

DEMSOC

Delaware Emergency Medical Services Oversight Council



11th Annual Report

2010



The Honorable Jack Markell, Governor

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DELAWARE EMERGENCY MEDICAL SERVICES OVERSIGHT COUNCIL



April 15, 2011

To the Citizens of Delaware:

On Behalf of Governor Jack Markell and the Delaware Emergency Medical Services Oversight Council (DEMSOC), I am pleased to present the 2010 DEMSOC Annual Report.

DEMSOC was created in 1999 in response to House Bill 332, otherwise known as the EMS Improvement Act, to promote the continuous development and improvement of Delaware's 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 Emergency Medical Services (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. In 2010 the National Highway Traffic Safety Administration (NHTSA) conducted a reassessment of Delaware's EMS system. The results of this reassessment revealed that our system has made progress, but there are still many things to accomplish. The recommendations that resulted from this process can be found in the year's report, and they will be the basis for future EMS system improvements moving forward.

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,

Lewis D. Schiliro, Chair
Cabinet Secretary
Department of Safety and Homeland Security

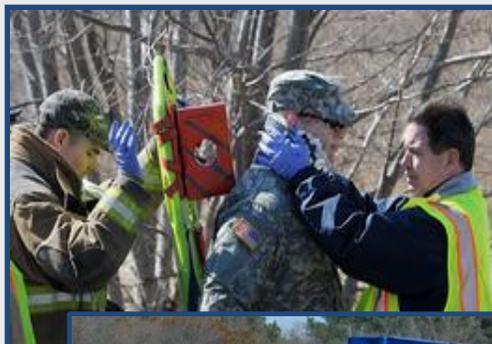


**DEMSOC, OEMS, 100 Sunnyside Road, Smyrna, DE 19977
Phone 302-223-1350, Fax 302-223-1330**

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TABLE OF CONTENTS

| | |
|-----|--|
| 6 | <i>INTRODUCTION</i> What We Do |
| 9 | <i>DELAWARE EMS SYSTEM OVERSIGHT</i> DEMSOC Emergency Medical Services and Preparedness Section State Fire Prevention Commission EMS Medical Directors |
| 23 | <i>EMS SYSTEM AND EVALUATION</i> NHSTA 5 Year Reassessment Continuum of Care EMS System Evaluations Prehospital Patient Care Report Clinical Performance Response Time Performance System Cost |
| 41 | <i>SPECIALTY CARE</i> Trauma EMSC Cardiovascular Care |
| 59 | <i>EMS SYSTEM RESOURCES</i> Emergency Department and Diversion Data Human Resources and Workforce Development Education and Training Domestic Preparedness EMS Interfacility Transport |
| 73 | <i>NEW CASTLE COUNTY</i> |
| 95 | <i>KENT COUNTY</i> |
| 111 | <i>SUSSEX COUNTY</i> |
| 131 | <i>AVIATION</i> |
| 153 | <i>PREVENTION</i> Injury Prevention Burn Camp Safe Kids SNAP First State, First Shock! CODES Infection Control |



INTRODUCTION

The Delaware Emergency Medical Services Oversight Council (DEMSOC) annual report represents a source of information for those interested in the progress of the state's EMS system. The inaugural report published in 2000, enabled DEMSOC to establish a baseline from which to measure the impact of changes and growth in Delaware's EMS system. DEMSOC presents this annual report in accordance with Title 16, Chapter 97, §9703 of the Delaware Code.



It is DEMSOC's vision that Delaware's EMS system represents true excellence in out-of-hospital health care. Integrated within Delaware's EMS system are emergency dispatch, emergency response, community health interventions, and prevention efforts. DEMSOC is proud of our courageous public servants and is committed to help them provide the best possible service to the citizens and visitors of Delaware.

As you read this Annual Report, we are confident that you will also be proud of the State of Delaware's Emergency Medical Services and the progress that has been made. DEMSOC members are encouraged by the system's successes, optimistic about what the future may bring and look forward to enhancing the services provided to the State.

WHAT WE DO:

Emergency Medical Services (EMS) is a system of services organized to provide rapid response to serious medical emergencies, including immediate medical care and patient transport to definitive care in an appropriate medical setting. An effective EMS system involves a variety of agencies and organizations working together to accomplish the goal of providing rapid emergency medical response and treatment. EMS in Delaware includes:

- County paramedic services
- Ground and air ambulance services
- Fire services
- Law enforcement agencies
- Public safety dispatch centers
- Training institutions and organizations
- Citizen, professional, and technical advisory groups
- Local and State EMS agencies
- Other governmental and voluntary organizations
- Hospitals and specialty care centers

WHO WE ARE:

| | |
|------|--|
| 1188 | Certified First Responders |
| 1402 | EMT-Basics |
| 248 | Paramedics |
| 165 | Dispatchers |
| 7 | Medical Directors |
| 67 | Regulatory, Managerial & Support Personnel (<i>DEMSOC, OEMS, SFPC, DE State Fire School</i>) |

SERVICES PROVIDED TO THE STATE OF DELAWARE AND VISITORS:

In Delaware, the three counties are covered by 56 Basic Life Support (BLS) ambulance agencies (combination departments made up of volunteer and paid employees), three paid paramedic programs operated by the county governments, a state police aviation division, nine private BLS non-emergency ambulance companies, two private ALS non-emergency ambulance companies, one specialty hospital transport service, and nine medical interfacility services. Each agency that responds to 911 calls in the EMS system receives direction from a certified dispatch center.

