County is facing increased challenges and mandates that affect all aspects of the Basic Life Support service. With these challenges come new problems that need to be addressed and New Castle County is handling these issues with a willingness to improve the overall system. This willingness to create a better system is demonstrated every time an ambulance company in New Castle County is dispatched to an EMS call and that company provides a safe, quick, and professional service to the public.

KENT COUNTY



KENT COUNTY EMERGENCY MEDICAL SERVICES

Mission

Our mission is to be a leader in meeting the present and future health care needs of the citizens and visitors in our community through a network of high quality advanced life support services, education and prevention programs which share common goals and values.

Values

Service: We are committed to help the sick and injured by providing superior service to our patients and our community with skill, concern and compassion.

Quality: Because our patients are our primary concern, we will strive to achieve excellence in everything we do.

People: The men and women who are our paramedics, and those associated volunteers, physicians, nurses and students are the source of our strength. They will create our success and determine our reputation. We will treat all of them with respect, dignity and courtesy. We will endeavor to create an environment in which all of us can work and learn together.

Stewardship: Fulfilling our mission requires that we use our resources wisely and with accountability to our publics.

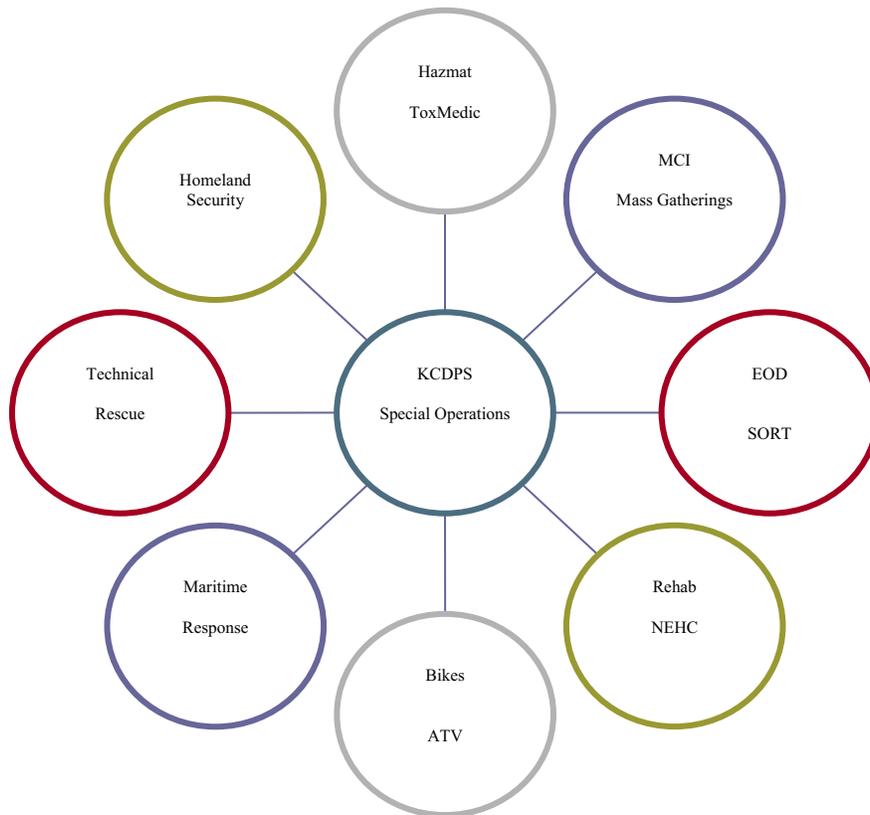
Integrity: We will be honest and fair in our relationships with those who are associated with us and other health care workers as well.



Community Education

The Emergency Medical Services Division feels strongly about the importance of community education. The Department is involved in community CPR training, bicycle safety and first aid programs for children and seat belt checks in the local high schools. Kent county Paramedics have gone out to the community to do programs for schools, Boy Scout and Girl Scout troops, and organizations. In addition, the County's All Terrain Medical Response Team is available for demonstrations and community events. As National Emergency Medical Services Week approaches the department will be visible at events throughout the County.

Kent County Dept of Public Safety 2008 Improvement Initiatives and Summary Report



Special Operations encompasses the response categories of Mass Casualty Incident (MCI), Hazardous Materials Incidents (Hazmat), Technical Rescue Operations (confined space, high angle, trench, and collapse), Explosive Ordnance and Tactical EMS Support (EOD/SORT), Fire Ground Support (Rehab), All-Terrain Medical Response (Bikes & Medic-Gator), Maritime Operations, and Weapons of Mass destruction (WMD/CBRN) preparedness and response.

In keeping with the National trends, Special Operations activity within the Department continues to gain a more “global” or “all-hazards” capability in that equipment, materials, and personnel are utilized for multiple response strategies with key personnel with more highly focused training serving as response leaders.

This section of the report will update the current status of each of these response categories as a result of equipment procurement, training of personnel, and activity over the past year. Further, an outline of future needs and initiatives will be presented.

Mass Casualty Incident (MCI)

Response: The Department MCI Plan identifies staged levels of response based upon assessed patient populations. The key operational point identified is to activate the MCI response and to that end the plan allows for any component of the system to “make the call”. Within this Department Dispatchers, Medics, Supervisors, or Administration can all initiate the MCI Response Plan. The MCI Response Plan has been presented to and endorsed by the Kent County Fire Chiefs as to the automatic response levels.

Equipment: Each Medic Unit carries Triage Kits and limited additional supplies to be used for patient care. The Supervisor’s unit (KM5) is equipped with an MCI Command Kit to facilitate orderly control of the medical sectors of the incident. All units have updated contact lists for local and regional medical facilities. The Special Operations trailer is equipped to support triage and treatment of up to 50 patients, has its own electrical power supply, and has additional components of the Treatment Area Command Kit, TVI Shelter with air heater unit, Chemical Personal Protection Kits (PPE), Nerve Agent Antidotes Kits (NAAKs), and Cyanide Antidote Kits. The Decon Support trailer may also be deployed for further sheltering and electrical supply. The Mobile Command Post may be deployed for extended operations.

Training: All Medics are trained in START Triage and this skill is supported by monthly “Triage Days” during which all patients are identified with appropriate triage tags. Medics continue to train on the MCI Plan which gives Medics guidelines for determining the level of response necessary and emphasizes the need for the first-on-scene Medic crew to initiate the MCI response. “Trailer Day” drills continue in which all Medics were familiarized with the response support units and completed hands-on practical evolutions with the equipment.

Activity: Units were pre-deployed as required in support of Mass Gathering events.

Needs and Initiatives:

1. Continued refresher training through Triage Days and con-eds will maintain current training levels.

These have been added to the 2008 Training Schedule

2. Further training needs to be accomplished such that all Medics are competent in establishing a Medical Sector at an MCI (Triage, Treatment, and Transport).

- During training sessions Medics who are less experienced with MCI Command roles are tasked with accomplishing such an assignment. Supervisors are being included in functional and full-scale exercises as part of the Management Team.*
3. Dedicated towing vehicles should be established such that no on-duty Medic Unit is diverted from direct response to the scene in order to transport a support unit.
Two additional Suburbans (KM10; KM11) are in-service this year to accomplish this goal.
 4. Extended Operation and Re-call of personnel capability needs to be demonstrated through practical exercise.

Mass Gatherings

Response: The Department prepares for several Mass Gathering activities each year. Notably, the NASCAR races at Dover Downs, the Delaware State Fair, the Bike-to-the-Bay, and the Amish Country Bike Tour present the venues for the largest populations. There are occasionally other events (VIP appearances, DAFB Air Show, Chicken Festival, etc.) which also require Mass Gathering preparations. Operations center on pre-positioning assets and adding staff to cover the particular event. Response may be limited to assigning a Bike Team to the venue or expanded to establishing an entire communications center with dozens of support units on site.

Equipment: The All-Terrain Medical Response trailer now houses the Bikes and the Medic-Gator. This trailer facilitates the transport and provides an operational base for these units. All trailer units can be pre-deployed in support of larger events. These units include the Spec Ops, Decon Support, and Medical Resource Unit (MRU) trailers. Additional ALS gear sets have been established to support each of these units. The Mobile Command Post is a self-contained communications center which can be deployed to any site as needed.

Training: A number of Medics are trained to operate the Bikes and a lesser number trained to operate the Gator (the primary means of covering large venues). All Medics are introduced to towing a support trailer.

Activity: The Gator and/or Bikes were used to cover Spring and Fall NASCAR races, Safe Summer Day, and the Governor's Fall Festival. The Gator was used to assist in two large area land searches.

Needs & Initiatives:

1. Due to the expanding Bike fleet and additional equipment, a new and larger trailer has been ordered.

Maritime Response

Response: Kent County's primary response jurisdiction extends well into the Delaware Bay and includes a busy anchorage. Currently the Medics are taken to vessels via VFD Rescue Boats. Occasionally the Coast Guard assists with aviation support. DSP has

acquired a new helicopter which will increase the availability of aviation support over marine environments.

Equipment: There is no specialized equipment currently in service to support maritime response.

Training: The Little Creek FD has a Company specific training available to Medics.

Activity: There has been no maritime response activity.

Needs & Initiatives:

1. As soon as the DSP helicopter is available for training, Medics should be involved with rescue hoist operations.

Hazardous Materials Response (Hazmat)

Response: The Department’s response continues to be one component of a multi-agency response plan. Supported primarily and in depth by the Little Creek VFD, the group response for hazmat incidents is currently initiated by a responding fire line officer. The mission of the Hazmat Group remains primarily the provision of decontamination services. Following a request by DNREC and the support from the Department Chief, an expansion of the mission has been to develop a limited number of personnel capable of assisting DNREC in entry operations as a medical component of the entry team.

Equipment: The State of Delaware Hazardous Materials Decontamination trailer and the Decon Support trailer remain housed at Little Creek VFD.



Training: Regular training sessions are held on the third Tuesday night each month (with few exceptions). As new equipment arrives it is introduced through these regular training sessions. Joint exercises have been conducted with DNREC, the 31st CST, and DAFB. These joint sessions have met with great approval from all concerned and more are planned for the future. Currently there are six Medics trained to the Hazmat Technician level which qualifies them to assist the entry team.

Activity: There were three incidents in 2007 which required the full response of our resources. The unit(s) participated in displays 3 times. The units were pre-deployed in support of the NASCAR races. The units were utilized at the State Fair Exercise.

Needs & Initiatives:

1. Regular training nights will continue. Joint training evolutions with other response agencies should be enhanced.

The 3rd Tuesday each month has been established as a regular training day for Medics, as well as the evening session at Little Creek.

As an outreach service to the Fire Service, this department has made a commitment towards facilitating the development of training curriculums.

2. To meet the Department's previous goal of sufficient response of personnel and to achieve the new goal of assisting the DNREC entry team, a minimum of four Hazmat Technician level responders must be maintained on-call. This initiative would require additional Technician level training and on-going costs of on-call pay. This initiative would most likely be phased in over time and as budgeting allows. The previous initiative to establish a Hazmat Duty Officer should be refocused towards a Special Operations Duty Officer, thus enhancing the justification for the position.

This remains a growing need for the Department.

Technical Rescue

Response: The Kent County Technical Rescue Team is spearheaded by the Dover FD with support from several Kent County FDs. Currently there are 2 Medics training with the team. Technical Rescue encompasses trench, collapse, confined space, high angle, and swift water rescue operations along with urban search & rescue (USAR). The primary response area is Kent County with assisting teams in New Castle and Sussex counties. The "Second Due" area for the Kent team extends to the Chesapeake Bay including Caroline, Talbot, and Queen Anne counties in Maryland (dual response with Anne Arundel).

Equipment: The team equipment is based at Dover Station 2 and is comprised of a custom heavy rescue unit with additional equipment contained in a support trailer. Dover runs an engine and a squad with these units. All rescue operations equipment is compatible with the other two county's equipment. Each team member has a "go bag" with some personalized gear. Some specialized medical equipment has been placed in service.



Training: The majority of active team members are trained to the Technician level for Trench and Collapse rescue; all are Operations level for all disciplines.

Activity: There were no Kent County incidents in 2007. The Team assisted Sussex County on a trench rescue. Several media events were conducted.

Needs & Initiatives: As the team increases in number and equipment inventory, continuing training will have to occur. Exercises testing extended operations and the establishment of a “base camp” will begin in 2008. The team is working towards USAR qualification.

EOD/SORT Response

Response: Medic Units are routinely dispatched to support EOD/SORT operations. Bomb Technicians are medically monitored before and after entry evolutions. Medics stand by in safe zones for certain law enforcement operations. Tactical Medics operate as integral members of a Tactical Team.

Equipment: Currently there is little equipment in service directly related to EOD/SORT. Body armor and ballistic helmets are in stock and this inventory has been expanded to provide both “throw-on” vests and fitted “concealed” vests.

Training: All current Kent County Paramedics received refresher briefings regarding EOD operations as part of the 2-year refresher cycle.. Medics routinely receive refresher training regarding the assessment and treatment of blast and burn injuries.

Activity: Two Medics are scheduled to attend extensive Tactical EMS training this spring and are currently beginning training with the STAR Team.

Needs & Initiatives:

1. Initial response is currently accomplished by one of the three primary Medic Units. The establishment of the Spec Ops Duty Officer will allow primary units to return to available status quickly.

This remains a priority issue for the Department.

2. Additionally, an agreement with EOD needs to be established in which this Department is notified of an EOD response in Kent County prior to the EOD units being on scene. This would allow the Duty Officer time to meet EOD and eliminate committing a primary unit.

This is contingent upon the establishment of the Duty Officer.

Fire Ground Support

Response: Medics are routinely dispatched to multiple alarm working fires and many “occupied high density residential” locations. Many times this response is merely a stand-by, however it is not uncommon for the Medics to assist in rehab services or conduct medical assessment and monitoring of firefighters.

Equipment: Primary Medic units have no specific equipment for fire ground support operations. All of the support trailers have sheltering, heat, and lighting capability. An additional unit has been placed in-service which offers a “bridge” in support equipment between the Medic Unit and the support trailers. The Spec Ops trailer has additional IV supplies, cots, sheltering, and heating capability.

Training: No specific training is indicated. Medics should be capable of deploying shelters.

Activity: While fire ground support call volume fell in 2007, periods of severe weather (heat) created greater concern for firefighter safety and health.

Needs & Initiatives:

1. The establishment of a Duty Officer should alleviate the demand for primary Medic units to cover stand-by operations. While the primary units may still make initial responses (especially incidents with reported patients), the Duty Officer should be able to relieve primary units at extend incidents. The Duty Officer will be able to provide enhanced services including shelter, heat, air conditioning, and cooling fans.

This remains a priority issue for the Department.

All-Terrain Medical Response

Response: The Bikes and Medic-Gator have thus far been pre-deployed to special events. While the units are capable of emergency response, the application of these assets remains as support to in-progress incidents. The units are housed in the ATMR trailer which requires transport to the scene.

Equipment: The ATMR trailer has been a tremendous improvement in storage and ease of transport of the units. All response vehicles (Crown Vics excluded) are equipped to tow the trailer. A solar battery charging system was installed for the Gator. A new and larger trailer will be in service during 2008.

Training: The Bike Team continues as before with several Medics trained to ride the units. Gator training has been completed and all medics are familiar with Gator unit operation.

Activity: The Bikes and Gator covered both the spring and Fall NASCAR races. The Bikes appeared in at least 2 parades. The Gator was used at Safe Summer Day, the Governor's Fall Festival, and the State Fair Exercise, and large area search operations.

Needs & Initiatives:

1. Additional training on Gator operation should be conducted to increase the number of qualified drivers. Gator driving should be extended to all Department employees and an MOU should be established to allow VFD personnel to operate the unit under extreme circumstances.

Training is scheduled periodically. VFD personnel can be utilized as needed, much in the way they assist in transferring Medic Units from the scene when all Medics are committed to patient care.

2. Further training on trailer operations should be conducted and extended to all Department employees to increase the number of qualified drivers.

Training is scheduled periodically.

WMD / Terrorism Preparedness

Response: General ideology suggests that response units will most likely not know ahead of time that an incident is an act of terrorism or involves WMD. Therefore, all responders must be capable of adapting operational modalities in response to information as it is acquired. Specialized equipment will be utilized as the situation warrants.

Equipment: Personal "Escape Ensemble Kits" are available on each unit which include chemical protective suits and air purifying respirators. Ballistic helmets, goggles, and concealed body armor are now part of the standard uniform. Tox-Boxes are in-service which provide NAAKs (nerve agent antidote kits) for medics and patients and additional pharmaceuticals for those medics who can function under the ToxMedic Protocols. Four of the five support trailers in the department carry additional WMD response equipment and supplies. The First-On-Scene response guidelines include a "Bomb Response" checklist and related reference materials. Each Medic Unit is equipped with a radiological response kit and a GammaRAE detector for early warning of a radiological event. Carbon Monoxide detectors have been added to the Medic standard equipment.

Training: "Trailer Days" are included in the annual con-ed schedule in which all Medics practice with the response support units and complete hands-on practical evolutions with the equipment. A hands-on training for radiological response has been added. AHLS courses are conducted twice each year and are available to all Medics.

Activity: There was no identified activity in response to WMD / Terrorism. There were several CO responses in which the arrival of the Medics (and the CO detectors) was the first indication of potential poisoning.

Needs & Initiatives:

1. Refresher training in the use of PPE and “escape kits” needs to be conducted. Each Medic should demonstrate proper use of this equipment.

Incorporated into “Trailer Day” con-ed sessions.

2. Awareness and Operational level concepts and procedures for WMD response should be revisited through in-service review and printed distributions.

This is accomplished through periodical publications.

Conclusion

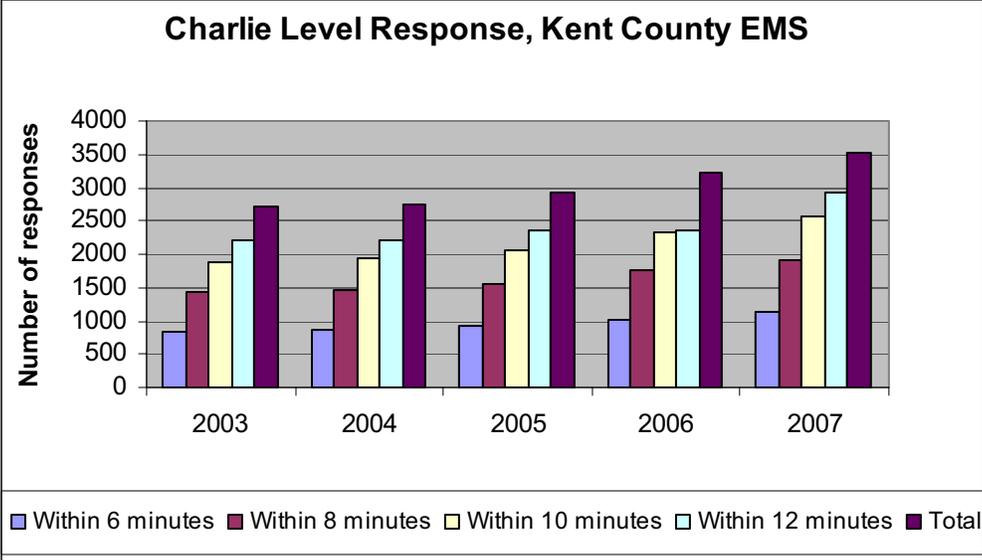
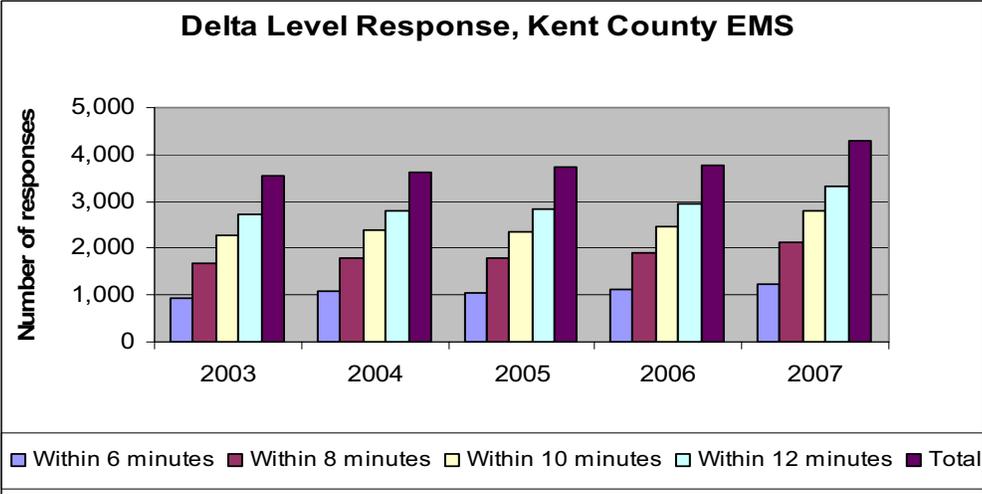
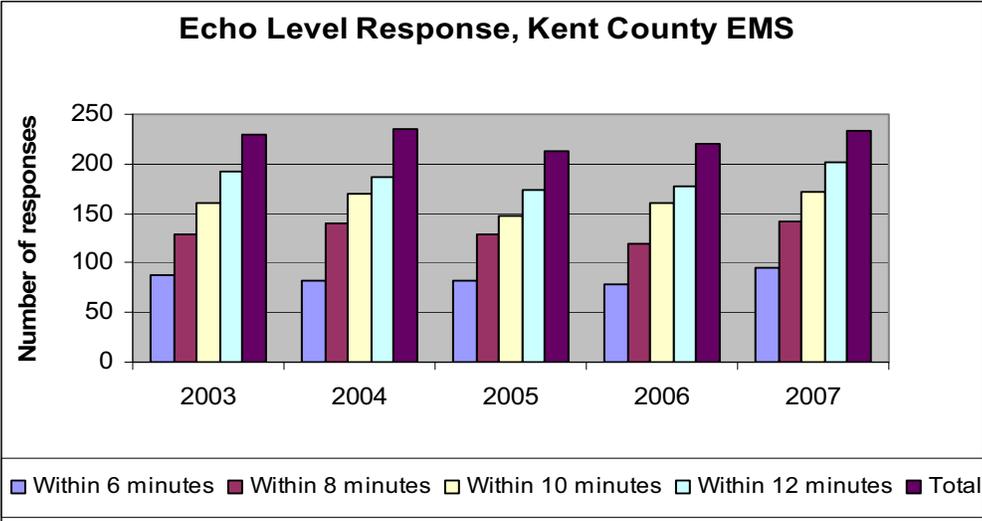
Situational Assessment: Incidents involving some form of Special Operations response continue to occur at a manageable frequency, however primary Medic Units are being committed to these incidents for longer periods. Several annual event venues present significant challenges to the department’s operations. The department has continued response roles both locally and regionally. The possibility of a disaster, natural or man-made, is as present as ever.