| | |
|----------------------------|---|
| 131 | BLS ambulances providing 911 services |
| 88 | BLS ambulances providing non-emergency services |
| 19 Full Time & 3 Part Time | ALS units providing 911 services |
| 5 | ALS Supervisor units |
| 2 | Air Medical helicopters providing 911 services |
| 2 | ALS agencies providing non-emergency services |

Transportation of patients is provided predominantly by volunteer BLS fire based ambulance services, and the Delaware State Police Aviation Section. Integrated into the ambulance transport system are chase vehicles operated by three countywide paramedic systems that provide advanced medical treatment to patients. In 2010, EMS responded to the following incidents (*information based on Delaware patient care reports*):

| | | | |
|---------|------------------------------|---------|-------------------------------|
| 179,366 | Statewide Total Run Reports | 136,381 | Medical Incidents |
| 112,749 | Basic Life Support Incidents | 31,089 | Trauma Incidents |
| 66,617 | Paramedic Incidents | 9,495 | Pediatric Incidents (0-17yrs) |
| 272 | Air Medical Transports | 6,181 | ALS Cardiovascular Incidents |

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Delaware System Oversight

Delaware Emergency Medical
Services Oversight Council 11

Emergency Medical Services
and Preparedness Section 13

State Fire Prevention
Commission 17

EMS Medical Direction 20

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Delaware Emergency Medical Services Oversight Council (DEMSOC)

The Delaware Emergency Medical Services Oversight Council (DEMSOC) was formed pursuant to the Delaware Emergency Medical Services 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.

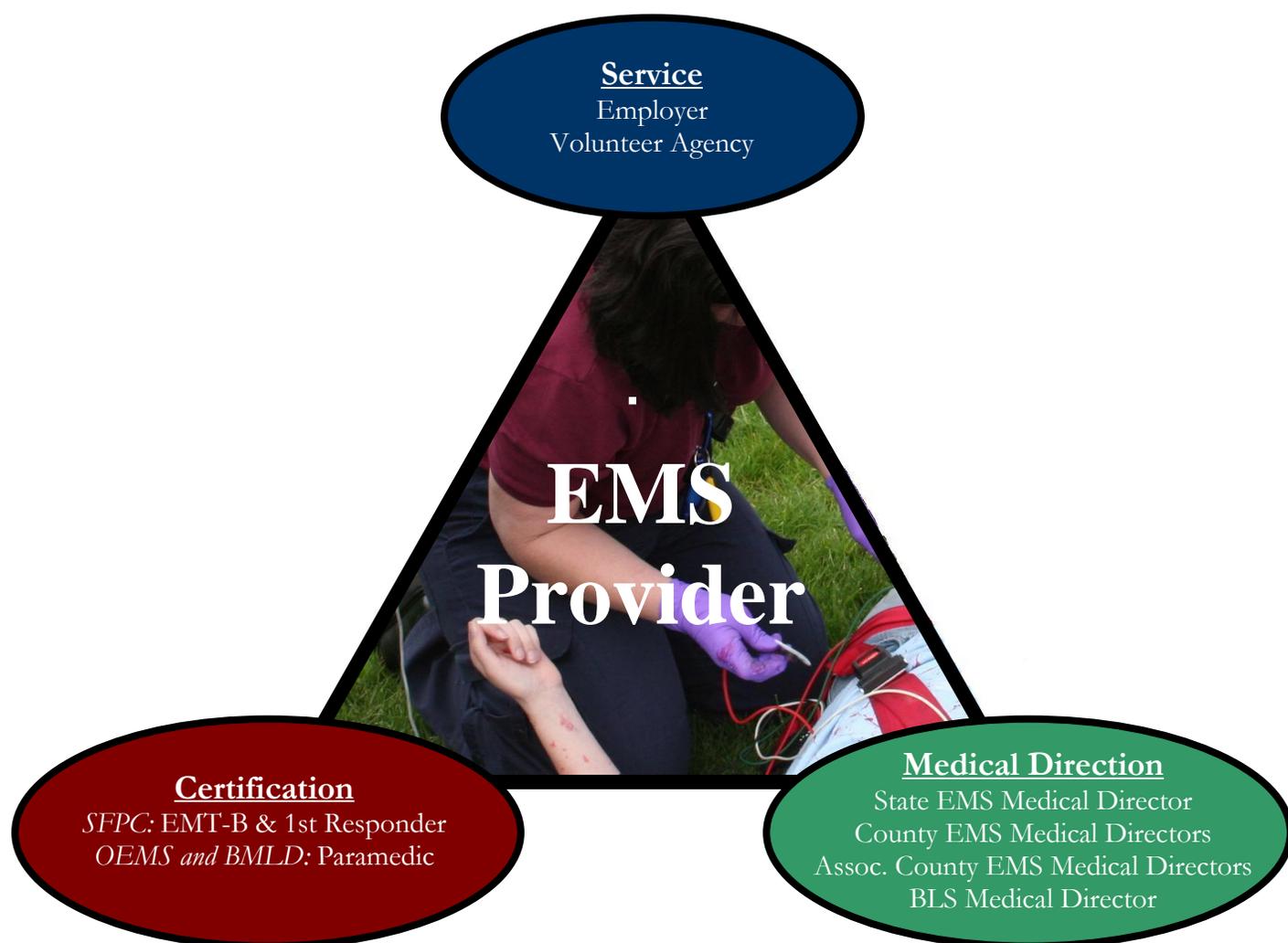
DEMSOC consists of 19 members appointed by the Governor. The Secretary of The Department of Safety and Homeland Security, Lewis Schiliro, serves as the chairman. Also serving on the Council is the Secretary of Delaware Health and Social Services, Rita Landgraf. DEMSOC also includes representatives from the following agencies: the Governor's Office, each county government, the Delaware State Fire Prevention Commission, the Delaware Volunteer Firefighter'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 the regulatory authority for the advanced life support services and provides medical oversight to the entire EMS system.

Delaware is a frontline leader in prehospital emergency care through comprehensive coordination, development and evaluation of the statewide emergency medical services system. Coordination of the state's EMS system falls under the Delaware Emergency Medical Services Oversight Council established by law and appointed by the Governor.

DEMSOC MEMBERSHIP

| | | |
|--|---|---|
|  |  | |
| Hon. Lewis Schiliro Chairman | Robert Stuart Co-Chairman | |
|  |  |  |
| Hon. Rita Landgraf | Robert Ricker | Wayne Smith |
|  |  |  |
| Dr. Jon McGhee | Lawrence Tan | Colin Faulkner |
|  |  |  |
| Dr. Glenn Tinkoff | Dr. Ross Megargel | Dr. Ed Alexander |
|  |  |  |
| Dr. Heather Farley | Sgt. Keith Mark | Glen Luedtke |
|  |  |  |
| Michael McMichael | Edward Marecki | Kenneth Dunn |
| Not Pictured: | | William Tobin Robert Coyle, Jr. Gregory Patterson |

Delaware EMS Oversight Triangle



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

The Office of Emergency Medical Services (OEMS) regulates Advanced Life Support (ALS) agencies in regards to certification, education/training, and medical control.

The Delaware State Fire Prevention Commission (SFPC) oversees Basic Life Support (BLS) services through the Ambulance service regulations, which address administrative, operational, and provider requirements. This includes emergency as well as non-emergency ambulance services.

EMS Medical Direction is provided by emergency medical physicians that are employed by the Office of EMS. They provide medical direction to both Advanced Life Support (ALS) and Basic Life Support (BLS) services. There are a total of eight Medical Directors within the state: one State EMS Medical Director, three County Medical Directors, three Associate County Medical Directors, and one BLS Medical Director.

Emergency Medical Services and Preparedness Section (EMSPS)



DELAWARE HEALTH AND SOCIAL SERVICES

Division of Public Health

Emergency Medical Services and Preparedness Section

In December of 2010, the Division of Public Health announced that the Office of Emergency Medical Services (OEMS) and the Public Health Preparedness Section (PHPS) merged and now constitutes the new Emergency Medical Services and Preparedness Section (EMSPS). The two separate offices still exist; they are co-located geographically and have shared oversight. Steven Blessing was named as the Section Chief overseeing the newly formed section. Nicole Quinn is the Director of the Public Health Preparedness Office. In early 2011, Diane Hainsworth was named the Director of the Office of EMS. The EMSPS is located in Smyrna at the Delaware Hospital for the Chronically Ill (DHCI) on the 2nd floor of the Prickett Building. The merger allows the Division of Public Health to consolidate resources supporting the two offices and find synergy in the similar missions and capabilities they possess.

The EMSPS has representation on the following committees:

- DEMSOC
- National Association of State EMS Officials
- Maternal Child Health Steering Committee
- Organ and Tissue Donor Awareness Board
- National Trauma-EMS Stakeholders Committee
- Coordinating Council for Children with Disabilities
- Accreditation of Educational Programs for the EMS Professions (CoAEMSP)
- Child Death, Near Death and Stillbirth Commission
- American College of Surgeons' Trauma System Consultation -site visit review
- Statewide Interpretative and Emergency Communication
- New Castle County EMS Advisory Committee
- Sussex County EMS Advisory Council
- ALS Standard Subcommittee of the Board of Medical Practice
- Delaware Chapter of the American College of Emergency Physicians
- Delaware Chapter of the Committee on Trauma
- Delaware Chapter of the American Trauma Society
- American Heart Association's Delaware Mission Lifeline
- Delaware Homeland Security
- Delaware Medical Reserve Corps Volunteer Meetings
- Delaware Volunteer Organizations Active in Disasters (DEVOAD)
- Performance Evaluation and Improvement Workshop
- DHSS Disaster Committee
- Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) State Coordinators' Meetings
- Emergency Services Coordinator Group
- Advisory Committee for Johns Hopkins Center for Public Health Preparedness
- State Hazard Mitigation Council
- ASTHO Directors of Public Health Preparedness (DPHP)
- Medical Information System Committee
- Traffic Records Coordinating Council "Core Team"
- DPH Section Chiefs Meeting
- CODES
- EMS Dispatch Committee
- Governor's Stroke Task Force
- DTCC Paramedic Education Advisory Board
- DEMSOC Mass Casualty Transport Committee
- Atlantic EMS Council
- Priority Medical Dispatch
- School Health Commission
- Risk Watch
- Drowning Prevention Coalition
- NAEMSP Annual Meeting
 - NAEMSP Public Health Committee
 - NAEMSP Standards and Clinical Practice Committee
 - NAESMP Quality Improvement Committee
 - NAEMSP Air Medical Services Ad Hoc Committee
- Christiana Care Emergency Department Research Committee
- Christiana Care Critical Care Committee
- State Citizen Corps Council Meetings
- Delaware Public Health and Medical Ethics Advisory Group
- Healthcare preparedness Steering Committee
- Laboratory Preparedness Advisory Committee (Biological Component)
- Collaborative Fusion, Inc
- SHOC Section Meetings
- Senior Advisory Council (SAC)
- Governance Board Member, Delaware Information and Analysis Center (DIAC)
- Mid-Atlantic Regional Public Health Preparedness Council

The Office of Emergency Medical Services (OEMS)



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.