The establishment of TANGO-1, a multi-purpose response unit has enhanced the response capacity of the Department. This unit is not currently staffed around the clock.

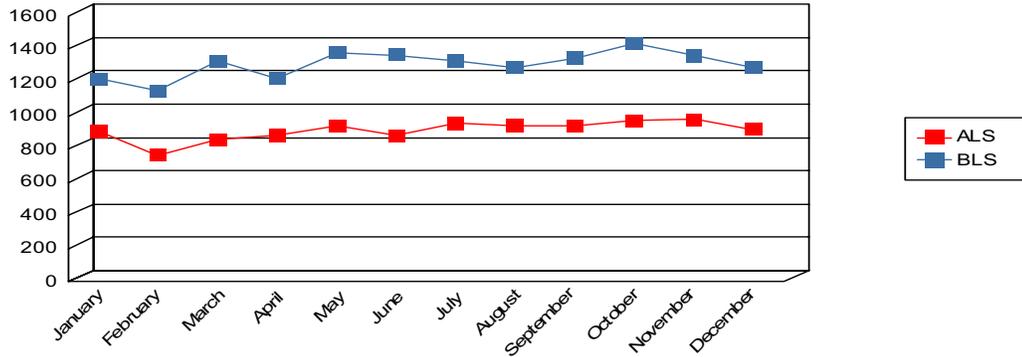
Vulnerability: Training and exercise has increased awareness and response capability as compared to previous years, thus reducing the vulnerability of the individual responder. Geographically Kent County remains central to several major metropolitan areas of national significance. Complacency as a result of low utility presents the greatest controllable risk factor. A comprehensive Kent County threat/vulnerability assessment needs to be conducted.

Capability: The establishment of a Duty Officer program will reduce the demand on the primary Medic Units at many Special Operation incidents. The Medics are better trained to utilize available equipment. Resources continue to expand and develop to provide flexible response modalities and increased capability.

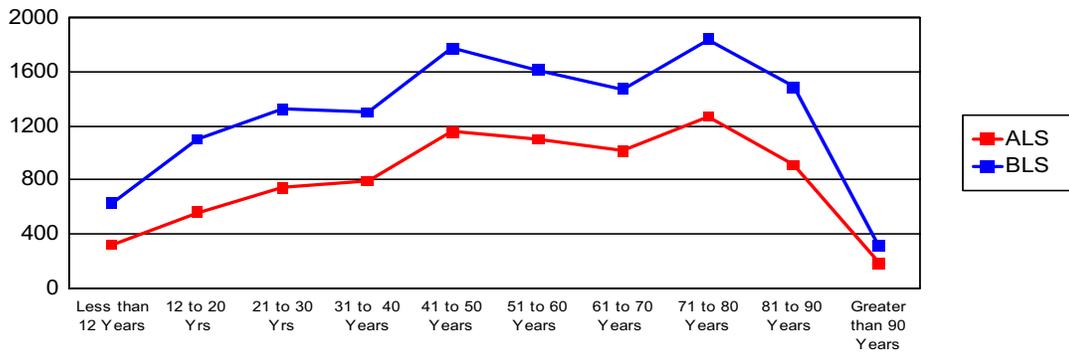




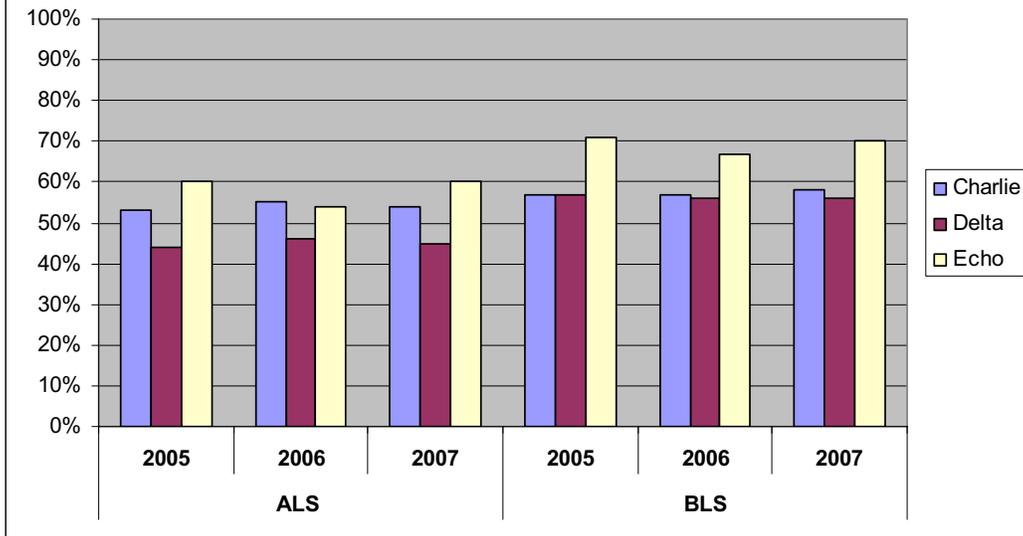
ALS/BLS Incidents by Month-2007 Kent County



ALS and BLS Patient Age Comparison 2007 Kent County



Percentage When Kent County ALS/BLS Arrived On-Scene in 8 Minutes or Less on Delta/Echo/Charlie Level Incidents-2007



KENT COUNTY EMERGENCY COMMUNICATIONS

The Kent County Emergency Communications center dispatches approx 15,000 EMS calls per year. This number does not include fire and or police dispatches. During the past year Kent County has added 2 new dispatcher positions to accommodate the increased work load that is being caused by the development in the county. Kent Center went to a new CAD system in May of 2007.

On November 29, 2008 Kent County became accredited in Fire Dispatch by the National Academy of Emergency Dispatch. We were first in the state to receive this recognition and 6th in the world.

One of the biggest challenges Kent County has twice a year is the NASCAR Race. This event brings over 150,000 people to our county. The race creates a city within a city. Starting on Wednesday of race week we provide trained dispatchers to answer and dispatch Ems and Fire calls to the emergency responders that are working the event. From Wednesday until Sunday, (sometimes Monday) the Kent County 911 Center provides up to three dispatchers a day to work the command center at the track.



KENT COUNTY BASIC LIFE SUPPORT

Kent County is comprised of 18 Volunteer Fire Companies and one volunteer ambulance company, the Smyrna American Legion. The Smyrna American Legion's ambulance responds on BLS runs within the Citizen's Hose fire district. Other Fire Districts, which do not operate BLS services in Kent County, are: Farmington, Houston, Little Creek, South Bowers, and Robbins Hose. Mutual Aid agreements exist with boarding fire companies to supply ambulance service to these districts or contracts with paid ambulance companies.

KENT COUNTY AMBULANCE ASSOCIATION

The Kent County Ambulance Association is designed to bring all EMS agencies together and to provide a forum for discussion on local and national issues that pertain to the pre-hospital field. Officers of the association are actively involved in EMS activities at the county and state level and are dedicated to providing EMS personnel with the most up-to-date information. To help increase attendance, the association offers a 1-hour continuing education credit at most of these meetings.

ACCOMPLISHMENTS AND NOTABLE EVENTS

DVFA Annual Conference: The 13th annual Delaware Volunteer Firemen's Association conference was held at the Sheraton Dover hotel and conference center in September. During the first three days of the conference, Emergency Medical Services classes were held. Classes surpassed anticipated attendance levels as more than 300 persons engaged in the EMS continuing education phases of the conference.

Governor's Fire Safety Conference: The Governor's Fire Safety Conference was held Saturday evening at the Dover Sheraton to celebrate Fire Prevention Week and recognized statewide fire safety and prevention activities. Sponsored by the State Fire Prevention Commission in association with the Delaware Children's Fire Safety Foundation and hosted by Governor Ruth Ann Minner. The conference featured Jon Stetson as keynote speaker and Lt. Governor John C. Carney as the Master of Ceremony. Ceremonies included presentation of awards in recognition of outstanding efforts related to statewide fire safety and prevention activities over the past year. Award recipients included:

Allied Organization Award for Excellence in Promoting Fire Safety Education
**DELAWARE JUVENILE INTERVENTION PROGRAM,
OFFICE OF THE STATE FIRE MARSHAL, GROVER P. INGLE**

Partnership Award for Excellence in Promoting Fire Safety Education
**DELAWARE STATE VISITORS CENTER, "FIGHTING THE DRAGON"
TIMOTHY SLAVIN & BEVERY LAING**

School System Award for Aggressively Promoting Fire Safety in the Schools
LAKE FOREST ELEMENTARY SCHOOL, PAULETTE PATTERSON

Edward C. McCormick Memorial Fire Safety Education Award presented to a Delaware Fire Company for their outstanding Fire Prevention Education Activities

FIRST PLACE – CHRISTIANA VOL. FIRE COMPANY

SECOND PLACE – WILMINGTON MANOR VOL. FIRE COMPANY

THIRD PLACE – CITIZENS HOSE CO. NO. 1, INC.

DELAWARE CHILDREN'S FIRE SAFETY FOUNDATION AWARDS

Excellence in Fire Safety Education

JACOB E. MORENTE



Jim Cabbage Awarded Kent County Volunteer Fireman of the Year: At this years annual Kent County Ladies Night, held at the Felton Community Fire Co., Past Chief/Past President James L. Cabbage Jr. was awarded the William R. "Ace" Carrow / Morris W. King Memorial award for Firemen of the year for Kent County. This award is in memory of the late William R. "Ace" Carrow of Clayton and Morris W. King of the Hartly Vol. Fire Co. for their numerous years of service to not only their departments but also to Kent County. Past Chief Cabbage was nominated by his department for his tireless dedication on both the Local, County and State levels. Known for his commitment in the state as well as on a national level Jim has always been a great supporter of the fire service in Delaware and across the country. As Jim has traveled around this country for the fire service he has "Never forgot where he came from". Also at the same Banquet Clayton Ladies Auxiliary President Nancy Scotton was named the Kent County Ladies Auxiliary member of the year. Nancy has not only been active leading the ladies Auxiliary of the Clayton Fire Company but has also been active on the county level. From the Officers and Members of the Clayton Fire Company we would like to congratulate Jim and Nancy on their awards and for always representing Clayton to the highest levels.



SIGNIFICANT EVENTS

Delaware State Fair: Every year in July the Harrington fairgrounds is home to the annual Delaware State Fair. During this ten-day event, Harrington Fire Company and other local Fire/EMS departments spend their days caring for the large number of tourist who may get sick or injured while visiting the attractions. Dispersed throughout the fairgrounds are EMTs and Paramedics that will respond and treat visitors on a daily basis. The Harrington Fire Company also does stand-bys during some of the larger, more populated, main events, such as the monster truck show and the demolition derby.

Dover International Speedway: Twice a year the Dover International Speedway is home to stock car racing. This event draws in over 150,000 spectators to Kent County. With this large number of NASCAR fans brings an increase in EMS and Fire responses. Along with the increased responses, EMS and Fire Personnel from around the state take additional training to provide emergency services during the race. Temporary treatment and triage areas, set-up to treat NASCAR fans and ambulances, are on a stand-by basis if anyone needs to be transported directly to the hospital. On an average, 250-300 people are treated during these four day events.

SUMMARY

There have been many accomplishments in Kent County, as well as some setbacks. Several companies have ordered new ambulances, hired paid personnel, and financially been able to cover all BLS expenses. There are still a large number of companies struggling to meet the financial burdens of running a BLS service. Most BLS agencies find it difficult to fund training for personnel, purchase supplies and in general keep up with the changes in society. Retention and new acquisition of personnel is also a huge problem both with volunteer and paid personnel. Kent County BLS is moving forward to meet the needs of the community with all the advancements that were made in 2007 and will continue to improve in 2008 and beyond.

SUSSEX COUNTY



SUSSEX COUNTY EMERGENCY MEDICAL SERVICES

Caring People, Quality Service

This year, Sussex County EMS (SCEMS) celebrates seventeen years of providing Advanced Life Support (ALS) Service to the residents of and visitors to our community. We provide paramedic service to an area of nearly 1,000 square miles, including all of Sussex County and a portion of Kent County (primarily Milford), using eight specially designed ALS rapid response vehicles, each staffed by two paramedics, and two District Supervisors. During the summer tourist season, an additional two-paramedic unit is placed into service to assist with the high volume of calls, particularly in the beach areas. Our paramedic staff is supported by administrative, clerical, support, and information systems personnel to ensure a constant state of readiness throughout the year. We work closely with fire department-based Basic Life Support (BLS) services, volunteer ambulance services, local hospitals, state and local police, and are a part of the Delaware State-wide Paramedic Program.

“Caring People, Quality Service” is not only our slogan, but our commitment to the people of Delaware and to each of our patients.



MISSION STATEMENT

Sussex County EMS is:

A nationally recognized leader in mobile health care services committed to improving your quality of life.

We will accomplish this through:

- Quality, compassionate patient care
- Continuous quality improvement
- Proactive planning
- Innovative technologies and procedures
- The full spectrum of emergency medical services
- Comprehensive education and training for our personnel and the public

We Value:

- Kindness
- Professionalism in action and in attitude
- Respect, dignity & politeness
- A supportive, productive work environment
- Continuing education for personal and professional growth
- Honesty, trust, integrity in all our actions
- Individual creativity, initiative, and responsibility
- Fiscal responsibility
- Public trust and support

SUSSEX COUNTY EMS ACCOMPLISHMENTS AND INITIATIVES

Recruiting

SCEMS reduced the number of paramedic vacancies to three (as of December 31, 2007). This effort included actively recruiting Nationally Registered Paramedics from out-of-state, and participation in the Delaware Technical and Community College paramedic training program. Three students graduated from the program in 2007, and six students were enrolled in the 2007-2008 program.

Medic 103/Special Operations

Medic 103 relocated from its original location in the Stockley Center to a new facility in Dagsboro. This new facility also houses our Special Operations Section, including our Hazardous Materials Medical Team, Special Events and Bicycle Medic Operation, and Public Information, Education and Relations Team, as well as WMD resources. It also features a fully equipped exercise facility for use of both on-and off-duty personnel.

Medic 108/Technical Services Division

With the relocation of Medic 103, Medic 108 transitioned from a part-time to a full-time unit, stationed in the Georgetown area. It is currently housed in temporary quarters at the

Paramedic Administration Building. The Sussex County Council purchased a building in the nearby Cinderberry complex which will become the permanent home of both Medic 108 and our Technical Services Division.

Medic 109

With the transition of Medic 108 to full-time status, we implemented a part-time “Power Unit” to provide additional resources to the busy coastal area during the vacation season. This resource resulted in better coverage and shorter response times at the beach communities, and reduced the need to deploy central and west units into the beach area.

Medic 104

This unit, located in the Lewes-Rehoboth area, was relocated from a single-wide trailer and separate garage facility to a new rented facility constructed at its previous location. The new station features a three-bay garage, and houses a Medic Unit, Supervisor Unit, and a Reserve Medic Unit.

Electronic Staffing

The “TeleStaff” electronic scheduling and callback system was made operational during 2007. This software automatically contacts off-duty personnel to fill vacancies, and can be used in a disaster situation to rapidly call back personnel for duty.

Equipment Upgrades

We have begun upgrading of our LifePak 12 monitors, including installation of Masimo SpO₂ monitoring software and conversion to biphasic defibrillation technology. We also initiated the use of the “Quick Trach” device, replacing the “Per Trach” equipment, at the recommendation of the Medical Directors and the Equipment Committee.

Station Improvements

Working with the County engineering department, we are designing the specifications for emergency generator power for our Headquarters building, and anticipate completion of the project by the end of the fiscal year. Plans are also being developed to provide emergency generator power at our paramedic stations.

Mobile Data Computer System

Improved mapping data enabled us to implement “Quickest Path” technology, which automatically detects and dispatches the nearest available ALS resource to emergency calls. The program takes into consideration the true travel distance (rather than air miles), speed limits, road closings and other factors in identifying the closest unit to the call.



Director Glenn Luedtke was appointed to the Board of Directors of the National Association of EMS Educators. This organization represents the teachers and their institutions who provide medical education to EMT's and Paramedics throughout the world. He chairs the NAEMSE Diversity Task Force, which is working to identify strategies that will increase the number of minority EMT's, Paramedics and program faculty members. Mr. Luedtke chairs a similar group for DEMSOC.

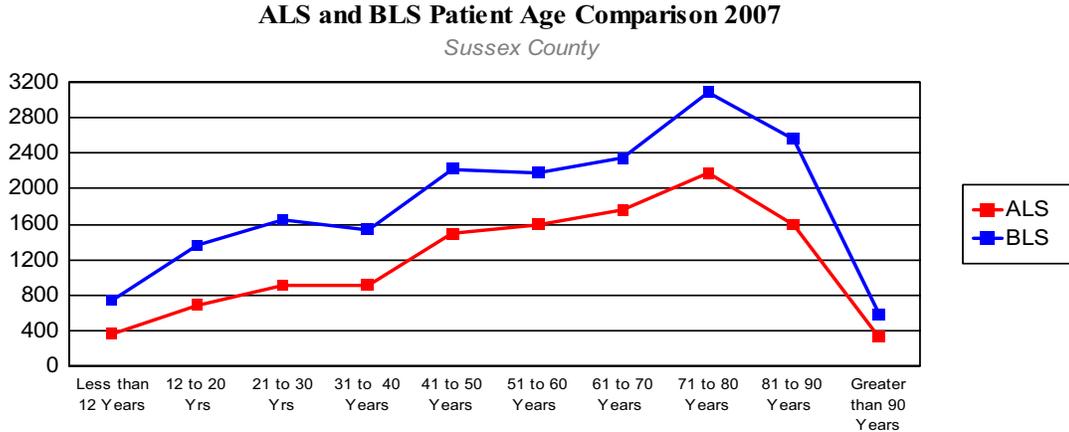


Sussex County Paramedic Ray Fulkrod speaks to children about the paramedic program during the Sussex County Emergency Operations Center Annual 911 Awareness Day.