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.

Prehospital Patient Care Reports: 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 demographic, assessment, and treatment phases of an EMS incident.

EMS Medical Direction: This program is responsible for providing medical oversight of the statewide EMS system (Advanced/Basic Life Support, and emergency medical dispatch), 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. The Special Needs Alert Program (SNAP) and Safe Kids are part of the programs within EMSC.

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.

EMS Infectious Disease Exposure Monitoring: The need for an effective infection control program has always been an essential and integral part of the prehospital practice in Delaware, because there is both the risk of healthcare providers acquiring infections themselves, and of them passing infections on to patients. Preventive and proactive measures offer the best protection for individual and organizations that may be at an elevated exposure to these infectious diseases.

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. These regulations intend 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 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.

Prehospital Advanced Care Directive Regulation: On July 10, 2003, legislation was signed into Delaware law to adopt a Prehospital Advanced Care Directive (PACD). A Delaware Prehospital 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.

OEMS Board Membership:

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, §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. As of July 2010, there were 554 Delaware residents waiting for an organ transplant. As of January 1, 2011 305,482 (43.57%) Delaware drivers have designated themselves as organ donors on their driver licenses.

Public Health Preparedness Section (PHPS)



The Public Health Preparedness Section takes the lead and collaborates with partners and the community to develop, implement and maintain a comprehensive program to prepare for, mitigate against, respond to and recover from public health threats and emergencies.

Beginning in 2002, Delaware has received funding through the Health Resources and Services Administration (HRSA), Bioterrorism Hospital Preparedness Program, which is now managed by the Office of the Assistant Secretary for Preparedness and Response (ASPR) within the US Department of Health and Human Services (HHS). In addition, Delaware has also received funding through the U.S. Department of Homeland Security to enhance preparedness and response capabilities to a terrorist incident. Delaware continues to prepare the Division of Public Health (DPH), hospitals and supporting healthcare systems to deliver coordinated and effective care to victims of terrorism, disasters and other public health emergencies.

DPH has well-established Public Health and Emergency Medical response capabilities and continues to further enhance preparedness efforts as they pertain to Medical Surge Capacities and Capabilities (MSCC). Through its Modular Medical Expansion System (MMES), DPH can provide prophylactic medications and/or vaccine for up to 2000 people per hour for dispensing medications and 600 people per hour for vaccination through its Neighborhood Emergency Help Center; can accommodate up to 200 people in a Medical Needs Shelter; can assist hospitals with expanding acute care capabilities by 400 patients; and can expand mortuary capacity within the state by 144 bodies. Other capabilities include, but are not limited to, redundant communications capabilities using 800 Mhz radios, portable decontamination shelters in every hospital, stockpiled personal protective equipment, a mobile medical facility, and a statewide hospital evacuation plan. Throughout DPH's preparedness process, it has addressed supplies and equipment; education and preparedness training, exercises, evaluation and corrective actions; and the needs of at-risk populations.



In 2012, DPH will improve its program by revising public health's operational plans and adopting a new single overarching Public Health and Medical Operation Plan to resemble the Delaware Emergency Operations Plan (DEOP) and to streamline operations, processes, and equipment, and use common terminology. These revisions will also emphasize the use of all community partners within public health and the medical system and how community partners can best work together to ensure the health of all Delawareans during a catastrophic emergency.

Delaware State Fire Prevention Commission (SFPC)

Submitted by the Delaware State Fire School



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.



Back Row:

Alan Robinson, Jr.
Marvin Sharp
Kevin L. Wilson
Douglas S. Murray, Sr.
Tom Di Cristofaro

Front Row:

Bob Ricker, *Chairman*
David Roberts, *Vice Chairman*

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 Delaware Code and are summarized as follows but not limited to:

- The Commission consists of seven persons appointed by the Governor.
- They have the power to promulgate, amend and repeal regulations for the safeguarding of life and property from hazards of fire and explosion.
- Prior to promulgation, they shall hold at least one public hearing on each regulation, amendment or repealer and shall have the power to summon witnesses, documents and administer oaths for the purpose of giving testimony.
- They shall appoint the State Fire Marshal and State Fire School Director.
- The Commission shall have power to authorize new fire companies or substations; resolve boundary and other disputes; prohibit cessation of necessary fire protection services.
- The Commission is empowered to enforce its orders in the Court of Chancery.

Delaware State Fire School (DSFS)



Delaware Code, Title 16, Chapter 66, §6613 – 6618, mandates the Delaware State Fire School 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.



New Castle County Division



Delaware State Fire School



Sussex County Division

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.

The agency objectives established to achieve that goal are:

- To provide firefighters with needful professional instruction and training.
- To provide basic life support personnel with needful professional instruction and training.
- To provide rescue personnel with needful professional instruction and training.
- To certify basic life support personnel as State of Delaware Emergency Medical Technicians.
- To inspect and license ambulances that operates within the State of Delaware.
- To provide agency, institutional and industrial personnel and the general public with needful professional instruction and training.
- To disseminate information relative to fires, techniques of firefighting, and other related subjects to all agencies and individuals throughout the state.
- To develop new methods and practices of firefighting.
- To provide facilities for testing of firefighting equipment.