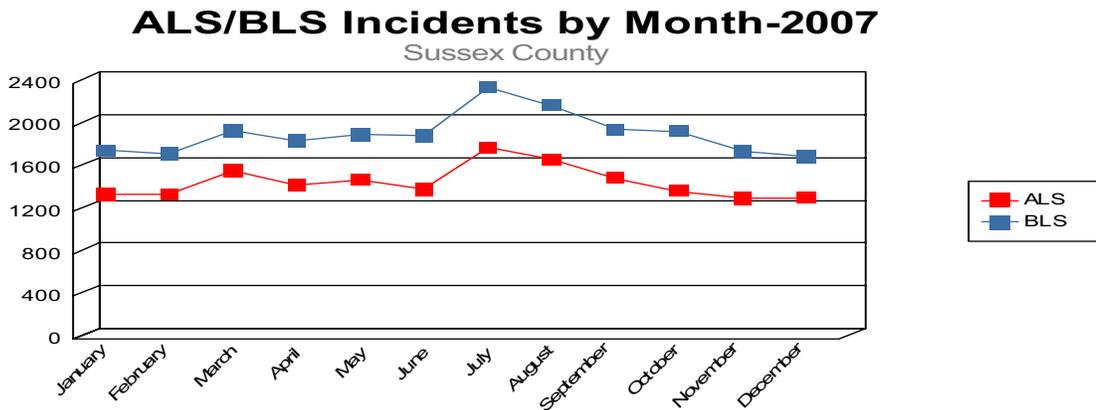
Sussex County EMS participates in over 100 public education events each year. Paramedics from Sussex County provide community outreach, career information, public education, and injury prevention to area schools of all ages and the general public throughout the year.

CHALLENGES

Sussex County EMS has three unique challenges in its delivery of EMS services. First, is the increasing retirement and elderly population. Second is the increase in demand for services during the summer or tourist months. Third is the geographical region and rural nature of their response area.



As our population age,s the demand for services will increase, as will the demand for EMS providers. The Delaware Population Consortium projects that from 2005-2015 Delaware’s population will increase by 15%, and the number of residents 60 years and older is expected to increase 27%. Sussex County is in position to be extremely hard hit by the aging population. In 2006, 47.5 percent of the paramedic responses are to patients over age 60. As the senior population increases, so will the strain on the system.



To address the increase in call volume in the summer months, SCEMS places an additional two-paramedic unit into service to assist with the high volume of calls, particularly in

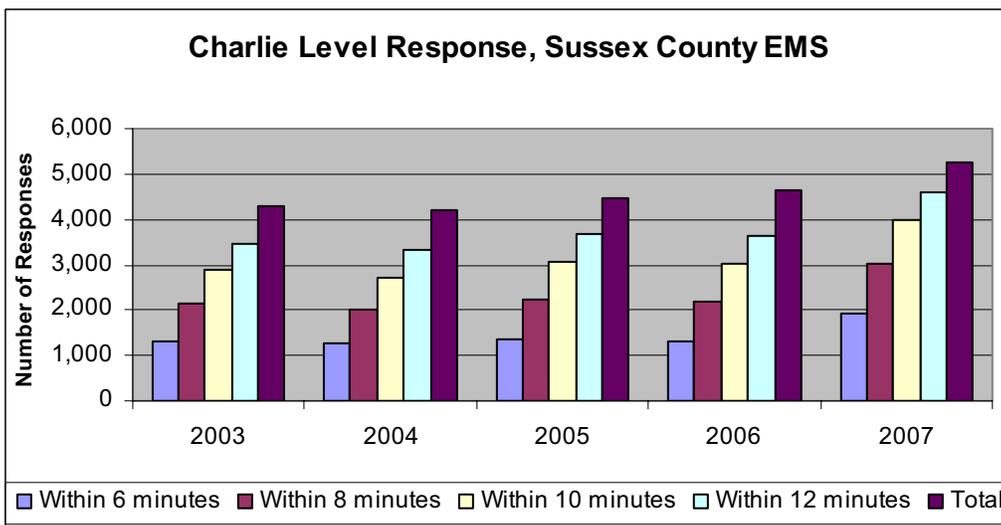
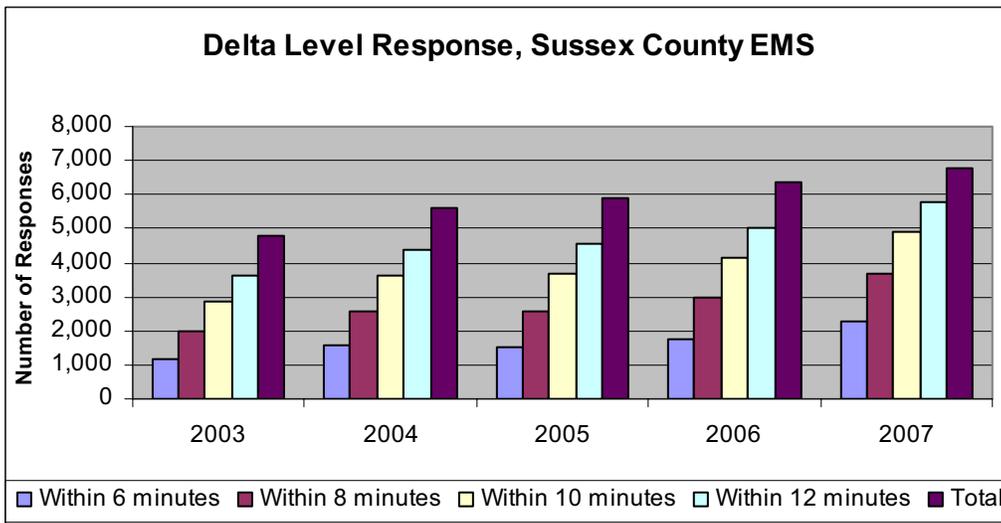
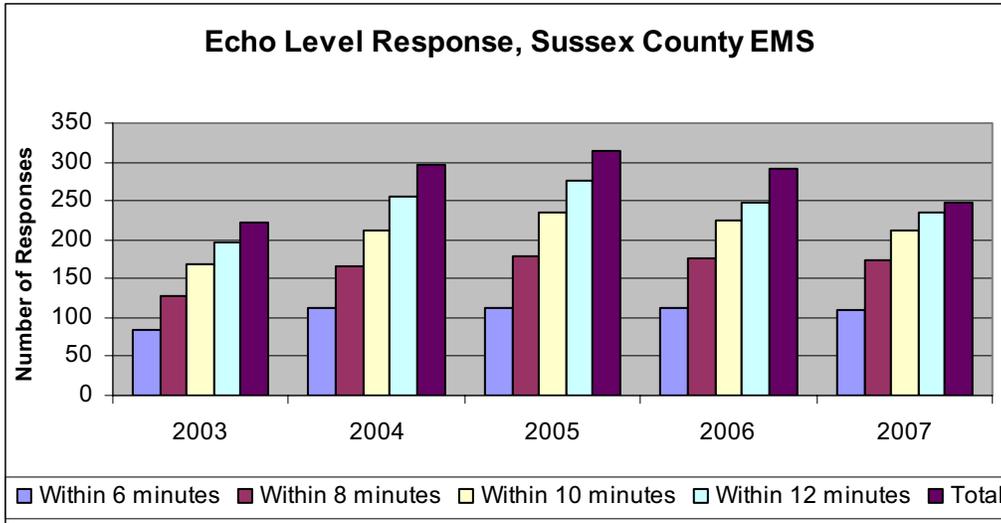
the beach areas. In addition, the SCEMS bike team is deployed to cover the boardwalk area as well as special events.

The Bike Medic division of the Sussex County EMS Special Events Team (SET) consists of specially trained paramedics, who not only stand-by at mass gatherings, but are also very visible and interact with the citizens. Removing the paramedics from the large truck and putting them on specially designed EMS bicycles makes them less intimidating, more approachable, and more interactive with the public. In addition, the bikes provide a maneuverable, fast response to the site of a medical or traumatic emergency.

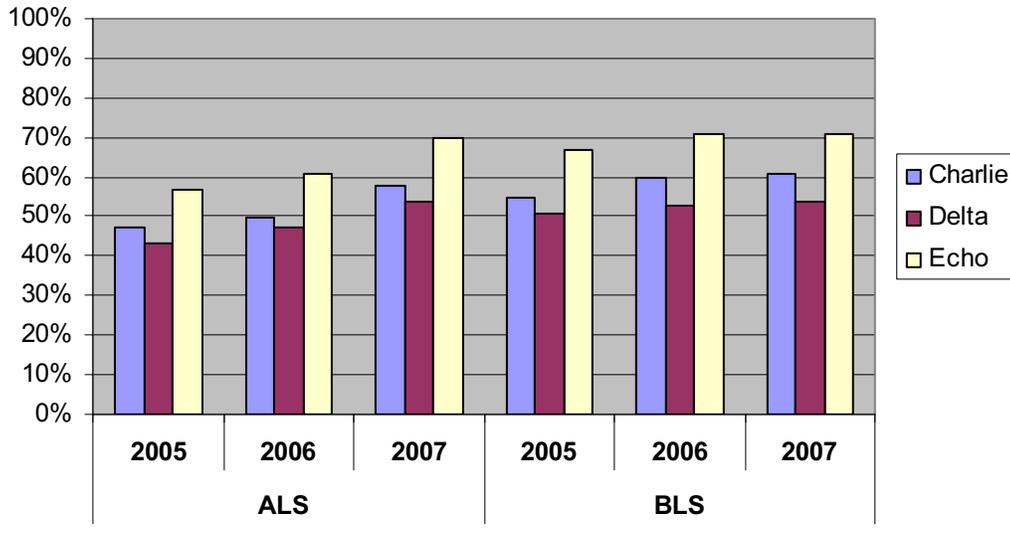


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The third issue involves the geographical size of the county and the rural nature of many of its roads. At nearly 950 square miles, it is the largest county in the state. There are three major four-lane north-south arterial roads, and two major two-lane east-west roads; the remainder of the road infrastructure consists largely of two-lane rural and neighborhood residential roads. As the county has grown, the amount of traffic has grown with it, contributing to increased response and travel times. Although the problem is most acute during the summer months, the increase in year-round residents has led to increasing traffic-related delays throughout the year. Sussex County EMS has addressed this issue by strategically locating its stations to improve response times throughout the county. Most recently, the addition of the Georgetown station (108) and relocation of station 103 from the Stockley Center to the Millsboro/Dagsboro area has improved response in the central corridor of the county.



Percentage When Sussex County ALS/BLS Arrived On-Scene in 8 Minutes or Less on Delta/Echo/Charlie Level Incidents-2007



SUSSEX COUNTY EMERGENCY COMMUNICATIONS

There are three (3) dispatch agencies serving Sussex County. All three dispatch centers operate 24 hours a day 7 days a week. The towns of Rehoboth Beach and Seaford each have a dispatch center.

Rehoboth Beach

The Rehoboth Beach Police Department 9-1-1 Communications Center operates 24 hours a day on a year round basis. It provides Police communications service to the City of Rehoboth Beach and Fire/EMS communications to the Fire Territory of the Rehoboth Beach Volunteer Fire Company. The Center is staffed by a Communications Supervisor and 8 (eight) Full Time Telecommunicators. The center has a minimum staffing of 1, but most shifts have 2 people on duty. While the Center is much busier during the Summer Months due to our area being a resort, we are seeing our winter activity increasing each year.

The Rehoboth Beach Police Department 9-1-1 Communications Center was Re-Accredited by the National Academy of Emergency Medical Dispatch on August 1, 2007 which is good through August of 2010.

Our Center receives all 9-1-1 calls from landlines in the 226/227 phone exchange and from several cellular towers in the area. In 2007 we processed 5,696 9-1-1 calls, although not all Emergencies are reported on 9-1-1. The center dispatched or processed 3,893 police/city incidents; 4,169 traffic stops; 639 fire incidents; 2,016 EMS incidents (1,092 ALS calls and 924 BLS calls).

City of Seaford Police Department

The Seaford 911 Center operates 24 hours a day on a year round basis. It provides communications service to the City of Seaford to include the police department of 27 full time officers along with the Seaford Fire Department handling fire and EMS calls for service. The Seaford Communications Center is staffed with 9 full time telecommunicators which include a dispatch administrator who oversees the daily operation.

The Seaford 911 Center was originally Nationally Accredited by the National Academy of Emergency Medical Dispatch in August of 2003 as the 83rd accredited center. They were re-accredited in August of 2006 and will be due again in 2009.

The Seaford 911 Center receives all 911 calls from landlines in the 629/628 exchange and cell calls from several cellular towers in the area. In the year of 2007 the Seaford 911 Center received approximately 11,000 911 calls for service and approximately 6,000 cellular calls. The Seaford 911 Center dispatched approximately 9,651 police calls for service, 2,254 EMS calls and approximately 720 fire calls.

Sussex County Emergency Communications Center

The largest of the dispatch centers in Sussex County is the Sussex County Emergency Communications Center (SussCom). SussCom is an accredited Center. They received their initial accreditation in October 2001 and were re-accredited in 2005. They are due to apply for re-accreditation in July 2008.



They have 20 dispatchers of which 4 are shift supervisors. There are 5 people assigned to a shift. The minimum staffing is 3 during the winter/off season months and 4 during the summer/seasonal months. The dispatchers are currently certified in Emergency Medical Dispatch, Emergency Fire Dispatch and as Emergency Telecommunicators. They are also required to hold current CPR and AED certifications.

They are in the process of moving to a new \$13 million state of the art building. The 18,000 square foot facility is located on Rudder Lane at the Sussex County Airport.



SUSSEX COUNTY BASIC LIFE SUPPORT

Sussex County is comprised of 21 volunteer fire companies and two volunteer ambulance companies. The Georgetown American Legion responds on BLS calls within the Georgetown Fire District and the Mid-Sussex Rescue Squad responds on BLS runs within the Indian River Fire District. The only other fire district, which does not operate BLS services in Sussex County, is Bethany Beach. This company has mutual aid agreements with bordering fire companies to supply ambulance services.

SUSSEX COUNTY AMBULANCE ASSOCIATION

In 1978, the Sussex County Ambulance Association was formed. This association is designed to bring all EMS agencies together and to provide a forum for discussion on local and national issues that pertain to the pre-hospital field. Officers of the association are actively involved in EMS activities at the county and state level and are dedicated to providing EMS personnel with the most up-to-date information. Both the president and vice-president sit on numerous committees, such as the EDIN users committee and the BLS protocol committee to help resolve issues and make the system work more efficiently.

ACCOMPLISHMENTS AND NOTABLE EVENTS



Georgetown Fire Company host Sens. Carper and Collins: Sens. Tom Carper (D-Del.) and Susan Collins (R-Maine) have introduced the Volunteer Firefighter and EMS Personnel Job Protection Act (S. 2399) to protect first responders from retribution if they miss work to respond to a disaster. Communities across the country depend on volunteer firefighters and emergency medical services personnel to respond to major disasters. Current law offers these volunteers no protection against punishment by their

employers if they miss work when called to respond to a national emergency. This means that firefighters or EMS personnel volunteering their time during major disasters like 9/11, Hurricane Katrina or even the current wildfires in California can be disciplined or even fired, all when they put their lives at risk to save others. The Volunteer Firefighter and EMS Personnel Job Protection Act will protect volunteers from losing their jobs while they continue their vital service to this country. First responders will no longer be required to make a choice between losing their job or responding to a presidentially-declared disaster or an emergency. The bill also allows volunteer firefighters or EMS personnel to take legal action against businesses that violate this law. The legislation places a 14-day limit on the amount of time volunteer firefighters or EMS workers may take off from their jobs before being subject to disciplinary action. The bill does not require employers to compensate volunteers for time away from work.

Bethany Beach Ambulance Service Update: In April of last year, the Millville Volunteer Fire Company notified the State Fire Prevention Commission (SFPC) and the BBVFC that it would be ending ambulance service in the BBVFC District January 1, 2009. Millville took this step due to ongoing growth in its own district that is straining the organization's human and financial resources. Upon receiving Millville's notice, the SFPC asked the BBVFC to consider starting up and operating an ambulance service. BBVFC agreed to study the matter and created budgets for what it would take to establish and run a career-based service equal to what Millville provides the community today. BBVFC advised the SFPC that they would be prepared to take on this challenge if guaranteed; recurring sources of the necessary funds were made available to them. At the same time, a special committee appointed by the SFPC was independently exploring alternative solutions to the challenge.

Laurel Fire Department member receives award: On December 31st Deanna Brown was recently presented the Everyday Hero award from the radio station Froggy 99.9 by April Brilliant. Deanna is an Active member, and Past president, of the Laurel Fire Department Ladies Auxiliary. She recently decided to join the Ambulance Associate program as a member, and she is starting to take the NREMT-B course through the Delaware State Fire School in Georgetown. Deanna Decided that she needed to give back to the Laurel Fire Department for all of the time, hard work, and dedication they gave to her and her family in their time of need. Deanna also dedicated a lot of time and effort into raising money for the light the night walk in Rehoboth Beach. She raised over \$3,710 in which her goal started out at \$500 which was completed within two days. Team Gump which had over 30 walkers on October 13th raised over \$7,000. The team's goal was \$1,500. Deanna received this award for being a great role model, now a single working parent, a widow, a friend, an auxiliary member, a supporter for cancer research, and a student. Along with the Everyday hero plaque she received many gift certificates, and is invited to the Everyday hero banquet.

Frankford Fire Company receives grant: The Frankford Volunteer Fire Company has been selected to receive the 2007 Assistance to Firefighter Grant (AFG). During round eighteen of the grant funding the FVFC was selected to receive \$72,438.00 for Operations and Safety. The department will use the monies received to put in service an

exercise room that will be available to its membership. The grant will also fund the implementation of a physical fitness and firefighter safety plan. Senator Tom Carper visited the FVFC today to talk about some of the positive outcomes that could be obtained with receiving funding such as this. Also, he took the time to have an informal conversation with many of the department's operational and administrative officers. Senator Carper was instrumental in putting together a Federal Emergency Management Agency (FEMA) grant writing class for the fire service, which our own Patrick Quigley attended prior to writing our grant application.



Indian River Receives check from WSFS Bank: On Wednesday evening, February 6, 2008, WSFS Bank Representatives, Pam McCutcheon; Kelly Palakar; and Andrew Walls presented the Indian River Volunteer Fire Company with a check in the amount of \$889.63. This contribution is a result of WSFS Partners in Banking Initiative where non-profit organizations pledge to have persons affiliated with their organization open or maintain accounts with the financial institution and WSFS offers a percentage of the account balance to the non-profit organization at no cost to the account holder. WSFS has identified that the Indian River Volunteer Fire Company received the largest contribution from the WSFS Bank this year.

SIGNIFICANT EVENTS

Multi-Department Recruitment Presentation: On January 4, 2007 the members of the Frankford Volunteer Fire Company participated in a multi-department recruitment presentation at the Indian River High School in Dagsboro, DE. Representation from the Dagsboro VFC, Millville VFC, Roxana VFC, Selbyville VFC, Sussex County Paramedics, and Christiana Care's Lifenet Helicopter were all present to embark on this first annual event. Turnout was much higher with approximately 75 potential junior fire personnel attending the presentation. In addition to a thirty minute presentation, the students were broken down into groups by fire district they live in for a question and answer station. Once that was complete they were all taken out and given an overview of fire and EMS apparatus and the jobs emergency services provide. Paramedic Supervisor Rob Mauch also gave a brief orientation on the Sussex County Paramedic student program. We feel that this was a tremendous success, and we plan to follow this up with

a one on one question and answer session with parents and potential junior fire applicants.



Frankford Elementary School Drill: Members of the Frankford VFC, Dagsboro VFD, SCEMS & LifeNet took part in a surprise fire drill complete with smoke filled hallways. At approx. 09:00 members entered the school and set up (7) seven smoke machines. The principal and maintenance personnel were the only school employees aware of the drill. Several children of local firefighters were called down to the school prior to the drill to be used ad victims. As smoke filled the hallways it tripped the fire alarm, in which the Sussex EOC dispatched the participating units to the call. School faculty evacuated the students and followed school procedures on fire alarms prior to units arriving and still at this point had no idea this was not real. First units arrived with smoke showing with school officials stating they had (11) eleven subjects unaccounted for. Crews entered the structure and began search & rescue. As search crews were bringing out the patients Dagsboro EMS & SCEMS established a triage area and began patient care & LifeNet arrived to transport a priority 1 patient. Search and rescue was complete in 20 minutes with all personnel accounted for.

SUMMARY

Sussex County’s main concern is the future of the EMS system: where are we going and how are we going to get there? These questions remain unanswered because the future of EMS is unpredictable. The “EMS agenda for the future” is a document that addresses a new direction for EMS. The document describes “an EMS system that will be community-based health management that is fully integrated with the overall health care system. It will improve community health and result in more appropriate use of acute health care resources.” However, it still remains to be seen if this new direction will become a reality.

EMS is an ever changing discipline in Sussex County due to the increase in growth and development. These changes create difficult challenges for the companies that provide BLS services. Although these companies know that changes and mandates are forthcoming, they are willing to make the necessary changes to better meet the needs of their community. This positive attitude combined with a dedicated group of pre-hospital providers ensures that Sussex County EMS will continue to provide quality medical services long into the future.

AIR MEDICAL SERVICES



DELAWARE STATE POLICE AVIATION SECTION



Delaware State Police Aviation Section provides effective support services to our law enforcement, medical, and search and rescue communities. As the Section's mission expands to encompass the many new demands placed on the Division on the Homeland Security front, members have been able to incorporate new technologies, add new equipment, expand hours of operation to 24 hour service, and increase staffing.

The Aviation Section supports State, federal and local law enforcement traffic concerns by providing aerial assistance during vehicle and foot pursuits, traffic reconnaissance during large public events and route security during events involving visiting dignitaries/important persons. Our Sections provides criminal reconnaissance and stand-by medical evacuation during high risk warrant executions to all law enforcement agencies operating in our state and surrounding area. Additionally, the fixed wing component of our mission transports detectives to assist in investigations and provides extradition for Delaware fugitives. Delaware Department of Natural Resources and Environmental Protection Agencies also utilize the Section for game and environmental violation.

The Section continues its participation in the Open Water Rescue program, which involves a partnership between the state police, the United States Coast Guard, the Delaware Fire Service, and rescue swimmers from area beach patrols. Aviation, at EMS request, provides air medical transport for seriously injured and ill persons. Organ transplant recipients are also transported, at request, by our section to hospitals within or outside of our State borders. Similarly, we provided patient transport from hospital to hospital in order to facilitate the highest and most appropriate level of care.

Calendar year 2007 was a year of transition for the Aviation Section. The Section realized changes in personnel, aircraft and technology which have kept them busy. We continue to serve the law enforcement and medical communities with criminal support, traffic enforcement, search and rescue, medical transport, homeland security and fixed wing transit missions.

Sgt. Paul Shavack, who served the Section as Paramedic Commander transferred to T-2 patrol. Sgt. Ben Parsons transitioned nicely into this position and now serves as our

Paramedic Commander and is responsible for the entire medical component of our operation.

Tfc. Sharon Wile retired from the Division at the end of December 2007. Sharon was a trooper-medic in the Section for many years. She was well known in the EMS community as she was involved with many teaching assignments in Sussex County. She has moved onto a career with Sussex County EMS. We wish her luck on the next leg of her journey.

During the year, Cpl. Bill White and Cpl. Don Pope achieved Pilot-in-Command (PIC) status and now serve as duty pilots. Also, Cpl. T.J. Aube graduated from the DTCC Paramedic Technology program, and passed both the state and national tests to become board certified as a nationally registered paramedic. Congratulations to these troopers on their accomplishments.

In September of 2007, Robert McMahon was hired as a civilian employee. Bob retired from the Division in 2006 after over 25 years of service to the Aviation Section. Bob brings a wealth of experience and knowledge with him. He will be used to assist us with training as well as piloting some of our fixed wing missions.

In January of 2007, the new Bell 412 twin engine helicopter was sent to Edwards and Associates in Bristol Tennessee for the completion process. During this process, all of the EMS, search and rescue, and law enforcement specific equipment, as well as the advanced avionics were added to the ship. In addition, the ship was painted and the interior was modified. DSP took delivery of the completed aircraft at the end of December, 2007. Pilot and Medic training on the elements of the new aircraft are taking place and almost all the pilots are completely trained on the operations of the ship. Medics continue to learn the new equipment and technology that is also considered state of the art, which will undoubtedly enhance their ability to save lives and assist with the many law enforcement capabilities this new ship will provide.

The new Bell 412 has a much greater capacity to enhance our operational missions of air medical service as well as our police function to support our patrol forces. With a much larger lift capacity, the Bell 412 will be able to transport multiple patients from the same scene and the extra cabin space will provide the attending medics with ample room to provide life savings services. Additionally the Bell 412 is a twin engine helicopter which will provide our crews with additional officer safety capacity as we continually are called upon for open water rescue and flights that extend into the Atlantic Ocean. Often times we are the primary call for service for lost or stranded boaters, due to the strained resources that currently the US Coast Guard is plagued with. The life rescue equipment and extra ‘muscle’ provided by the Bell 412 will certainly enhance our capability for rescue operations over these waterways and also will provide additional resources for response during natural disasters as well.

With the added capability to add a functional water bucket to the belly of the ship, the Bell 412 will also be an added asset to the Delaware Fire Service in support high rise fire fighting efforts as well as open field and marsh fires where otherwise restricted access

might be a problem. The Bell 412 will also be used as a means to support the Homeland Security efforts within our state and serve as a regional asset to assist our neighbors should the need arise for aerial support for the multi state region as well as the National Capital Region. The capability also exists for the Bell 412 to be able to move an entire entry team for the DSP SWAT or EOD team quickly; anywhere within the state if the need arises. As you can see the many capabilities of this new Bell 412 along with the advanced technology that it provides will enhance the capability and capacity of the DSP airborne assets as we move forward into 2008. The bell 412 will be placed into full service on April 2, 2008

Delaware State Police recently received an invitation to display the new aircraft at the international HAI Helicopter Expo that was held in Fort Worth Texas in February 2008. This venue provided us the opportunity to highlight the Section as well as the Division in the eyes of the world.



DSP Aviation looks forward to an exciting new year, delivering the very best law enforcement and emergency medical service possible.



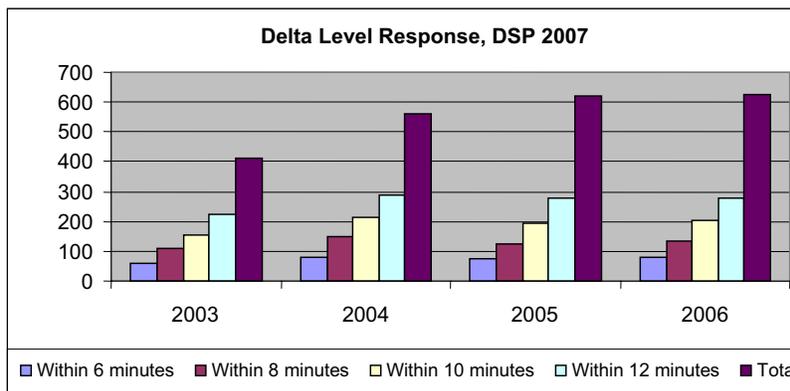
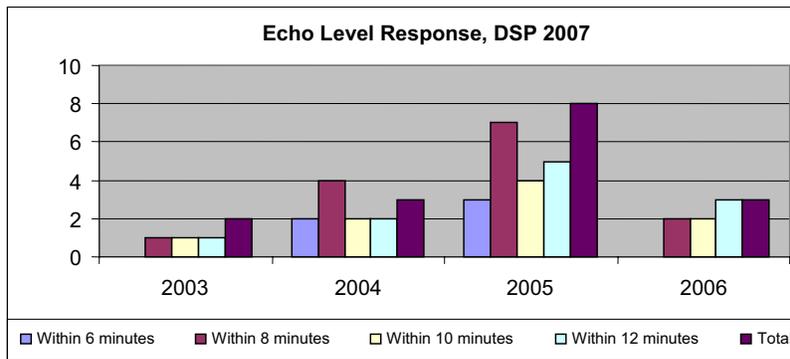
Helicopter Missions 2007

The helicopters flew 3,385 missions in 1,686.4 flight hours.

- Medical missions now account for approximately 57% of our total mission.
- The next largest mission category continues to be criminal support flights.



	New Castle County	Kent County	Sussex County	Other	Total
Law Enforcement					
Traffic	1	11	1		13
Reconnaissance	19	18	18		55
Criminal	232	53	130	8	423
Surveillance	130	28	132	1	291
EMS					
Scene Responses	659	616	604	60	1939
Inter-facility Transport	0	2	2	3	7
Medic Assist	4	5	5		14
Search and Rescue	84	25	57	10	176

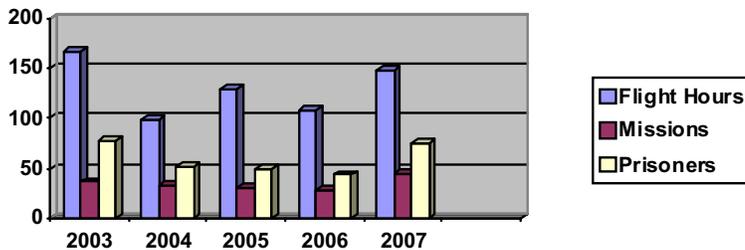


Delaware State Police Aviation Division
Fixed Wing Missions 2007



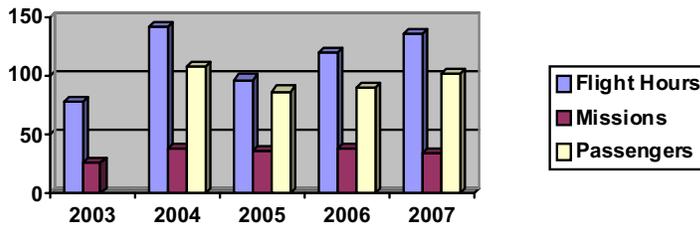
Extradition's:

During 2007 the fixed wing unit flew a total of 44 extraditions; it logged 148 flight hours and transported 75 persons from other states who were suspected of or convicted of a crime.



Non Extradition Flights:

The fixed wing unit flew a total of 35 non-extradition flights. It logged 136.3 flight hours and transported 101 passengers.



Tactical EMS Missions 2007



Tactical Missions by Month

January	7	July	5
February	9	August	10
March	6	September	8
April	3	October	3
May	10	November	2
June	1	December	0

Tactical Missions by Type

Medic	High Risk Warrant	Hostage Baricade	Dignitary Protection	Civil Disturb.	Training / Exercise	Other
635	21	4	1	0	1	0
149	0	0	1	0	0	0
779	5	0	0	0	0	0
234	11	1	2	0	1	0
229	3	0	0	0	0	0
429	13	0	0	0	0	0
TOTAL	53	5	4	0	2	0



Air Medical Services

Delaware's Division of Public Health first promulgated Regulations for Air Medical Ambulance Services in 1993. The purpose of these regulations is to provide minimum standards for the operation of Air Medical Ambulance Services in the State of Delaware. It is the further intent of these regulations to ensure that patients are quickly and safely served with a high standard of care. Subsequent revisions in 2001 and 2002 described the application and state certification process and resulted in the emergence of a well-developed system of air medical transportation in our state.

Currently, private air medical services may apply for any of three levels of State of Delaware interfacility transport certification and/or prehospital certification:

LIMITED STATE CERTIFICATION: Approval granted, following satisfactory completion of the air medical program certification process, to an air medical service wishing to provide only one way transport to or from Delaware.

FULL STATE CERTIFICATION: Approval granted, following satisfactory completion of the application process, to an air medical service wishing to provide point to point transport service within the state of Delaware.

PREHOSPITAL 911 CERTIFICATION: Approval granted, following satisfactory completion of the application process, to an air medical service wishing to act as a supplemental resource to the Delaware State Police in carrying out prehospital scene missions in Delaware.

The initial certification period is three years, and reapplication for recertification is required every three years thereafter.



Program Highlights

Scene response – The Delaware State Police (DSP) Aviation Section has responsibility for primary scene response throughout Delaware. Additionally, the following private air medical services are state-certified to be dispatched by the Emergency Operations Centers when DSP is not available to respond to a scene or when more than one aircraft is needed:

- *Christiana Care LifeNet, Newark and Georgetown DE*
- *MedSTAR, Easton MD*

The *Delaware 911 Air Medical Dispatch Process*, which was developed based on proximity of the aircraft to the incident location, is utilized to determine the next due aircraft to be dispatched.

Interfacility transfer – State-certified private air medical services are utilized as the primary transport services for patients who need to be transferred to a higher or more specialized level of care, either within Delaware, or within the region, such as to a Burn Center.

The following private air medical services are certified to perform point-to-point interfacility transfers within Delaware:

- *Christiana Care LifeNet, Newark and Georgetown DE*
- *MedSTAR, Easton MD*
- *STAT MedEvac, Baltimore MD, providing air transport for the duPont Hospital for Children transport team*
- *PHI for Maryland ExpressCare, Baltimore MD*

The following private air medical services are certified to perform flights bringing patients either into or out of Delaware:

- *Christiana Care LifeNet, Newark and Georgetown DE*
- *MedSTAR, Easton MD*
- *STAT Med Evac, Baltimore MD, providing air transport for the duPont Hospital for Children transport team*
- *PHI for Maryland ExpressCare, Baltimore MD*
- *PennSTAR, Philadelphia PA*
- *Sky FlightCare, Coatesville PA*
- *University MedEvac, Pottstown/Doylestown PA*
- *JeffSTAT LifeNet, Philadelphia PA*

The following air medical services are available to serve our state through Mutual Aid agreements:

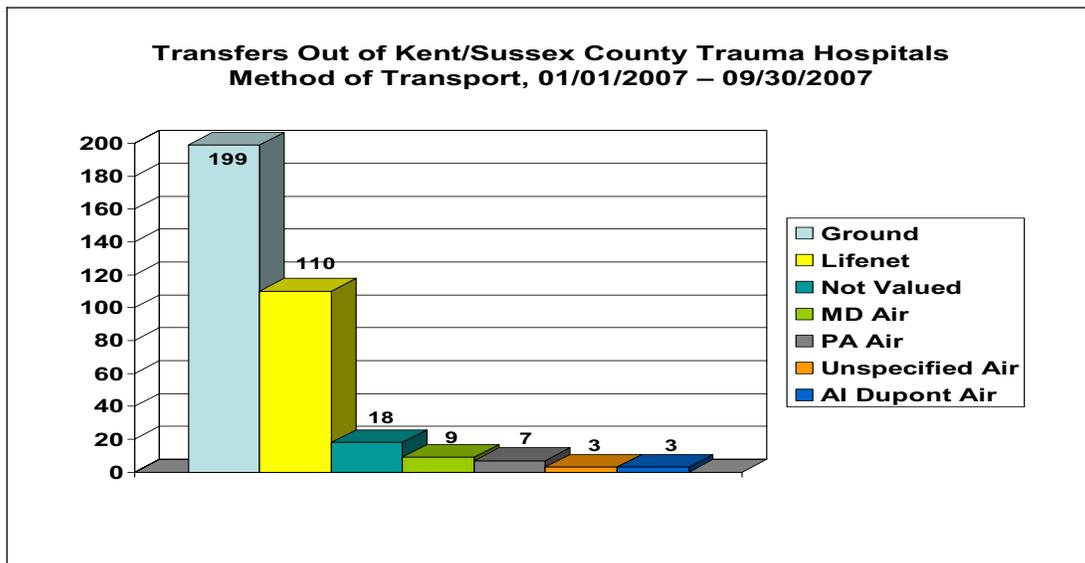
- *Maryland State Police Aviation Section*
- *New Jersey State Police Aviation Section*

Challenges

The Trauma System Quality Committee will be continuing to work on analyses of data to determine optimal distribution of patients throughout the Trauma System. This includes methods of identifying the most seriously injured patients, with utilization of air medical transport to move them directly to the Level 1 Trauma Center from the scene, while triaging less seriously injured patients to the Community Level 3 Trauma Centers. The addition in January 2008 of a Level 2 Pediatric Trauma Center at duPont Hospital for Children provides another specialty care center for Delaware. The goal is optimal utilization of the resources of all level facilities so as to avoid overcrowding of our tertiary care center and underutilization of the resources available close to the patients' homes in the Community Trauma Centers.

Summary

Integration of air medical services to appropriately transport patients has progressed significantly over the past several years. Delaware is now served by a more than adequate number of services. Further refinement of the role of air medical services within the EMS and Trauma Systems continues to be the focus of the developmental process.



Data from the Trauma System Registry illustrates, above, the method of transport of patients from the four downstate Trauma Centers/Hospitals during the first nine months of 2007. Not Valued represents data field left unanswered.

Specialized Care



DELAWARE STATEWIDE TRAUMA SYSTEM

June 30, 2006 marked the 10th anniversary of the passage of legislation creating Delaware's Statewide Trauma System. That legislation was the culmination of years of work by the state's hospitals, the Division of Public Health, the Delaware Hospital Association, and prehospital, fire and police agencies statewide. The passage of this enabling legislation was the first step in systematically improving the care provided to the injured throughout our state. Since this bill was passed, over 32,000 people have been cared for by Delaware's Trauma System.

Delaware's Trauma System Committee continued working to develop one of the nation's few truly inclusive statewide Trauma Systems, which was fully implemented in January 2000. An inclusive Trauma System is one in which every acute care hospital participates in the Trauma System and has met the standards for state designation as a Trauma Center or Trauma System Participating Hospital. More importantly, it means that no matter where in the state people are injured, they enter a system of care that follows the same guidelines, regulations, and standards and makes sure they are cared for in the facility best able to manage their injuries.

Unintentional traumatic injury is the # 1 killer and disabler of Delawareans ages 1 to 44 years, and the # 5 killer for all age groups combined (Delaware Vital Statistics Annual Report 2005). It includes injuries such as those caused by highway crashes involving motor vehicles, bicycles or pedestrians, falls, and farm and industrial mishaps. Intentional injury adds assaults, shootings, and stabbings. Trauma System Registry records show that 4,980 citizens and visitors of Delaware were injured seriously enough to require hospitalization in 2006 and of these, 178 sustained fatal injuries (Delaware Trauma System Registry, 2006). Because trauma so often involves children and young people, it is responsible for the loss of more years of life than any other cause of death, both nationally and in Delaware. It robs our nation of its most precious resource---its youth.

Trauma can occur at any time. It can happen to anyone. Those with critical injuries need to receive definitive care within a short period of time in order to minimize the risk of death and disability. The role of a Trauma System is to organize resources and assure their immediate availability to the injured at all times and in all geographic areas of the system. These resources include 911 Emergency Communications Centers, Basic and Advanced Prehospital Providers, multidisciplinary Trauma Teams in hospital Emergency Departments, and in-hospital resources such as Operating Rooms and Intensive Care Units. Research has shown that the coordination of these resources which takes place as a Trauma System is developed can result in dramatic reductions, up to 50%, in preventable deaths due to injury¹.

Delaware's Trauma System regulations are based largely on the guidelines of the American College of Surgeons' Committee on Trauma (ACS COT). ACS review teams visit each Level 1, 2, and 3 Trauma Center and report to the Division of Public Health on the facility's compliance with the Trauma Center Standards before a hospital can be

designated as a Delaware Trauma Center. Reviews must be completed every 3 years in order for a hospital to retain its state Trauma Center designation status. Trauma System Participating Hospitals are reviewed every three years by an out-of-state physician consultant and Division of Public Health staff.

Current Trauma Center and Trauma System Participating Hospital designations are:

Regional Level 1 Trauma Center:

Christiana Hospital, Christiana Care Health Services

A Regional Resource Trauma Center has the capability of providing leadership and comprehensive, definitive care for every aspect of injury from prevention through rehabilitation.

Pediatric Regional Level 2 Trauma Center:

Alfred I. duPont Hospital for Children (provisional beginning 1/1/2008)

A Pediatric Regional Level 2 Trauma Center has the capability to provide comprehensive pediatric trauma care for the most severely injured children within its geographic area and is expected to assume a leadership role in the care for injured children within its local, regional, and statewide trauma systems.

Community Level 3 Trauma Center:

Beebe Medical Center

Kent General Hospital, Bayhealth Medical Center

Milford Memorial Hospital, Bayhealth Medical Center

Peninsula Regional Medical Center (Maryland) via reciprocity

A Community Trauma Center has the capability of providing assessment, resuscitation, stabilization, and triage for all trauma patients, arranging for timely transfer of those patients requiring the additional resources of a Regional Trauma or Specialty Center, and delivering definitive care to those whose needs match the resources of this facility. *Reciprocity* means that Delaware's Division of Public Health has accepted the Trauma Center designation conferred by Maryland.