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 and Non-Emergency Ambulance Service. It clearly defines the administrative and operational requirements for such entities.

The State Fire Prevention Commission has adopted, as a regulation, a Statewide Quality Assurance and Improvement Committee. This committee, under the direction of the State Medical Director, is responsible for assuring and improving the quality of Basic Life Support within the EMS systems that serve the State of Delaware. By conducting medical incident reviews and evaluating patient care statistics, the committee is able to provide constructive feedback on quality improvement to all EMS professionals within the State of Delaware.

The State Fire Prevention Commission also adopted a BLS regulation that detailed EMS Educational Program Administrative Standards and Guidelines. This regulation describes the standards and guidelines for emergency medical services (EMS) educational agencies that present programs for the First Responders/ EMT-Bs in the State of Delaware. The regulation was developed to insure that all students receive the highest quality of training approved by the State Fire Prevention Commission and the Office of Emergency Medical Services.

Office of the Fire Marshal (OFM)



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.



New Castle County Division



Fire Marshal's Office



Sussex County Division

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 fireworks.

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 | 15 |
| Number of Burn Injuries Investigated by SFMO | 34 |

2010 Delaware State Fire Marshal's Office Data

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. (National Highway Traffic Safety Administration)



*Dean Dobbert, MD
Kent County Med. Director*

*Ross Megargel, DO
State EMS Medical Director*

*Patrick Matthews, MD
BLS Medical Director*

*Timothy Shiuh, MD
Associate New Castle County Med. Director*

*Rob Rosenbaum, MD
New Castle County Med. Director*

*Kevin Bristowe, MD
Sussex County Med. Director*

Not Shown:

*Paul Cowan, DO
Associate Sussex County Med. Director*

*Vacant
Associate Kent County Med. Director*

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, first 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.

Delaware employs emergency physicians to devote part of their professional efforts to the EMS system. They include the state EMS medical director, the state BLS EMS medical director, three county EMS medical directors, and three county associate EMS medical directors. The BLS and county medical directors are accountable to the state EMS medical director. 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. All EMS medical directors are required to take the National Association of Emergency Medical Services Physicians' (NAEMSP) Medical Directors course.

Delaware's EMS Medical Directors assure quality care to patients through interactions with other physicians, hospitals, citizen groups, and organizations such as, the American Heart Association and the Medical Society of Delaware. They review aggregate patient care data from the providers to determine the effectiveness of the treatment protocols. Retrospective medical oversight occurs through interactions with EMS personnel at hospital emergency departments and subsequent to problem case identification. Certain high risk or intensity cases, such as those involving use of neuromuscular blocking agents for tracheal intubation, are routinely identified for automatic medical direction review.

The 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 patients.

Prospective medical oversight is provided via extensive basic and advanced life support standing orders and protocols. While standing orders and protocols can be promulgated by the State EMS Medical Director at times of urgency, current practice is to involve committees or subcommittees of the State Fire Prevention Commission (SFPC) or Board of Medical Licensure and Discipline (BMLD). The Chair of the SFPC and the Director of Public Health are part of the approval process of standing orders and protocols.

Initiatives:

EMT-B's work hours: There have been reports of EMT-Bs working several 24 hour shifts, one after another. There are paid EMT-Bs who works for several different companies, scheduling themselves several days in a row, counting on sleeping at night. These schedules are leading to a number of real and potential problems / liabilities:

- Increased medical errors
- Increased aggressiveness
- Motor vehicle crashes

EMS Safety: EMS safety issues are a major concern on both state and local levels. In 2008, the State of Delaware lost two EMS providers, who sustained fatal injuries in the line of duty. EMS Medical Directors have been discussing this issue and have addressed EMS safety through protocol.

- Medically unnecessary RL&S utilization
- CPR assist devices
- Patient restraint protocols
- Termination of futile resuscitation attempts

EMS Funding: EMS funding is a considerable issue within our state. When the ALS system was developed in our state it was set up that the state would reimburse the county paramedic services 60% of all operational costs. Unfortunately, with the fiscal environment today that number as of the start of FY10 has dropped to 30%. As a result, the county agencies have had to make some difficult decisions as to reductions of service. Some of those reductions (or proposed reductions) include:

- Reduced administrative support staff
- Reduced QA/QI data analysis
- Reduced participation in State EMS planning, QA, protocol development and training.

Systems of Care Development: Delaware is fortunate to have a well-developed inclusive Trauma System. The state is nearing implementation of an inclusive Pediatric System. The next initiative is the development of a Cardiovascular System of Care. Currently, our EMS system operates as if a cardiovascular system of care is already in place. We have developed protocols that identify the need for transport to an appropriate facility. Emergency PCI capabilities in each county have been identified and are the preferred center for transportation. The following are a few major obstacles that have been identified:

- Currently there is no funding for a system coordinator
- Need for development/legislative change for protected peer review
- Need to identify systemic performance measures for QA/QI
- Lacks outside, independent verification

Committees, Publications and Research:

More and more, paramedics pack cardiac-arrest patients in ice By Don Sapatkin • Philadelphia Inquirer • Hypothermia Article - 9/14/10 New Castle County EMS was highlighted in the article. <http://www.firefightingnews.com/article.cfm?articleID=84392>

NCCo paramedics earn EMS accreditation • The News Journal • January 29, 2010. The paramedics with advanced life support do not transport patients; rather, they respond and administer emergency services, and basic life support units transport.