Participating Hospital:

Nanticoke Memorial Hospital

St. Francis Hospital

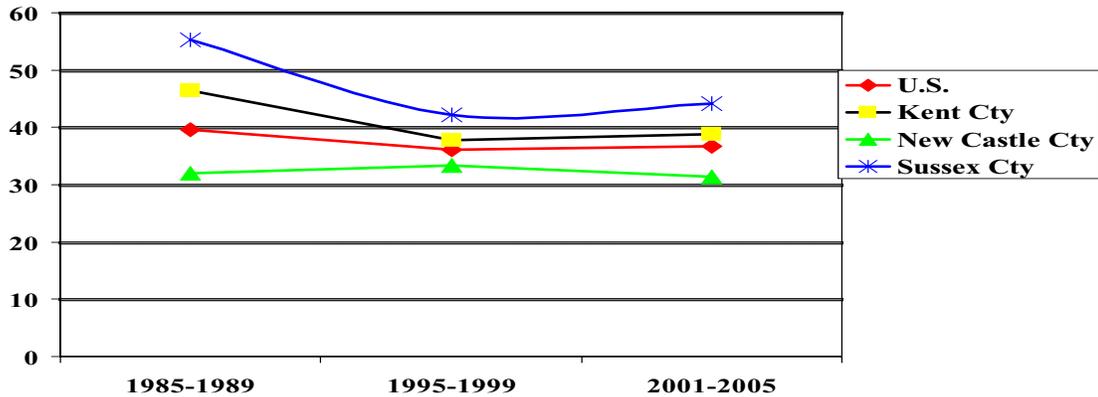
Wilmington Hospital, Christiana Care Health Services

A Participating Hospital is an acute care facility that may receive, usually by private vehicle, moderately or even severely injured trauma patients. These hospitals quickly identify and transfer these patients to a Trauma Center after initial resuscitation. When necessary, this facility may provide care to trauma patients with minor injuries. Participating hospitals contribute data to the Delaware Trauma System Registry and Quality Improvement Program. They do not receive ambulance patients meeting the Prehospital Trauma Triage Scheme criteria.

Analyses of Delaware's Trauma System Registry data for the five-year periods preceding and following Trauma System implementation in 2000 have demonstrated positive steps in Trauma System maturation. *Comparison of Pre- and Post-Trauma System implementation data shows a significant decrease in the injury mortality rate for the Level 3 Trauma Centers, with a significant increase in the percentage of patients they are transferring to higher levels of care. These*

changes demonstrate a positive impact of Delaware's Trauma System through appropriate utilization of the Level 1 and Level 3 Trauma Centers.

UNINTENTIONAL INJURY DEATHS in DELAWARE per 100,000 population, 5 year averages by county



Delaware Health Statistics Center, 2005 and CDC *National Vital Statistics Reports*, 2005

As shown above, deaths from unintentional injury in our state have declined over the past 20 years, as the state Trauma System has grown. While Sussex County has shown an impressive decrease, deaths there remain above the national rate. This is at least in part due to the nature of rural trauma, where a car crash may not be observed at night on a country road, delaying transport to a Trauma Center. New Castle County, more urban and within our Level 1 Trauma Center's primary catchment area, has consistently demonstrated a lower death rate than the national average. This may result from years of county trauma system development related to Christiana Hospital's Level 1 Trauma Center verification by the American College of Surgeons.

Trauma Systems DO Save Lives!

Challenges for Trauma Systems

Trauma Systems cost money. They often do not generate enough revenue to pay for the many resources and professionals who are ready to respond at a moment's notice when they are needed, 24 hours a day, 7 days a week, 365 days a year. Nationally, some Trauma Centers have closed their doors, unable to continue maintaining the required level of availability of specialized staff. The increasing costs of malpractice insurance, along with the frequent disruptions to both office and home schedules, have caused some specialists to choose to decline to take trauma call and to stop participating in hospital trauma programs. But when Trauma Centers close, injured patients are the ones who suffer. The remaining Trauma Centers have to take on increased patient loads, and patients may not receive optimal care due to the higher numbers of patients needing care. Ambulances have to travel farther from their home districts to take injured patients to available Trauma Centers, meaning that their constituents may have to wait a little longer for a neighboring agency to respond should they need an ambulance during this time.

Inpatient beds in Trauma Centers are full, and patients sometimes need to be held in Emergency Departments while beds are found or patients are discharged.

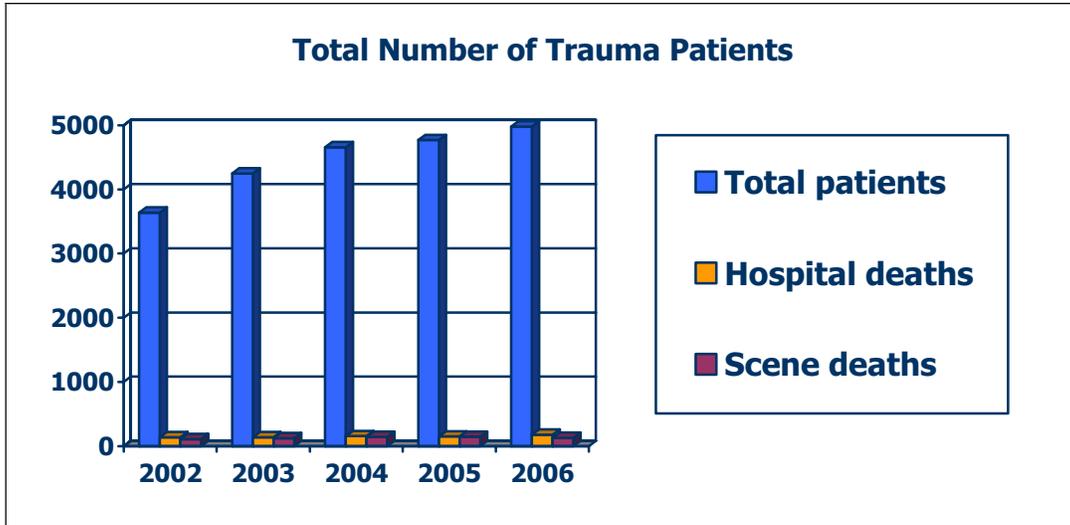
Last year at this time, those words were somebody else's problem, not Delaware's. They were cause for concern but not alarm. This year the problem has come to our state and our Trauma System. The spring and summer of 2007 saw two of our downstate Level 3 Community Trauma Centers drop to Trauma System Participating Hospitals because they were no longer able to provide 24 hour a day/ 7 day a week orthopedic surgeon on-call coverage as required by the American College of Surgeons. Both hospitals worked hard to regain the service. To date, one hospital has regained its Level 3 Trauma Center status and the other has not yet been able to do so. The other components of Delaware's Trauma System shifted and covered the gaps in care without issue or complaint. The strength of our Trauma System and the commitment and flexibility of all of its personnel came together and did a phenomenal job of continuing to provide optimal care for the injured. All agencies and personnel deserve a huge THANK YOU!! for their efforts during this challenging time.

A 2004 Harris poll commissioned by the Coalition for American Trauma Care to learn what the public knows and thinks about Trauma Centers and Trauma Systems yielded the following highlights:

- Most Americans failed to identify injury as the leading cause of death for children under 10 years of age, for youth ages 10-18 years, and for young adults ages 19-34 years.
- After hearing a description of a Trauma Center, Americans valued them highly and appreciated the importance of having one within easy reach.
- Nine in ten Americans indicated it is extremely or very important for their state to have a Trauma System, after hearing a description of a Trauma System.
- Nearly eight in ten Americans were willing to pay a dime or more a year to have Trauma Centers and Systems in their state. Over half were willing to pay \$25. or more.²

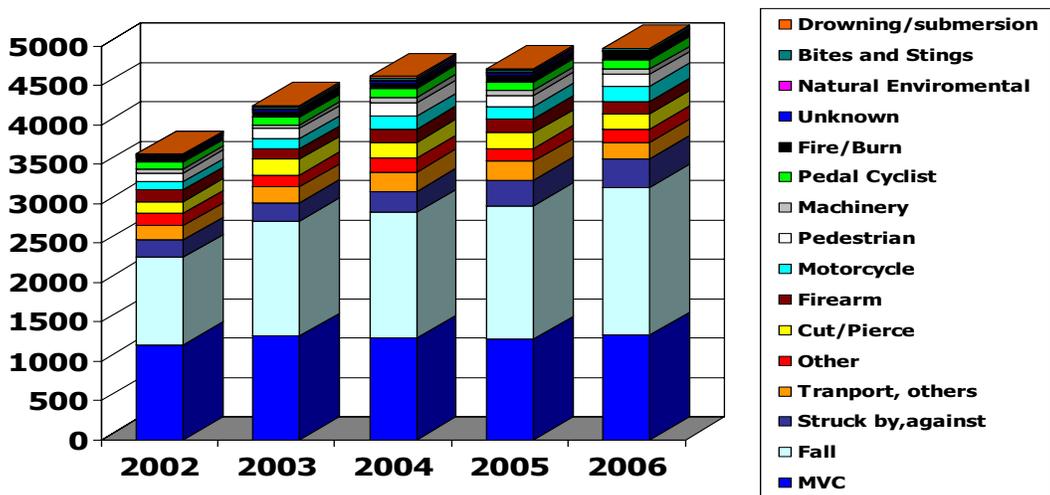
Federal funding for state trauma system development has come and gone since the landmark whitepaper, *Accidental Death and Disability: The Neglected Disease of Modern Society* was published in 1966. The Health Resources and Services Administration's most recent Trauma System program ended in 2006 following Congress' failure to appropriate funding. While the loss of federal funds has caused trauma system development in many states to flounder, some states have chosen to assure that their trauma systems continue to develop, with or without federal support, by passing various types of special or usage fees to fund them. Delaware too may find itself faced with this decision in the future, as care for the seriously injured becomes increasingly more expensive, the specialists needed to provide it more difficult to recruit and retain, and our population continues to grow. Yet we must always keep the needs of injured patients at the forefront of our vision as we strive to successfully resolve the issues and challenges of the future.

1. Mann NC, Mullins RJ, MacKenzie EJ, et al. Systematic review of published evidence regarding trauma system effectiveness. *J Trauma*. 1999;47(3 suppl):S25-S33.
2. Harris Interactive telephone survey conducted on behalf of the Coalition for American Trauma Care in November 2004 among 1,000 U.S. adults aged 18 and over. Sampling error is +/- 3 percentage points.



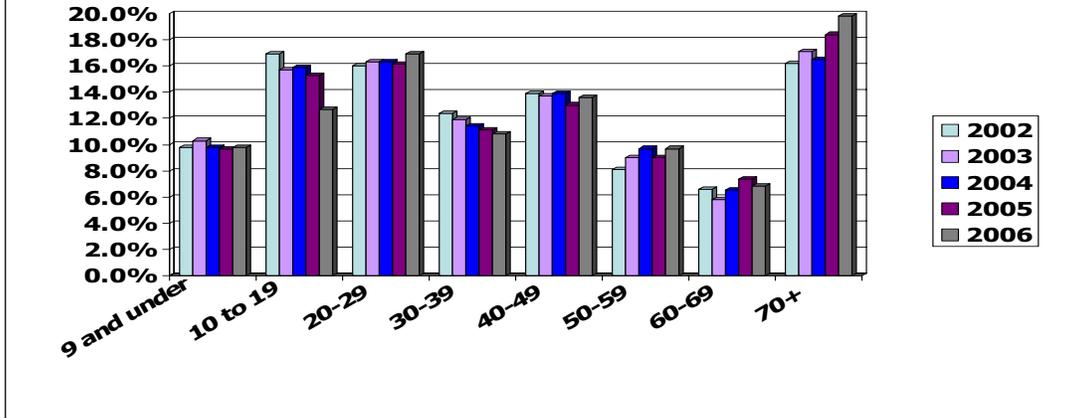
Data submitted by all eight Delaware acute care hospitals is compiled into the Trauma System Registry. The above graph reflects hospitalized trauma patients and scene deaths. The breakdown below shows falls and motor vehicle crashes to be the most frequent injury causes.

Mechanism of Injury



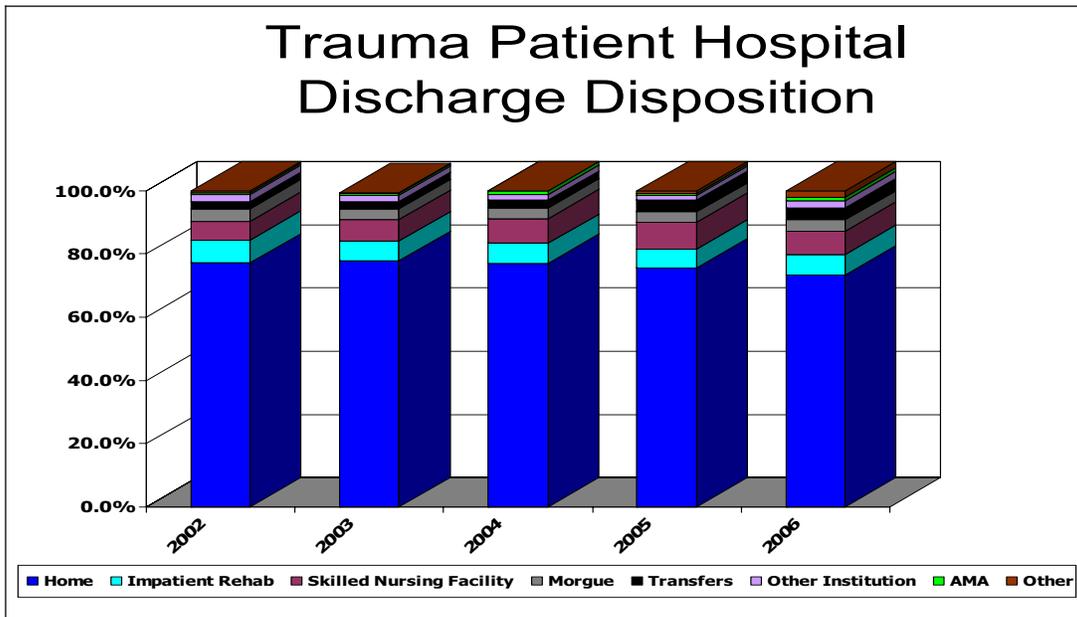
Categories of injuries based on the CDC's recommended E-Code groupings

Trauma Patient Distribution by Age



The graph above demonstrates the increased incidence percentage of traumatic injury in the teen through young adult age group, and again in the elderly population. The graph below shows that most trauma patients are being discharged directly home from the hospital. Transfers to acute care facilities are primarily from Community Level 3 to the Level 1 Trauma Center, or to specialty centers such as burn centers.

Trauma Patient Hospital Discharge Disposition



*Latest data available with all hospitals reporting. Excludes patients not transported to a hospital. Data quality may cause discrepancies in total number of patients for some parameters.

Injury Prevention

Prevention provides an opportunity to realize significant reductions in human morbidity and mortality—all with a manageable investment. Engaging in prevention activities is the responsibility of every health care practitioner, including those involved with the provision of EMS. (NHTSA)

The goal of the Trauma System is to decrease death and disability from injury. In Delaware in 2007, **129** persons died instantly from their injuries. No amount of Trauma System resources, specialists, organization, or planning could have saved these lives. The solution to effectively decreasing this kind of injury death lies in prevention of the injury entirely, or in decreasing its intensity through safety measures such as wearing a seatbelt or decreasing speed. Only by teaching people to make safer choices and to learn and use safer habits can the number of these scene deaths be decreased. Injury prevention addresses the public education needs that can impact the statistics on scene deaths, as well as decrease the numbers of injured overall. In response to Delaware Title 16, Chapter 97's public information, prevention, and education mandate, the Office of EMS staffs the *Delaware Coalition for Injury Prevention* and the *Safe Kids Delaware* program.

Initiatives

In 2001, a group of individuals representing Delaware organizations active in injury prevention came together to form a ***Coalition for Injury Prevention*** under the auspices of the Division of Public Health, Office of Emergency Medical Services. This program is committed to supporting statewide injury prevention efforts through surveillance, training and technical support, community partnerships, encouraging development of interventions at multiple levels, and determining the effectiveness of interventions through evaluation.

In order to give direction to this collaboration, the Coalition developed a *Strategic Plan for Injury Prevention*.* The purpose of this Strategic Plan is to provide a framework for injury prevention efforts and their development in Delaware. The Plan addresses the nine major causes of injury and disability in Delaware – falls, motor vehicle crashes, traumatic brain and spinal cord injury, suicide, poisoning, fire injuries, dog bites, firearm injuries, and drowning and water injuries. A plan for each focus area was developed by teams of Coalition members - professionals and citizens with experience in each area. Because injuries have modifiable risk factors that can be predicted systematically, the teams used the public health approach to define and identify risk factors for each topic area. They identified goals, objectives, action steps, and evaluation methods to aid in effectively addressing the problem of each injury focus area.

Coalition Goal

The Coalition's goal is that through this plan, the vision of promoting safe communities in Delaware will be realized, as measured by fewer fatal and non-fatal injuries, fewer risk-taking behaviors, safer environments, and reduced incidence of injury-related disabilities. Through effective surveillance, partnerships, interventions, training and

evaluation, the Coalition's goal is to help Delawareans learn that injuries are preventable and choose to take steps to reduce their risks.

Coalition Team Highlights of 2007

The following pages summarize the 2007 highlights for the individual teams of the Coalition for Injury Prevention.

*The full Strategic Plan for Injury Prevention may be found at <http://www.dhss.delaware.gov/dhss/dph/ems/files/strategicplanforinjuryprevention.pdf>



Delaware Coalition for Injury Prevention - Fall Prevention Team

Team Leaders – Steering Committee:

Carol Landry (Foulk Manor North), Linda Heller (Division of Services for Aging and Adults with Physical Disabilities), Debbie Dalecki (Ingleside Homes, Inc), Peggy Mack (Nurse Consultant, Adult Mental Health).

Member Agencies: American Red Cross; Bayhealth Medical Center, Kent General Hospital; Beebe Medical Center; Christiana Care Health Services; Delaware Curative Physical Therapy and Rehabilitation; Division of Services for Aging and Adults with Physical Disabilities; Foulk Manor North; Ingleside Homes, Inc.; Milford Parks and Recreation Department.

Key Objectives (by 2010):

(1) Develop fall education programs; (2) Reduce fall related fatalities from 4.2 per 100,000 to 3.0 per 100,000; (3) Reduce the rate of hip fractures among Delaware adults over 65 years from 700 per 100,000 to 500 per 100,000.

Key 2007 Project: Senior Aquatic Fall Prevention Project

Project Description:

The team was awarded a Healthy People Grant in June 2007 to implement an aquatic fall prevention program. Thirty-nine senior citizens completed 12 one-hour sessions over six weeks in warm water swimming pool exercises specifically aimed at prevention of falls. Pre- and post-testing was completed for cognition, depression, balance, and strength. On a weekly basis, participants reported any falls and were provided educational materials on fall prevention. Based on research, 12 falls with injuries were expected in the project population and timeframe. It was predicted that with this exercise program, only nine falls with injuries would occur.

Project Outcome: The significant outcome was that only seven falls occurred during the program, none of which required hospitalization. Through the support of 14 different partnerships, the cost per participant was \$333.00, with a savings up to \$500,000, direct and indirect costs, based on the reduced number of actual falls. Currently the program has a waiting list of over 100 seniors. The project findings were reported in Washington DC at the Healthy People State Coordinators' Workshop. A DVD describing the project is available.



Delaware Coalition for Injury Prevention - Motor Vehicle Crash Prevention Team

Team Leaders:

Joan Pirrung, RN, APRN, BC (Christiana Care Health System – Christiana Hospital) and Alene Honecker, CNT (Bayhealth Medical Center, Milford Campus).

Member Agencies:

Bayhealth Medical Center (Milford and Kent Campuses); Beebe Medical Center; Christiana Care Health System, Christiana Hospital; Division of Public Health Office of Rural Health; Nanticoke Memorial Hospital; Office of Highway Safety; University of Delaware College of Health and Nursing Sciences and Cooperative Extension Traffic Safety Program.

Key Objective:

Conduct impaired driving enforcement initiatives and coordinate public awareness efforts to reduce the number of alcohol-related injuries and fatalities.

Key 2007 Project: Safe Family Holiday Mocktail (alcohol-free cocktail) Celebrations

Project Description:

The Motor Vehicle Injury Prevention team, in partnership with the Office of Highway Safety and trauma program staff in five Trauma Centers (Alfred I. duPont Hospital for Children, Bayhealth Medical Center (Kent and Milford campuses), Beebe Medical Center, and Christiana Care Health System-Christiana Hospital) hosted pre-holiday Mocktail Celebrations. Hospital staff and visitors were offered a non-alcoholic drink, a How to Have a Safe and Sober Holiday Season recipe brochure, and pamphlets from the Office of Highway Safety on safe driving habits.

Project Outcome:

Over 1000 people were served Holiday Mocktails (see photos below). Local media were included in the Mocktail events and shared with communities the information on non-alcoholic beverages as an option to prevent drinking and driving.



Delaware Coalition for Injury Prevention Traumatic Brain and Spinal Cord Injury Prevention Team

Team Leader:

Virginia R. Corrigan, MSN, RN (Christiana Care Health System).

Member Agencies:

Brain Injury Association of Delaware; Christiana Care Health System; Division of Aging and Adults with Physical Disabilities; Division of Public Health Children with Special Health Care Needs; State Council for Persons with Disabilities Brain Injury Committee; University of Delaware Department of Health, Nutrition, and Exercise Sciences.

Key Objective:

Decrease the number of brain and spinal cord injuries suffered in Delaware and improve the quality of life for those who have suffered these injuries.

Key 2007 Project: ThinkFirst Delaware

Project Description:

A team of brain and spinal cord injured VIPs (Voices for Injury Prevention) and health care professionals who work together to educate young people through their schools that injury can be avoided if *you think first and use your mind to protect your body*.

Project Outcome:

This team reached more than 7,500 Delaware young people through 177 presentations. Pre- and post-test data indicate a significant increase in knowledge, a positive change in attitude toward safety-seeking behaviors versus risky behaviors and an increase in self-reported safety behaviors such as buckling up 100% of the time while in a car. Photo below depicts a ThinkFirst session in a Delaware school.



Delaware Coalition for Injury Prevention - Suicide Prevention Team

Team Leader: Elizabeth McCourt, J.D, Director of Crisis Services, ContactLifeline, Inc

Member Agencies: ContactLifeline, Inc., Mental Health Association of Delaware, National Alliance on Mental Illness (NAMI) of Delaware, New Directions Delaware.

Key Objectives:

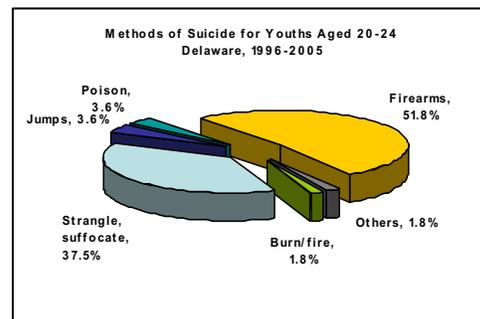
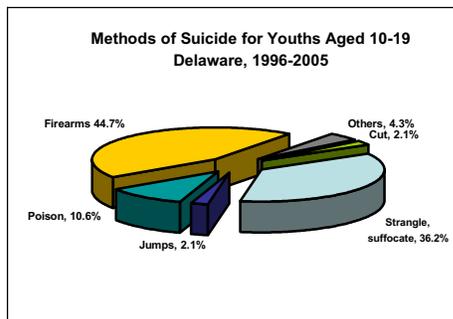
- (1) Promote suicide prevention as a preventable public health problem;
- (2) Engage in primary prevention through education and gate-keeper training.

Key 2007 Projects by Member Agencies:

1. Clergy Suicide Prevention: ContactLifeline provided suicide prevention materials to over 440 churches statewide. The materials included resource and training information.
2. ContactLifeline's Crisis Helpline received over 1500 calls in DE via the National Suicide Prevention Lifeline network and connected callers with intervention and counseling resources.
3. The Department of Corrections developed and implemented a suicide prevention policy supported by gate keeper training for all employees working in state correctional facilities.
4. New Directions Delaware (affiliated chapter of the Depression and Bi-Polar Support Alliance) held monthly support meetings and two Twelve Week Seminars offering support and education.
5. Mental Health Association provided over 20 different support groups weekly throughout the state for those experiencing depression, anxiety disorder, loss of a friend or loved one to suicide.
6. The Delaware State Suicide Prevention Coalition sponsored the second Delaware State Suicide Prevention Conference, with over 400 attendees.
7. The Warm Line is a free service offered by NAMI-DE that provides emotional support and resources for families dealing with serious brain disorders (mental illness).

Project Outcome:

Although the most recent data show a 21% decline in suicides in Delaware between 2001 and 2005, suicide remains a major concern. Males continue to represent approximately 80% of all suicides, and prevention of teen suicide is a national focus. Ten year data on Delaware teen suicides, shown below, documents firearms as the means of suicide in 44.7% of youth suicides and 51.8% of young adult suicides.



Source: Delaware Health Statistics Center, October 26, 2007 report

Delaware Coalition for Injury Prevention - Poisoning Prevention Team



The Poison Control Center

At the direction of the legislature, the Division of Public Health enters into an annual contract with The Poison Control Center at The Children's Hospital of Philadelphia to provide poison control services to the citizens of Delaware. The Poison Control Center is a non-profit public health organization, certified by the American Association of Poison Control Centers, with seven valuable missions:

- The provision of a free 24-hour daily public poisoning-assistance hotline to guide families in crisis
- The provision of regional toxic epidemic surveillance
- The provision of expert toxicological information to public health, governmental, and public news broadcast agencies
- The dissemination of community poisoning prevention education
- The provision of expert toxicology information to health care providers
- The provision of clinical toxicology education to health care professionals
- The participation in toxicological research

The federal Institute of Medicine has reported that poisoning is the 2nd leading cause of injury-related death within the United States, and that poison control services are cost-effective by saving \$7 for each \$1 invested. In 2006, the Poison Control Center received 8,180 calls from Delaware, and was able to manage nearly 80% of human exposures at home without burdening the state's other emergency medical systems. When advanced medical care was needed, the clinical toxicologists at the Center provided over 1,600 consultations to Delaware health care providers. The top five toxicants involved in these consultations were: analgesic drugs, sedative-hypnotic drugs, antidepressant drugs, cardiovascular drugs, and cleaning agents. In addition, in 2007 the Center had a critical role in identifying and monitoring a regional fentanyl-tainted heroin epidemic, and in responding to public concerns regarding the highly publicized lead contamination of toys.

The Poison Control Center offers a didactic schedule of professional education topics and provides poisoning prevention outreach to the community. The Center's poisoning prevention partners in Delaware include Safe Kids Delaware, Risk Watch Delaware, and the Delaware Coalition for Injury Prevention. The Poison Control Center promotes use of the National Poison Help Hotline number, 1-800-222-1222, which provides a toll-free connection to the appropriate regional Poison Control Center when dialed from anywhere in the United States. The photos below depict a typical situation dealt with by the Poison Control Center.



Delaware Coalition for Injury Prevention - Dog Bites Prevention Team

Team Leader:

Scott Vogel (Delaware SPCA).

Member Agencies:

Delaware SPCA and Division of Public Health

Key Objective:

Demonstrate the effectiveness of media exposure and educational outreach programs at increasing public awareness of dog bite prevention and responsible pet ownership by showing a 10% (population-adjusted) decrease in the number of dog bites reported to the Division of Public Health in 2009 versus 2004 baseline numbers.

Key 2007 Project: Humane Education – Teaching Justice, Kindness, and Good Will to all Living Things

Programs include:

- Animal Safety – Includes strategies for postal/service/repair personnel.
- Breaking the Cycle of Abuse - Defines and explores the connection between child abuse and animal abuse.
- Responsible Pet Care - Emphasis on housing, obedience and training.

Project Description:

In 2006, the Delaware SPCA educated 6,442 children and 1,402 adults in a variety of settings state-wide on how to prevent dog bites. The dog bite prevention programs are a segment of a larger humane education initiative, in which 20,000 people were educated in over 600 presentations by the Delaware SPCA. Over 500 humane education presentations are scheduled for 2008 in over 200 facilities statewide.

Project Outcome:

Data from the Division of Public Health demonstrates the need for continuing efforts to educate the public on prevention of animal bites. There was a 26% increase in the number of reported dog bites in Delaware between 2005 and 2006. In 2005, 1016 dog bites were reported compared with 1,283 reported in 2006. This represents a 25% increase in reported dog bites per 100,000 population. Data for 2007 is pending.



Delaware Coalition for Injury Prevention - Drowning Prevention Team

Team Leader:

Marie Renzi, MSN, RN (Emergency Medical Services for Children-Office of EMS/Division of Public Health, duPont Hospital for Children).

Member Agencies:

Beebe Medical Center; City of Milford Parks and Recreation; Delaware Risk Watch; Division of Parks and Recreation-Department of Natural Resources and Environmental Control; duPont Hospital for Children; Emergency Medical Services for Children-Office of EMS/Division of Public Health; Kent County Department of Planning Services-Division of Inspection and Enforcement; Office of Drinking Water-Division of Public Health; Sussex County EMS.

Key Objective: Prevent drowning injury and death in the State of Delaware.

Key 2007 Project: Beach and Pool Safety Education

Project Description:

Drowning prevention efforts over the past two years included public education activities by team member agencies.

- Beebe Medical Center and Sussex County EMS worked together to educate the public on the risks for injury. Warning signs were placed on the boardwalk and information about the rise in injuries was provided in multiple forums.
- The Kent County Division of Inspection and Enforcement created a Pool Safety DVD in collaboration with Kent County EMS. The DVD is given to the public when application is made for a new home swimming pool permit. The DVD was also shown in public injury prevention forums throughout the year.

Project Outcome:

The public education program at Beebe helped reduce the number of surf injuries, including spinal fractures from the surf. Beebe Medical Center identified 294 surf related injuries and 12 spinal fractures in the 2005 season from May through September. In the 2007 season there was a reduction in surf injuries to 175 with only two spinal fractures. Kent County gave approximately 400 Pool Safety DVDs to the public. There were two water-related injuries in Kent County in 2007, neither in a swimming pool.



Safe Kids Delaware

Safe Kids Delaware (previously the Delaware SAFE KIDS Coalition) is a non-profit organization, established in 1989, comprised of volunteers dedicated to reducing unintentional injury in children from birth to age 14. The Office of EMS in the Delaware Division of Public Health serves as the Lead Agency. An affiliate of Safe Kids Worldwide®, it is a state level coalition, led by an expert Board of Directors, with active chapters in each county.

Unintentional injury is the leading cause of death and disability to our most precious resource, our children. The mission of Safe Kids is to prevent accidental injury to children under 14 years of age. This is accomplished by raising awareness of current preventable injury issues in Delaware, educating individuals in injury prevention strategies, and motivating people to share the vision of an injury-free life for all children.

Initiatives

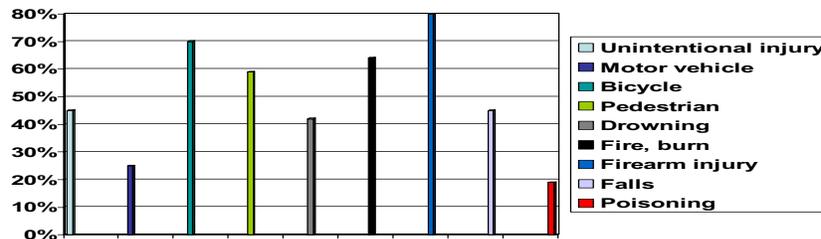
Since its inception in 1992, Safe Kids Delaware has provided a myriad of child safety educational events and activities for children and their parents as well as for professionals. Throughout the year, Safe Kids is showcased at many community health and safety fairs in Delaware. The program provides Child Passenger Safety Education and car seat inspections. Multiple fire and burn safety awareness events with smoke detector distribution are also held.

Highlights

Successful Safe Kids events held in 2007 included a Sussex County Safe Kids Day attended by 750 people, Safe Summer Day in Kent County, which was attended by 4,000 people; and, in cooperation with duPont Hospital for Children, New Castle County's Safe Kids Day, which provided child safety education to 200 participants. Each year since 2000, Safe Kids and Emergency Medical Services for Children (EMSC) have partnered to provide a statewide childhood injury prevention conference. In 2007 approximately 80 people attended the conference. Some other areas of focused education include gun safety, water safety, playground safety, poison and fall prevention.

Safe Kids Worldwide demonstrates in the following graph the significant declines in injury-related death rates since they were founded in 1988:

Decreases in Unintentional Injury-Related Death Rates in Children 14 Years & Younger in the United States
1987 to 2002, Safe Kids Worldwide data



EMERGENCY MEDICAL SERVICES FOR CHILDREN (EMSC)



Introduction

In 1997 Delaware was awarded a federal grant through the Maternal Child Health Bureau to improve Emergency Medical Services for Children (EMSC). In 2007 we are still dependent upon yearly federal grant funding for EMSC to meet children's needs in our ever-changing EMS System.

Pediatrics is well integrated into all aspects of the EMS and this is reflected all components of the EMS Continuum of Care. From the point of recognition of a pediatric emergency all the way around the Continuum to providing injury and illness prevention messages to children and families, child specific needs are part of the EMS System. With EMSC, Delaware is using the information system to better address pediatric EMS issues and reduce child mortality and morbidity sustained from severe illness and/or trauma. In 2007 we continued to identify Children with Special Healthcare Needs (CSHCN), through implementation of the Special Needs Alert Program (SNAP) and we are working towards improving EMSC by developing new pediatric standards for hospital emergency departments.

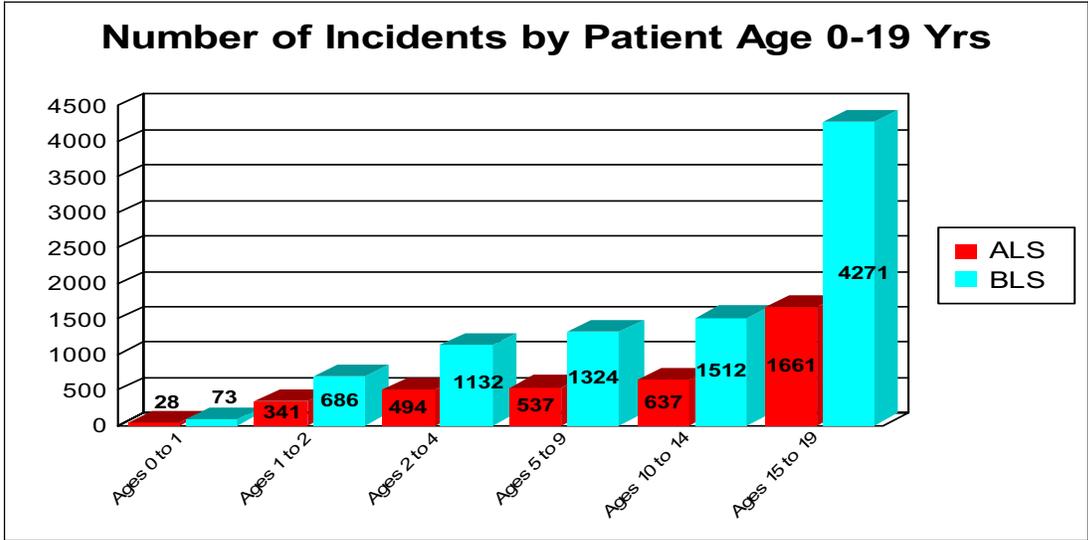
EMSC Highlights for the Year

February 28, 2008 will mark the close of the first year of a three-year grant cycle for EMSC. Accomplishments in 2007 include:

- The Special Needs Alert Program (SNAP) for children with special health care needs focused on providing education to local fire departments and now there are 83 families who have enrolled children in the program statewide. This is a 34% increase over the number of families in 2006.
- In partnership with Public Health Preparedness \$30,000.00 in funding was encumbered to support the SNAP program.
- The EMSC Coalition changed its name to the formal EMSC Advisory Committee in the Division of Public Health and they evaluated National Performance Measure requirements for EMSC to maintain funding.
- The EMSC Advisory Committee initiated development of a statewide system to recognize hospital emergency departments prepared for pediatric emergencies.

OEMS uses the EDIN system to monitor the number of pediatric calls, where the calls are occurring in Delaware, the most frequent primary impressions, and which procedures ALS and BLS providers most frequently perform on children.

Total Number of Pediatric Reports (Ages 0-19) According to Patient Age



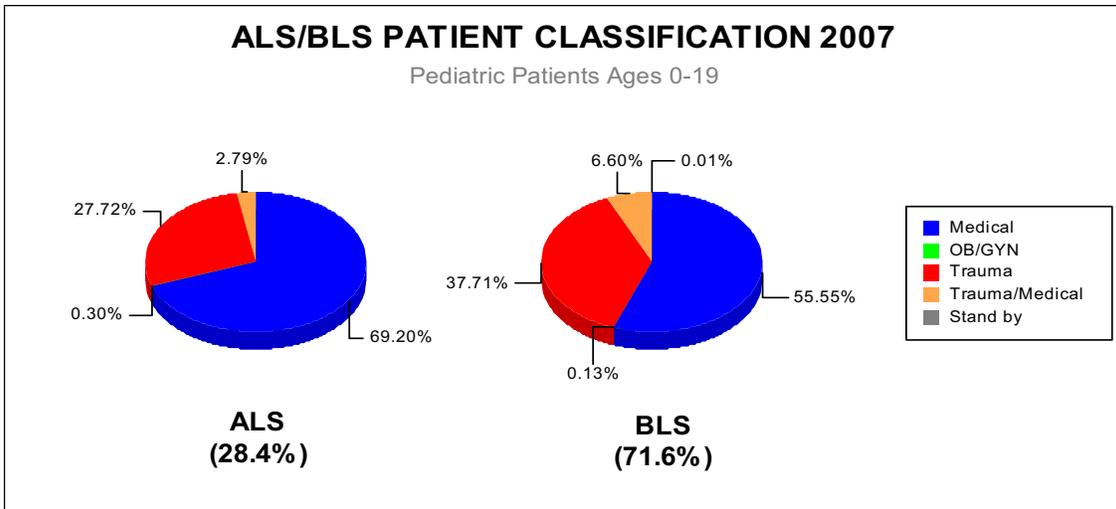
Please note that adding ALS and BLS numbers in each age group will lead to inaccurate totals. Adding the two numbers may count patients twice.

Above in graph EMSC-1 the highest number of incidents for BLS providers is in the 15-19 year old age group. Upon further investigation 21% of those BLS runs are due to motor vehicle crashes, while 27% of the ALS runs in the 15-19 year old group are due to motor vehicle crashes.

The number of pediatric emergency calls in 2007 remained similar to the number of calls in 2006. The only significant change noted is a 6% increase in the number of ALS calls in the 15-19 year old age group.

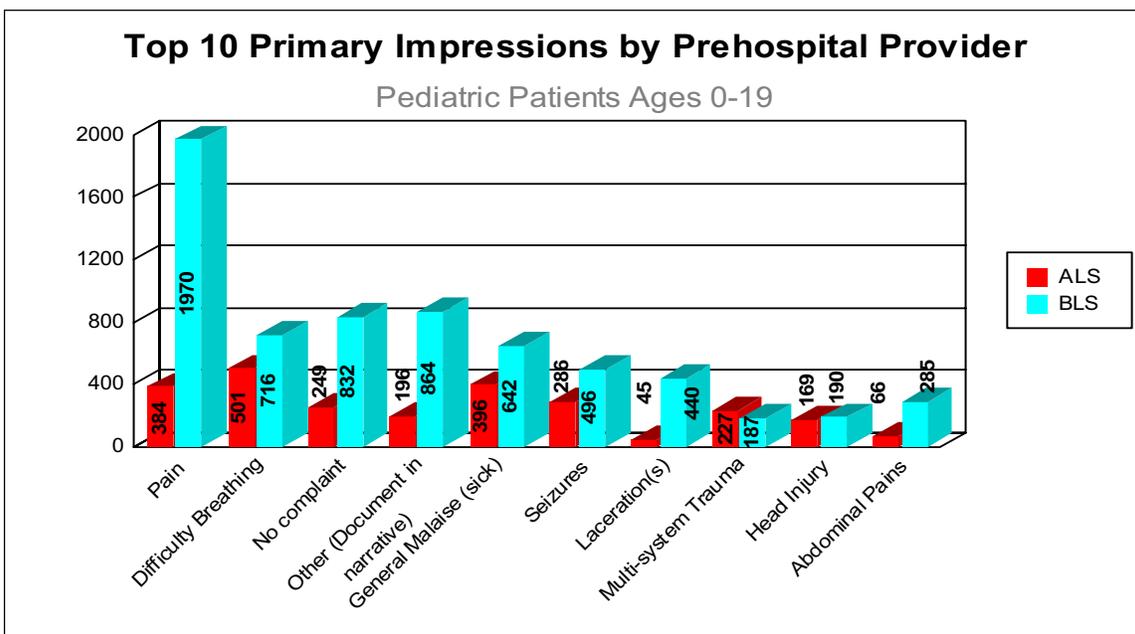
EDIN information also reveals that ambulance services with the highest volumes of calls also see the highest number of children. For the BLS agencies - First State Quality Transport, Aetna Fire Company, and Christiana Fire Company saw the highest volumes of children in the state respectively.