RSI The First Two Years: One agency's experience implementing an RSI protocol
By Robert J. Sullivan, BA, NREMT-P, Brian D. King, NREMT-P, Robert A. Rosenbaum, MD, FACEP, & Timothy Shiuh, MD, FACEP • EMS Responder Magazine • January 2010. [http://www.emsworld.com/print/EMS-Magazine/RSI--The-First-Two-Years/1\\$11556](http://www.emsworld.com/print/EMS-Magazine/RSI--The-First-Two-Years/1$11556).



From lunch line to front line By Dan Shotridge • The News Journal • March 28, 2010. News Journal article regarding the Sussex Tech EMS class program and references the existing program at St. Georges Tech High School.

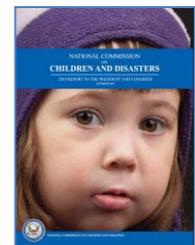
In southern NCCo, second paramedic unit could be crucial lifeline By Chad Livengood • The News Journal • May 28, 2010.

First Responders give unselfishly By Lewis D. Shiliro, Secretary of Delaware Department of Safety and Homeland Security • Morning Star • December 30, 2010.

Proper Restraint Technique Starts in the Classroom By Joseph Hopple • Journal of Emergency Medical Services • July 2010.

Rapid unit assessment. Checking your ambulance is as important as assessing your patient By RJ Sullivan • EMS magazine • September 30, 2010.

The National Commission on Children and Disasters submitted their 2010 Report to the President and Congress (cover attached) in October 2010. New Castle County EMS Chief Lawrence E. Tan received a congressional appointment to the 10-member independent Presidential Commission in 2008. The Commission is charged with conducting a comprehensive study to examine and assess the needs of children as they relate to preparation for, response to, and recovery from all hazards, including major disasters and emergencies.



NAEMT's "EMS Safety Course" committee chaired by Glenn H. Luedtke, retired Sussex County EMS Chief. The course was rolled out during the EMS Today Conference. NAEMT received the Rosecrans Award for Injury Prevention in recognition this course and Glenn Luedtke received the EMS Safety Foundation's "2010 Objective Safety Award for Innovation and Practice" for his work on this committee.

Delaware's Inclusive Trauma System: Impact on Mortality By Glen H. Tinkoff, MD, James F. Reed, III, PhD, Ross Megargel, MD, Edward L. Alexander, III, MD, Steven Murphy, MD, and Mary Sue Jones, RN • Journal of Trauma and Critical Care Medicine • August 2010.



The Drama of Trauma by Reid Champagne • Delaware Today's Delaware Health & Wellness supplement • Spring-Summer 2010.

System Evaluation

| | |
|---------------------------|----|
| 5 Year NHTSA Assessment | 25 |
| Continuum of Care | 26 |
| EMS System Evaluation | 27 |
| EMS Patient Care Report | 28 |
| Clinical Performance | 29 |
| Response Time Performance | 34 |
| EMS System Cost | 38 |

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DEMSOC Five Year Review and NHTSA Assessment

The EMS Improvement Act of 1999 mandated that DEMSOC conduct a review of the entire EMS system every five years. This was accomplished for the first time in November 2004. DEMSOC combined their five year review with a reassessment visit conducted by the National Highway Traffic Safety Administration (NHTSA). In 2010, NHTSA, conducted a reassessment of the entire EMS system.

The Technical Assessment Team was comprised of professionals of various backgrounds from across the country. The team members were:

Jolene Whitney, Assistant Director, Utah Bureau of EMS

Ritu Sahni, MD, MPH, State Medical Director, Oregon Health Sciences University

Dan Manz, State of Vermont EMS Director

Dia Gainor, Chief, Idaho Bureau of EMS

Susan McHenry, EMS Specialist, DOT, NHTSA

Charles Allen, MD, FACS, Good Samaritan Regional Medical Center, Arizona

Janice Simmons, Administrative Consultant, State of Maryland

The review/reassessment was conducted over a two day period in a panel interview format. Those who presented represented all aspects of Delaware's EMS system, including the Delaware Office of EMS, The Delaware State Fire Prevention Commission, New Castle County EMS, Kent County EMS, Sussex County EMS, The Delaware Volunteer Firemen's Association, The Delaware State Ambulance Association, Sussex County Volunteer Ambulance Association, The Delaware Hospital Association, Delaware Technical and Community College, and The State Trauma Systems Committee. The following areas were reviewed:

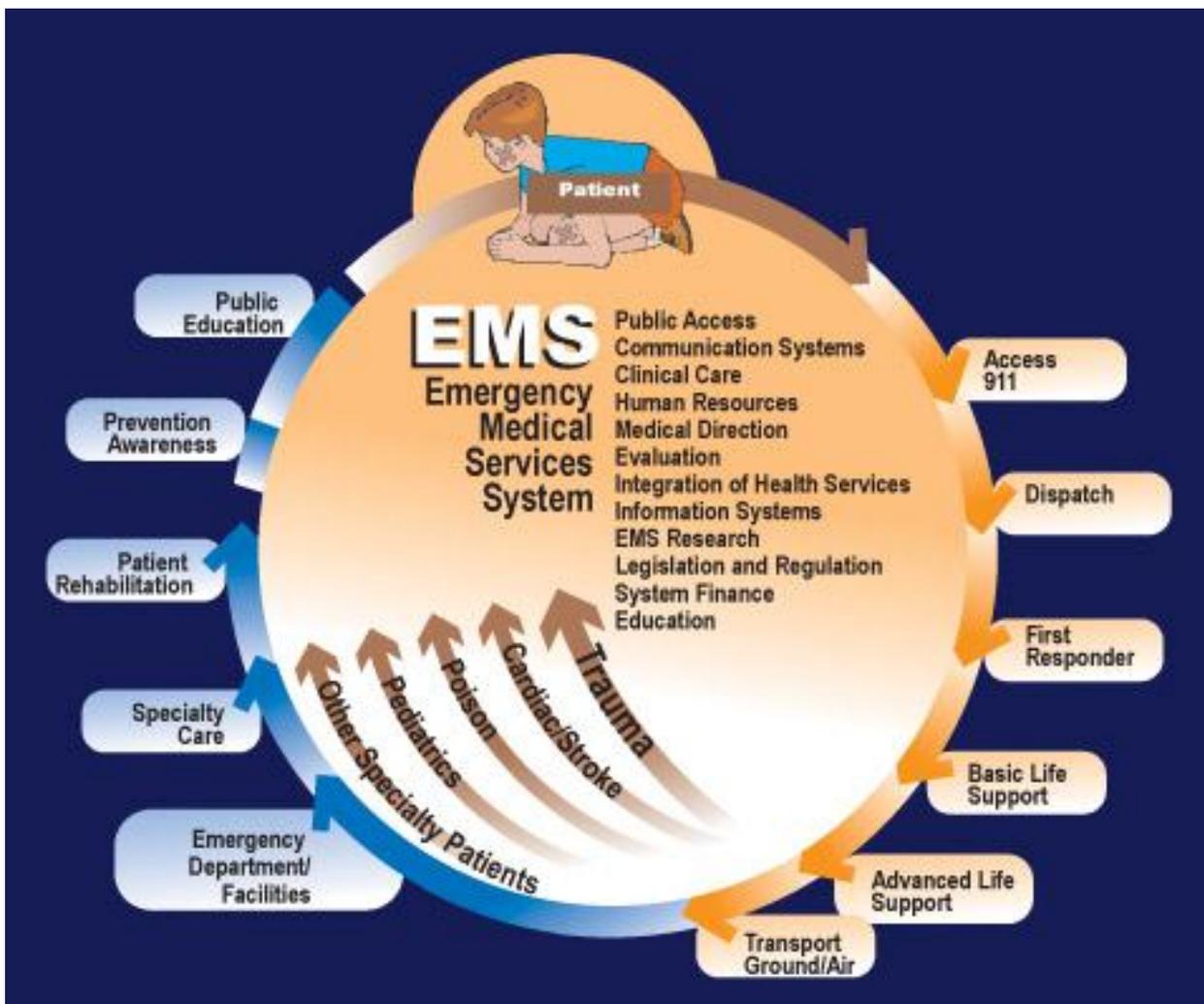
- Regulation and Policy
- Resource Management
- Human Resources and Training
- Transportation
- Facilities
- Communications
- Public Information and Education
- Medical Direction
- Trauma Systems
- Evaluation
- Preparedness

The overall assessment by the team was very positive and the panel noted numerous improvements that were made from the 2004 NHTSA assessment. The team made solid recommendations for improvement of our system. These recommendations were presented at the end of the Technical Assistance Team visit in a formal verbal report as well as a written report to DEMSOC. After receiving the report from the reassessment team, DEMSOC review and prioritized the 50 recommendations into three categories (high, medium and low). The current status of each recommendation is contained throughout this report, within the respective sections.

Prior to the next statewide assessment in 2015, the goal will be to implement these recommendations and other issues, in our EMS system, into a statewide EMS plan.