For the ALS agencies; New Castle County saw 1,871 (1,840 in 2005), Sussex saw 930 (up from 865 in 2005) and Kent saw 610 (down from 683 in 2005) pediatric patients during 2006. This is an 8% increase in pediatric calls for Sussex County EMS. Information on where pediatric calls are located by fire district can be used to identify local training needs.

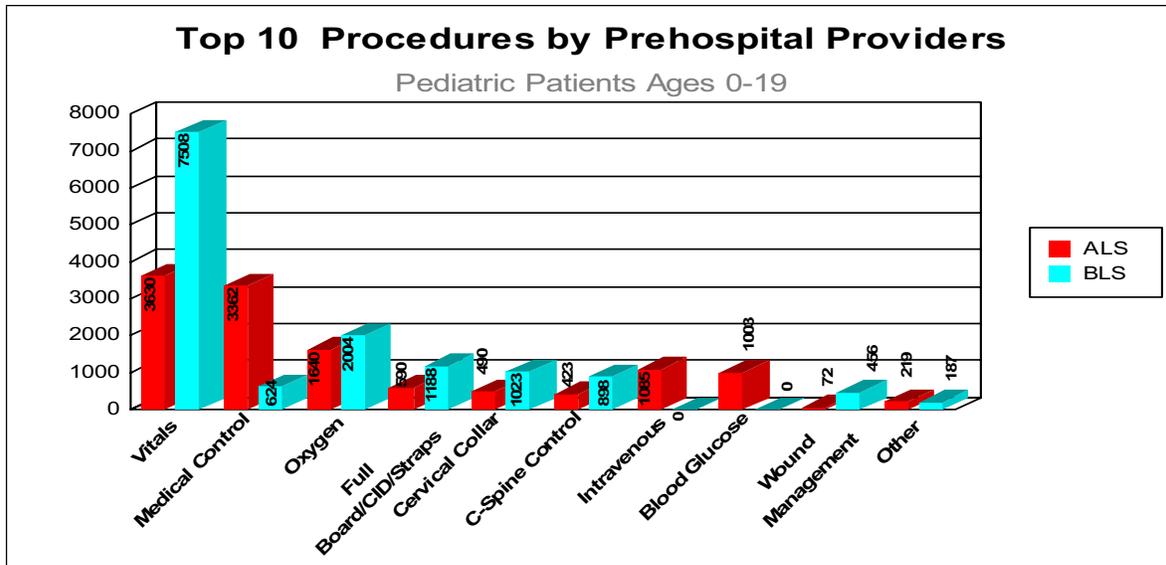


* Please note this includes Dead on Paramedic Arrival (DOPA), Refusal, Transport and Transfers of Service calls.

The majority of pediatric ALS emergency calls are for medical reasons (69%). A little over half of all pediatric BLS calls are medical in nature (55%). Trauma calls made up 28% of the ALS pediatric calls and 38% of the BLS trauma calls.



“Pain” remains the top primary impression reported by BLS providers. ALS providers cite “difficulty breathing” as their top primary impression for children. This fits with how children are anatomically different from adults with small airways. It is also noted that there is an increasing rate of childhood asthma in Delaware. The “no complaint” and “other” categories reflect a significant number of calls for children. This high number of calls for these two impressions warrants further investigation.



As in previous years the most frequent procedure performed for pediatric patients in 2007 by ALS and BLS is assessment of vital signs. It is noted that BLS agencies infrequently contact medical control for guidance in the field. Of the top ten procedures performed in the field three of the procedures are related to spinal stabilization and OEMS will look at this field to assess if it can be consolidated into one procedure. ALS and BLS both frequently administer oxygen to children. ALS providers also frequently start intravenous lines and monitor blood glucose in children.

Improvements/Initiatives:

The goal of EMSC is reduce death and disability to children by improving pediatric emergency care. Highlighted EMSC objectives for this grant cycle from March of 2007 through February 2010 are to:

1. Develop and implement a process to collect and report baseline data for the federal EMSC Performance Measures.
2. Ensure the operational capacity to provide pediatric emergency care in Delaware by:
 - A. Working with the EMSC Emergency Department Standards Subcommittee to develop pediatric emergency care hospital recognition by March of 2008.
 - B. Working with the eight acute care hospitals in Delaware to assure that pediatric transfer guidelines and agreements are in place.
3. Develop a plan for pediatric emergency care quality improvement using the EMS data system by March of 2010. This objective will be part of the Emergency Department Standards Subcommittee work.

Summary

EMSC has many notable accomplishments over the last ten years. The year 2007, marked the end of the third cycle of federal funding. Despite ten years of federal funding, the program remains unstable as long as it depends upon federal funding. Although OEMS and DEMSOC are taking steps towards permanence, there is still a great deal of work to be done to assure children's needs are addressed in all aspects of the EMS system.



CARDIOVASCULAR CARE

Cardiovascular Disease refers to a variety of diseases and conditions effecting the heart and blood vessels. The two most common cardiovascular diseases in Delaware are heart disease and stroke. Since most cases of cardiovascular disease are preventable, we can decrease the number of patients with cardiovascular issues through public education and awareness. The cardiovascular care programs within Delaware emphasize this type of education and awareness to help decrease risk factors for cardiovascular disease, which helps to create a healthier life-style for the public.

In 2007, Delaware Paramedics treated over 5400 patients with cardiovascular related complaints. With the increasing elderly population combined with the diverse settings within our state, this number is on the rise. Many hospitals within the state are expanding their cardiovascular capabilities, and EMS resources must be integrated with the hospitals to ensure seamless care of patients as they are brought from the field to the hospital.

The Paramedic statewide standard treatment protocols address the appropriate transportation and treatment of patients who present with a cardiovascular complaint. Currently any patient who presents with signs and symptoms of Acute Myocardial Infarction (AMI) are to have a 12-lead EKG performed. Any patient who has an EKG that is suspicious of an AMI is transported directly to an appropriate hospital with cardiovascular capabilities. In 2006, 430 patients were diagnosed with an AMI after a 12-lead EKG was performed and these patients were transported directly to hospitals with this specialized cardiovascular care.

Cardiac Alert/Cardiac Code, is a strategy to identify the AMI in the field, notify the hospital immediately and then transport the patient to a specialized care hospital that utilizes cardiac catheterization for the treatment of AMI. This systematic response is a goal for our system. Studies have shown that this strategy may reduce the diagnostic time to about 30 minutes. A recent study conducted by Christiana Care Health System, the largest hospital system in Delaware, evaluated the effect of a systematic response to AMI and found that the patients reviewed had a lower mortality rate as well as a shorter hospital stay when identification and treatment followed a systematic response model. This rapid treatment has a tremendously beneficial effect on the patient because during a heart attack “time is muscle”.

Similar to a heart attack, a stroke also requires rapid appropriate care and transportation. Studies on acute stroke management have shown that there is a narrow therapeutic window that mandates rapid identification, transport, diagnosis, and treatment; any delay undermines the system and the quality of care available to the acute stroke patient.

EMS plays an important role in the management of a stroke patient. EMTs and paramedics are responsible for transport decisions regarding level of transport, speed of transport, and destination of transport. There is strong evidence to support improved outcomes of stroke patients who are managed in established stroke centers.

Automatic Defibrillator and CardioPulmonary Resuscitation Program (AED/CPR)

The Delaware Office of Emergency Medical Services (OEMS) is charged with "coordinating a statewide effort to promote and implement widespread use of semi-automatic external defibrillators and cardio-pulmonary resuscitation..." (DelCode Title 16, Chap 97).



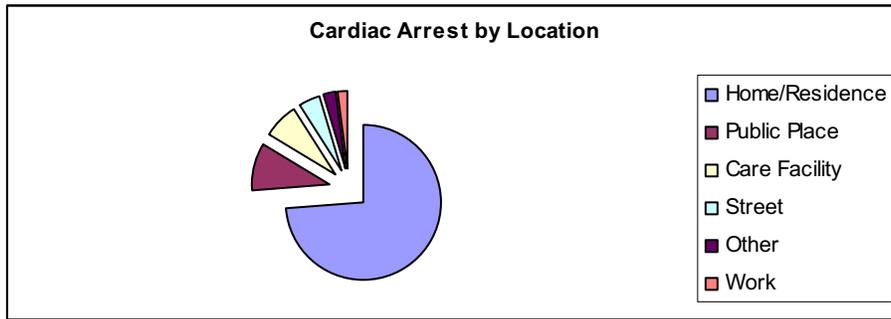
An essential focus of any EMS system is its ability to effectively treat cardiac arrest patients. A significant enhancement to our EMS system has been the expansion of our Automatic External Defibrillation (AED) program. To support the 1999, goal of defibrillation within 6 minutes of a cardiac arrest, the use of automatic external defibrillators has been extended to law enforcement vehicles in all jurisdictions in the state. Increased AED deployment and the accompanying training increase the chances for resuscitation of cardiac arrest victims. Data from 2006 showed a significant increase in Return of Spontaneous Circulation in cardiac arrest patients (32% in 2006 compared to 19% reported in 2002). These statistics are among the best in the nation, and show the significant role that the AED program has played in Delaware.

In 1999, Delaware implemented, with funding and support from the Health Advisory Committee, the Public Access Defibrillation Program (First State, First Shock). This program was charged with:

- Decreasing death and disability in Delaware by decreasing the time to defibrillation in cardiac arrest patients.
- Supporting heart health promotions and early recognition of heart attack activities.
- Increasing the accessibility to Automatic External Defibrillators (AED) within our state.
- Increasing the number of Delawareans trained in Cardiopulmonary Resuscitation (CPR) and AED usage.
- Tracking outcomes to guide future efforts.

Since its inception, the program has grown exponentially placing over 1,200 AEDs in-service and training more than 4,000 people in Cardiopulmonary resuscitation (CPR) and the use of an AED. The targeted groups for public access defibrillation include sites such as schools, worksites, food establishments, communities, first response programs and health care settings.

	Number of Cardiac Arrests	Patients Pronounced Dead by Paramedics	Patients Transported to Hospital	Patients that Experienced a Return of Spontaneous Circulation
2004	780	170	610	158(26%)
2005	752	185	585	170 (29%)
2006	756	166	590	190 (32%)
2007	756	151	605	215 (36%)



One major challenge for the program is the sale of over-the-counter AEDs that are FDA approved. This type of AED does not require a doctor’s prescription and the public can purchase these units without consideration of the state’s rules and regulations. This type of purchase makes it difficult to maintain an accurate database of all AEDs placed in-service throughout the state.

By expanding on the existing CPR/AED program within the OEMS, this initiative will provide a platform of data and research useful in prevention activities, as well as treatment and care. Goals of this initiative include:

- Working with EMS providers and other agencies to address specific issues concerning the prevention and prehospital treatment of cardiac disease and stroke.
- Organize statewide EMS efforts in the areas of prevention and public education, public access defibrillation and prehospital treatment of cardiac/stroke patients in order to measurably reduce mortality and morbidity associated with these disease processes.

Statewide integration and development of a cardiovascular system is a goal that will make Delaware a leader in the treatment of cardiovascular complaints. This type of system is expected to “decrease death and disability, improve quality of life, and maximize patient outcomes by delivering evidence-based effective, efficient and safe care from pre-hospital management through transport in a timely fashion to the most appropriate care facility.”

EMS Programs



DOMESTIC PREPAREDNESS

Domestic preparedness remains a key topic for EMS at the national level. In 2007, EMS agencies still reported a general lack of training and equipment as the nation boosts its preparedness capabilities, and EMS improved its visibility in federal planning and policy development in an effort to correct this situation. Preparation for response during pandemic flu events was at the forefront in 2006 and 2007, and EMS agencies throughout the country became involved with the planning and training at the state and local level. In the aftermath of Hurricane Katrina in 2005, discussion about the use of the Emergency Management Assistance Compact (EMAC) to allocate EMS assets was another issue of concern, since the process did not go well during Katrina and its aftermath, and assets in several states were deployed without state knowledge.

Delaware remains ahead of most states in its preparedness planning and efforts and the use of EMAC for Delaware assets worked well in recent times of need.

Toxmedic Protocols

These protocols were developed to delineate the requirements and responsibilities of various agencies when providers or patients are exposed to hazardous substances. Patients who have been exposed to chemicals and weapons of mass destruction often require procedures, medication and treatments that are not in the scope of a normal field paramedic. Participation in the Toxmedic program by Delaware paramedic agencies is elective. Each of the state's ALS agencies continues to participate.

Each paramedic identified as a "Toxmedic" has successfully completed the Advanced Hazmat Life Support Course (AHLS). AHLS program is a 2-day, 16 hour course sponsored by the Division of Public Health.

The AHLS program focuses on medical management of people exposed to hazardous materials, including nuclear, biological and chemical terrorism. Participants are trained to provide rapid assessment of hazmat patients, recognize toxic syndromes, provide medical management for hazmat patients, apply the poisoning treatment paradigm and administer specific antidotes.

This year the system medical directors researched the efficacy of hydroxocobalamin (Cyanokit). This medication, widely used in Europe to treat victims of smoke inhalation who also incur cyanide poisoning, reportedly treats this exposure without many of the side effects of current treatment. A protocol for the use of hydroxocobalamin was developed and this antidote was approved for addition to the state Toxmedic protocols.

A goal for the future is to work with Division of Public Health to offer this program at least annually to our paramedics.

Nerve Agent Antidote Protocols for BLS and Public Safety

The protocol was designed to outline the process by which BLS and Public Safety agencies train, acquire, maintain, use and discard MARK I nerve agent antidote kits. When responding to an act of chemical terrorism or a hazardous materials incident, emergency responders may be exposed to harmful, even fatal doses of nerve agents. In these situations, responders may need to administer life saving medications to themselves or fellow responders in a rapid time frame. The decision for an agency to participate in the MARK I program is voluntary; however, those agencies wishing to participate must comply with the Nerve Agent Antidote protocol outlining training and quality assurance requirements.

By the end of 2007, Meridian Medical Technologies, the manufacturer of the Mark I Nerve Agent Antidote kit, will cease producing this unit. They will then begin to phase in the DuoDote™. The DuoDote™ is a single autoinjector that administers both nerve agent antidotes through a single device.

In 2007, the Office of Emergency Medical Services continued working with the Homeland Security Terrorism Preparedness Working Group and Public Health Preparedness to obtain DuoDote™ replacements for those kits that have or are going to expire. Once the kits are obtained, there will be a push to encourage new services to participate in the Nerve Agent Antidote program.

Trauma

The majority of potential terrorist events involve some sort of blast or traumatic injury inflicted upon the victims. Emphasis on our statewide trauma system and the EMS care of patients injured by blast or trauma has become more important than ever. EMS agencies throughout the state continue working together to develop plans that ensure trauma patients in mass casualty situations get to proper care as quickly as possible.

The system medical directors have approved the use of some hemostatic agents by Delaware responders. These agents provide a mechanism for the control of bleeding caused by major traumatic injuries such as blast trauma.

Technical Assistance

In 2007, the Office of Emergency Medical Services working with the Office of Public Health Preparedness and the Delaware State Fire School contracted a senior paramedic to provide EMS agencies with technical assistance on domestic preparedness issues. This position has begun a number of projects to assess current preparedness efforts and plan for future preparedness initiatives.

Preparedness Needs Assessment

In 2007, a survey was distributed to all Delaware Emergency Medical Service Agencies and Fire Departments. This survey assessed preparedness efforts done at the local level. It looked at planning, staffing, equipment and training. The results of this survey began a more in-depth project developing a state resource list. By contacting various agencies and arranging site visits, a database is being developed listing resources available state-wide in the event of a disaster. These resources include things like mass casualty equipment, portable generators, air compressors to fill self-contained breathing apparatus, portable lighting, technical rescue equipment, tents/shelters and hazardous materials equipment.

The results of this inventory will be developed into a resource listing that meets federal criteria related to resource typing under NIMS.

The future goal is to continue this assessment to identify other agency and responder needs. One of the first items to evaluate will be training – what is available, what is needed, and where can training sources be found. We will then continue to work with the Delaware State Fire School to ensure that this type of training is available to state responders.

In-State Stockpile

The Office of Emergency Medical Services participated in a table-top exercise evaluating the use of the state CHEMPACK system. This exercise simulating a release of a possible nerve agent in a large venue, was conducted by Public Health Preparedness. Many state and local agencies participated and interacted to evaluate preparedness and response initiatives related to this type of incident. From this exercise, many items were identified for future planning and training on the use of the valuable CHEMPACK resource.

Response to Chlorine Emergencies

The Office of Emergency Medical Services and Delaware State Fire School worked together to obtain an extremely valuable training DVD – Chlorine Emergencies, An Overview for First Responders. This DVD was produced by the Chlorine Institute, Inc. Chlorine is a chemical found in communities throughout the state. Releases can pose threats not only to the community but to responders as well. This DVD reviews all aspects of first response to an incident involving a release of chlorine with a major focus on safety. The Office of EMS was able to obtain copies of this program for every fire department and EMS agency in the state. The program was approved for continuing education hours for Delaware EMS responders who view the program, complete a short quiz and return the answer sheet to the office of EMS.

Delaware Emergency Management Agency Training

Over the past year, the Delaware Emergency Management Agency (DEMA) has brought a significant number of training programs to Delaware emergency responders. Many of these courses address issues related to emergency preparedness and response to terrorism. In 2007, providers received training on such topics as WMD Crime Scene Management, Suicide/Terrorist Bombings, Radiation/Nuclear Incident Response and Agricultural Terrorism. Members of the Office of EMS attended many of these programs including a train-the-trainer course on WMD Radiation/Nuclear Awareness.

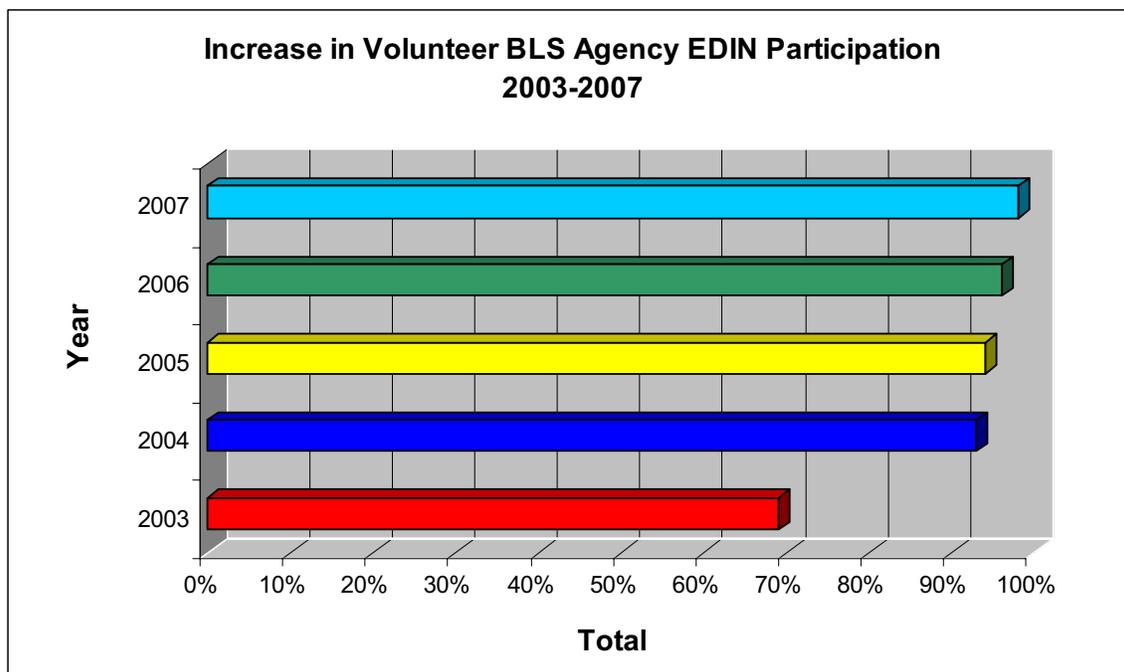
DEMA also offered the Homeland Security Exercise and Evaluation Program (HSEEP) Mobile Training class. This course developed a cadre of evaluators who can be used for future state and local level disaster training exercises. Lessons learned through exercises can be used to plan for future preparedness initiatives and training efforts. OEMS was pleased to be able to participate in this training program and be involved as an active planner and evaluator at future exercises.

A significant challenge has always been how to bring the various federally offered courses out to the emergency responders, many of who are volunteers with limited time available. It is often very difficult to get students into a weekday class. One way DEMA has worked to address this is through offering many of these programs as a train-the-trainer class. Delaware has begun to develop rosters of instructors qualified to teach these awareness level programs. Hopefully, this will allow state fire and EMS agencies to conduct these extremely valuable training programs to their members in an efficient and effective manner.



EMERGENCY DATA INFORMATION NETWORK

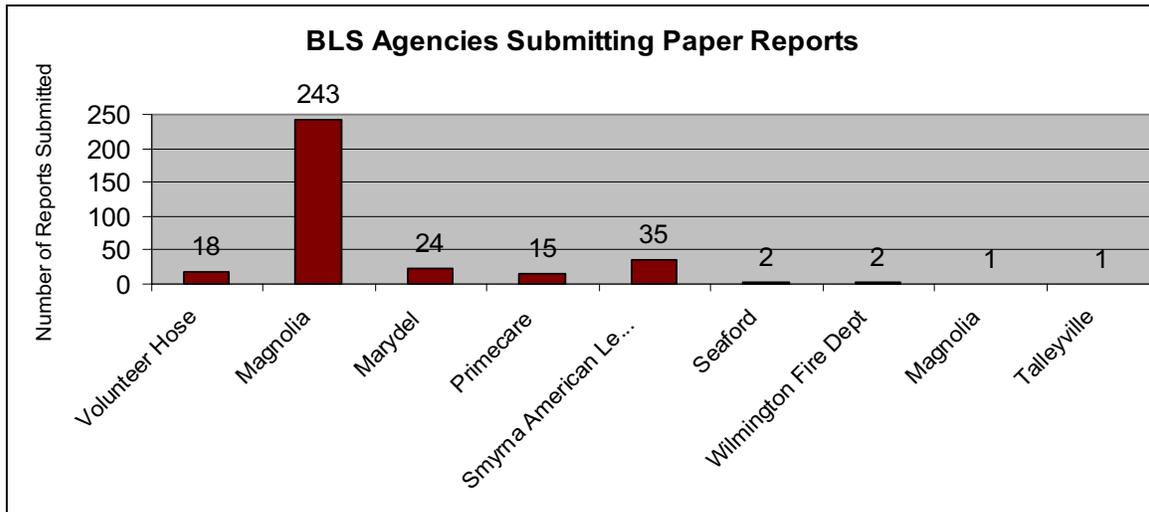
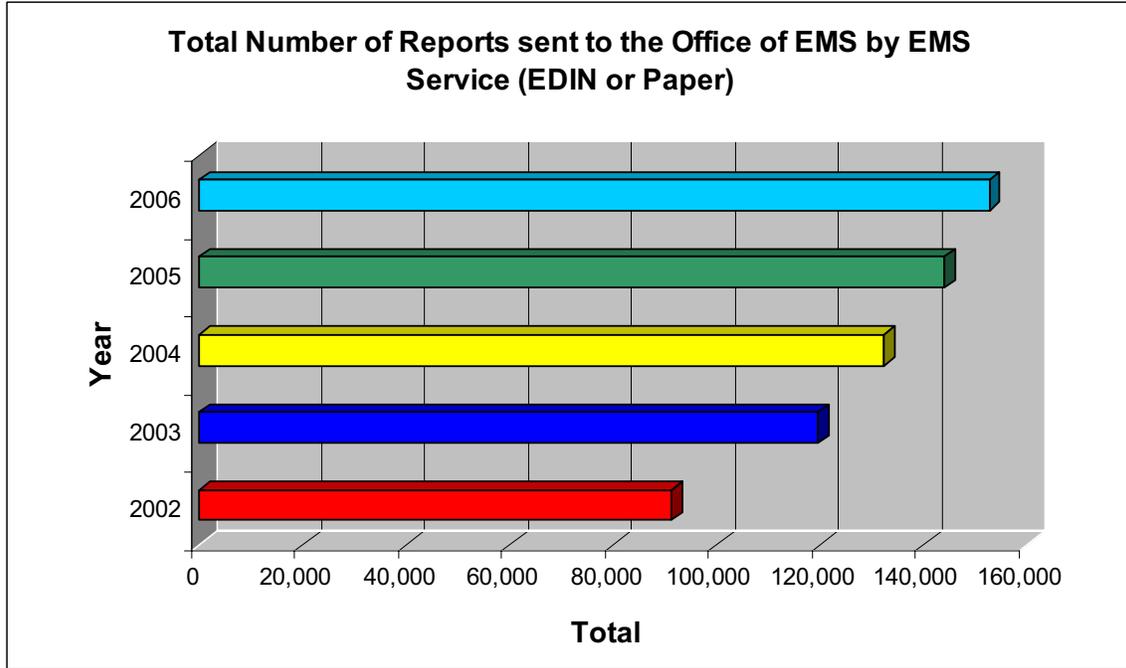
The EMS Data Information Network (EDIN) system collects EMS report data electronically on a real-time basis and provides administrators with a powerful resource management and research tool. The EDIN system collects, at minimum, over 130 data points covering the demographic assessment and treatment phases of an EMS incident. The EDIN system has been online since January 1, 2000. Since its inception, over 700,000 records have been entered into the system. Currently, all of the Advanced Life Support agencies in Delaware are using the system on a full-time basis. Of the 58 volunteer Basic Life Support agencies, almost all are using the system on either a full time or partial basis. This allows DEMSOC a continued review of operational and clinical data for the ALS and BLS providers.



UPDATE ON EDIN SYSTEM

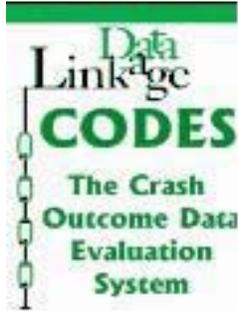
Like any software application, EDIN needs to be continually modified and improved to meet the needs of Delaware's evolving EMS system. There are three immediate needs for the system. First is to finish integrating the 911 centers into EDIN. The second is to enable EDIN to email a Patient care report directly to the hospital in the event that the report was created from a different location. Third is the creation a revised quality management system. All efforts will stimulate improvements in efficiency and information output for the EMS system. Also, with sufficient programmatic support, Delaware is hoping to create a web-based version of EDIN. This will vastly improve the accessibility of EDIN to providers throughout the state. Once a web-based version is developed, other useful applications can be created to work with EDIN, like a Palm® or Windows CE® version. Finally, Delaware is looking forward to integrating into national

data systems, such as the NEMSIS system (National EMS Information System). The ability to share and benchmark data with other states will be vital for continued growth and improvement of EMS care in the years to come.



Although improvements have been made to EDIN there are still some BLS agencies that continue to use paper reporting.

CRASH OUTCOME DATA EVALUATION SYSTEM (CODES)



<http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/CODES/808544.pdf>

In 1999, the National Highway and Traffic Safety Administration (NHTSA) awarded the Division of Public Health's Office of Emergency Medical Services (OEMS) a grant to develop a Crash Outcome Data Evaluation System (CODES) in Delaware. The CODES Project is a collaborative effort between several state agencies including the State Police, Office of Emergency Medical Service, Health Statistics Center and Office of Highway Safety. Many types of data (e.g., demographic, injury severity, hospital charge, etc.) are collected from these agencies and are linked, analyzed and publicized so that state agencies, policymakers and the public can better understand the causes and impacts of motor vehicle crashes. With this information, the Division of Public Health can create and prescribe prevention programs with demonstrated potential for improved outcomes.

Based on the analysis of Crash Outcome Data Evaluation System (CODES) linked data, the following is the summary of traffic overview in crashes. From 1999 to 2004, vehicle drivers accounted for 61% of traffic fatalities and injuries. Passengers of vehicle accounted for 33% of traffic fatalities and injures. The remaining 6% were pedestrians, pedalcyclists, and motorcyclists. Although more females were reported to be injured (54%) than males (46%) in crashes, more males (65%) were killed than females (35%). The fatality rate per 100,000 population was 16.86 in 2004, a decrease of 5% from the 2003 rate of 17.74. The injury rate per 100,000 population decreased from 1087 to 964 from 2003 to 2004. The traffic related fatality and injury rates varied by age in Delaware, with the peak at 15-24 years old (Figure 3 and 4).

Figure 1: Traffic Related Death Rates, United States and Delaware, 1999 to 2004

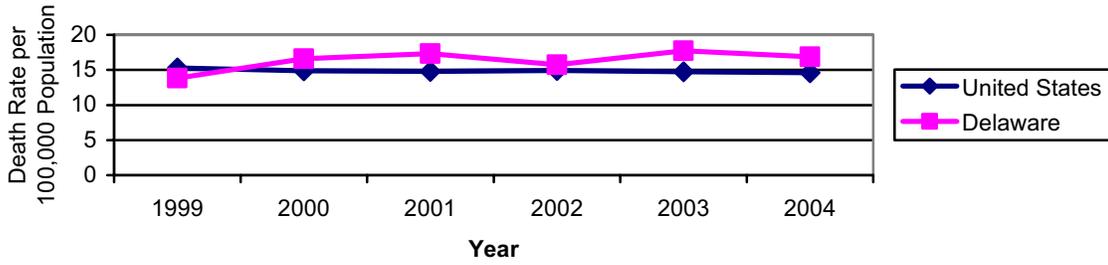
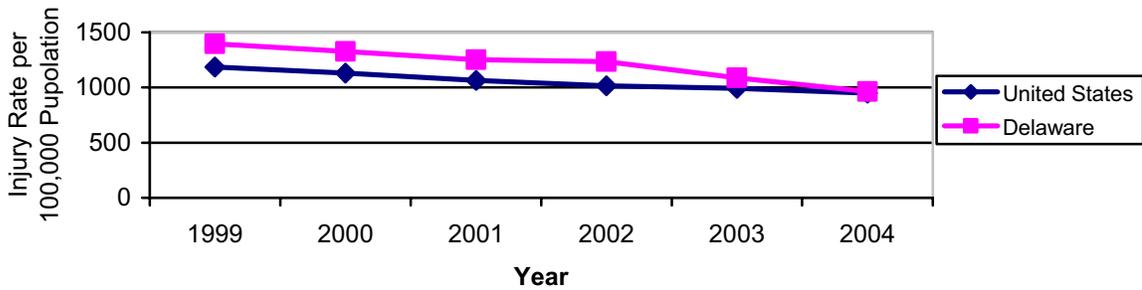
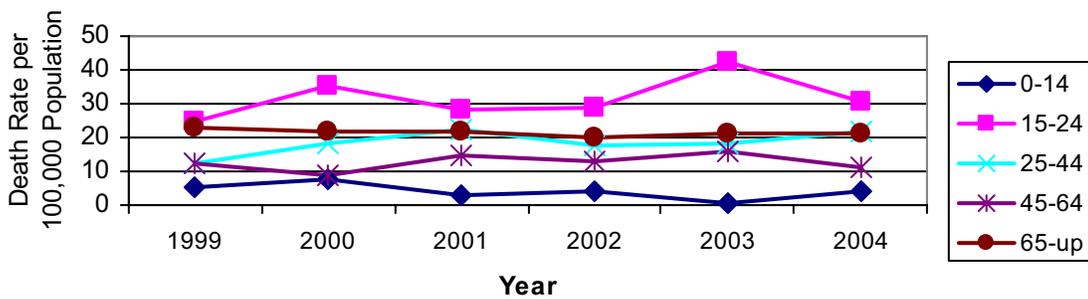


Figure 2: Traffic Related Injury Rates, United States and Delaware, 1999 to 2004



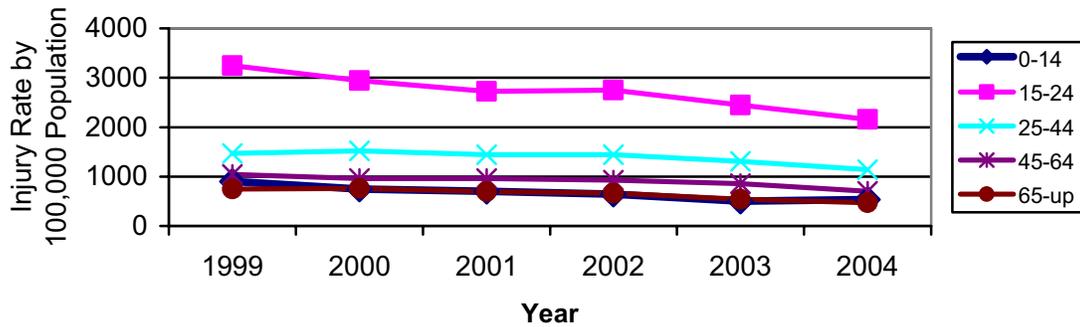
Data Source: 2003 Traffic Safety Facts, National Center for Statistics and Analysis, National Highway Traffic Safety Administration, Delaware Vital Statistics Center, and Delaware Crash Outcome Data Evaluation System (CODES) program

Figure 3: Traffic Related Death Rates in Delaware by Age Group, 1999 to 2004



Data Source: Delaware Vital Statistics Center, and Delaware Crash Outcome Data Evaluation System (CODES) program

Figure 4: Traffic Related Injury Rates in Delaware by Age Group, 1999 to 2004



Data Source: Delaware Vital Statistics Center, and Delaware Crash Outcome Data Evaluation System (CODES) program



Support of the highway safety legislations is one of the applications for CODES linked data. Delaware CODES linked data system has developed the fact sheets to measure the effectiveness of Graduated Driver’s License laws and compared the crash / hospital outcome on the factors of seatbelt, speeding, and drinking between 16- and 17-year-old drivers with and without passengers. In June 2006, the State’s General Assembly passed legislation that strengthened Delaware graduated Driver’s License laws, including limiting passengers to one and increasing the age to 16 years before a teenager can apply for a driver license. The CODES program continues linking data in an effort to prevent and reduce motor vehicle deaths and injuries.

INFECTIOUS DISEASE CONTROL

Infection control refers to policies and procedures used to minimize the risk of spreading infections. The purpose of infection control is to reduce the occurrence of infectious diseases. These diseases are usually caused by bacteria or viruses and can be spread by human to human contact, animal to human contact, human contact with an infected surface, airborne transmission through tiny droplets of infectious agents suspended in the air, and, finally, by such common vehicles as food or water. Hospitals and pre-hospital medical settings demonstrate higher levels of precaution around infectious disease management predominantly due to the higher risk of spreading infectious diseases in these environments.

The infectious control program for Delaware includes law enforcement and , emergency medical care providers may request notification concerning an exposure to an infectious disease. Every emergency medical care agency (volunteer or paid) shall designate an Infectious Control Officer who will handle the infectious control process. Delaware is one of the few states that conduct mandatory source testing.

Since 1993, Delaware has reviewed 53 potential exposures from the pre-hospital setting and in 2007 reviewed 14. The Table below represents the type of exposures reported in 2007.

<i>Type of Exposure for 2007</i>	<i>Reports</i>
Needle Sticks or puncture wound from contaminated object	1
Direct Mouth to Mouth	0
Patient blood or body fluid came in contact with Providers skin	3
Extensive Contact with Pt. blood or body fluid	3
Splash of Pt. blood or Body Fluid into eyes, nose, or mouth of the provider	2
Airborne Pathogen discovered by the Receiving Medical Facility	5

Education and training is required by all agencies yearly to update pre-hospital personnel on infectious disease policies and universal precautions. Increased emphasis is being placed on the educational process to reinforce these issues with pre-hospital medical providers as well as industrial and police agencies. During this training, agencies are given an overview of common diseases that have a potential for transmission.

Due to constant changes in our lifestyles and environments, new diseases are constantly appearing that people are susceptible to, making protection from the threat of infectious disease urgent. The required equipment lists for ambulances in Delaware now have increased mandatory personnel protective equipment such as HEPA masks. Alternative products are also being reviewed to help pre-hospital personnel deal with the increased

demand of infectious disease protection, such as ways to safely sanitize equipment and ambulances. Delaware also offers assistance to pre-hospital providers to get immunizations against Hepatitis, flu, tetanus and tuberculin skin testing to detect exposure to tuberculosis.

The need for an effective infection control program has always been an essential and integral part of the pre-hospital practice in Delaware, because there is both the risk of health care providers acquiring infections themselves, and of them passing infections on to patients. Preventive and Proactive measures offer the best protection for individual and organizations who may be at an elevated exposure to these infectious diseases.







reportaje report

Excelencia en el Servicio

Excellence in Service

El 21 de mayo, en la nueva sede de la policía del condado de New Castle se llevó a cabo la ceremonia de graduación de nueve flamantes paramédicos, entre los que figura el primer hispano en los últimos 10 años: Jorge Humberto Vásquez.

On May 21st, the graduation ceremony of nine brand new paramedics took place at the new headquarters of the New Castle County Police Department. Among them the first Hispanic in last ten years: Jorge Humberto Vásquez

| Gabriel Pilonieta Blanco

| Gabriel Pilonieta Blanco

Son varias las coincidencias que marcan significativamente la jura de Jorge H. Vásquez como el primer paramédico graduado en el Condado de New Castle, y una de ellas es que el siguiente fin de semana se conmemora Memorial Day, durante el cual la nación rinde tributo a aquellos que han dado sus vidas por su país, y en este caso un grupo de hombres y mujeres se comprometen a dedicar su vida a salvar la vida de otros seres humanos; por otra parte es uno de los primeros actos protocolares que se llevan a cabo en la nueva sede de la policía del Condado, y para completar, en menos de una semana Jorge además se juramentará como ciudadano de los Estados Unidos de América.

Nacido en Medellín, Colombia, a sus 34 años Jorge es considerado la alegría de su clase, un hombre que nunca deja de sonreír y sus compañeros lo consideran un elemento positivo en el conjunto del grupo.

«Personalmente siento que es un gran logro para mí, mi familia y mi comunidad ser el primer latino, ya que aunque hay varios paramédicos que hablan muy bien el español, culturalmente no es lo mismo. Me gusta estar al servicio de mi comunidad en su propio idioma sabiendo que los voy a entender bien» dijo por supuesto con una amplia sonrisa el recién graduado paramédico.

Hace algún tiempo Vásquez fue testigo de un accidente en el que estuvieron involucrados varios hispanos, y al ver sus caras de frustración al no poder hablar inglés ninguno de ellos, se puso a pensar, «¿qué tal que fuera mi mamá o alguno de mi familia que no pueden hablar inglés?» Y ahí se dijo a sí mismo, «¡esto es lo que yo tengo que hacer!»

Durante la celebración Jorge estuvo acompañado por Gloria Macías, su mamá, Amanda, su esposa y sus hermanos Juan, Paula, y Andrés.

Por su parte el Ejecutivo del Condado, Señor Chris Coons expresó su satisfacción con esta clase por ser, según dijo, «la más diversa que hemos tenido en los paramédicos y a la vez una que ha demostrado grandes cualidades académicas y un gran compromiso de servicio público. La variedad de antecedentes nos garantizan que servirán a nuestra comunidad muy, muy bien», dijo para El Tiempo Hispano.

Ojalá el ejemplo de Jorge Humberto cunda en nuestra comunidad tan necesitada de jóvenes dedicados al servicio ya que, tal y como se dijo en el emotivo acto de graduación, en un momento dado la actuación de un paramédico puede significar la diferencia entre la vida y la muerte, así de sencillo.



Several coincidences significantly marked Jorge H. Vásquez's oath as certified paramedic in New Castle County. One was that next week is Memorial Day, which is when the nation renders tribute to those that gave their lives for their country, and in this case a group of men and women are committed to dedicating their lives to save the lives of other human beings; on the other hand it is one of the first official events taking place in the new headquarters of the County's Police, and finally, in less than a week Jorge will be sworn in as a citizen of the United States.

Born in Medellín, Colombia, at age 34 Jorge is considered the ring leader of his class, a man who never stops smiling and considered by his peers as a positive element of the group.

«Personally I feel it is an accomplishment for myself, my family and my community to be the first Latino, since, even though there are many paramedics that speak very good Spanish, culturally it is not the same. I like to serve my community in their own language knowing that I am going to understand them well» said this newly graduated paramedic with a wide smile, of course.

Some time ago Vásquez witnessed an accident in which several Hispanics were involved. When he saw their faces full of frustration because none of them could speak English he thought to himself, «What if that was my mom or someone in my family that cannot speak English? This is what I need to do!»

During the celebration Jorge was in the company of his mother, Gloria Macías, his wife Amanda, and his siblings, Juan, Paula, and Andrés.

On his part, County Executive Chris Coons expressed his satisfaction with this class for being, in his own words, «the most diverse that we have had among the paramedics and at the same time, they have shown great academic qualities and a huge commitment to public service. There is a varied record that guarantees that they will serve our community very, very well.» he said for El Tiempo Hispano.

Hopefully Jorge Humberto's example will spread among our community which so needs dedicated youth to serve it, and, as mentioned during the emotional graduation event, at any given time the actions of a paramedic can mean the difference between life and death, it is that simple.