Continuum of Care

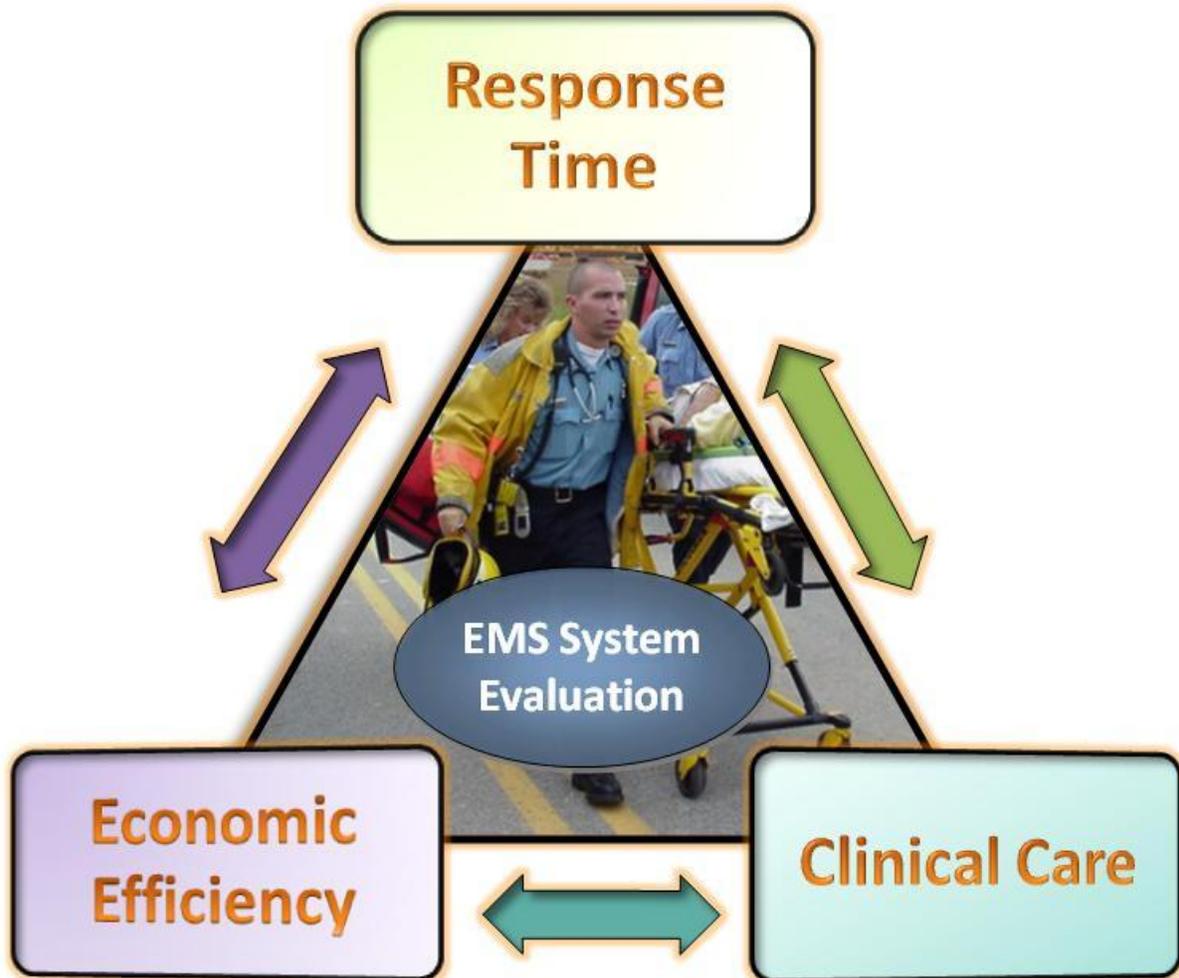
The EMS Continuum of Care is the cyclical process used to describe the delivery and constant improvement of EMS care. An EMS event usually begins with the onset of illness or injury in a patient and a call to the dispatch center through 911. The call is then triaged and dispatched and the appropriate 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.



System Evaluation

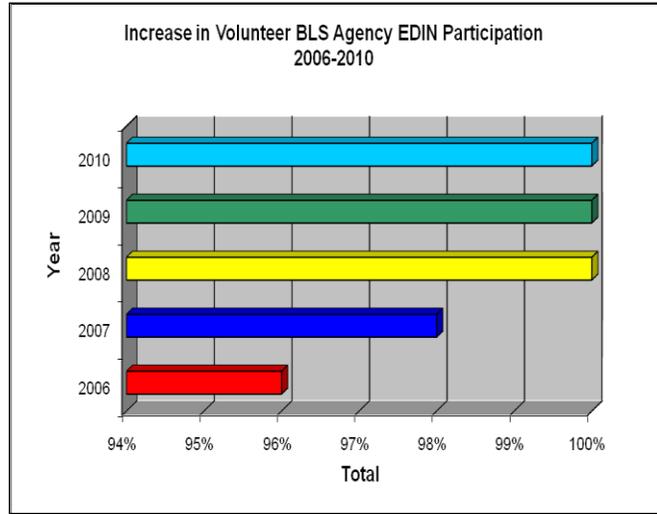
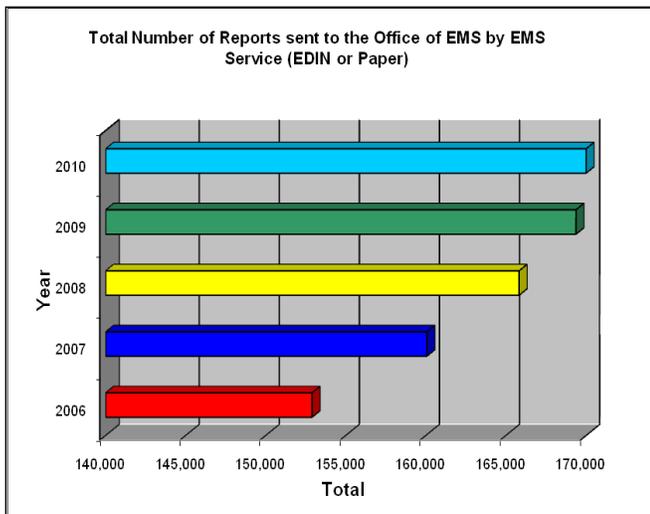
Evaluation is the essential process of assessing the quality and effects of EMS, so that strategies for continuous improvement can be designed and implemented. (National Highway Traffic Safety Administration)

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 there will be a significant increase in costs as well as a decrease in clinical performance.



Prehospital Patient Care Report

In Delaware, data from the electronic EMS Data Information Network (EDIN) is largely used to evaluate the EMS system. EDIN collects EMS report data electronically on a real-time basis and provides administrators with a 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 one million 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 55 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 NEW PREHOSPITAL PATIENT CARE REPORTING SYSTEM:

The OEMS is in the final development stage for the new data collection system. The new system, the Delaware Information Management for Emergency Services (DIMES), will be in a .Net format to provide increased functionality and scalability.

DIMES will have an open scalable architecture and support standards, which are key to streamlined processing and data exchange. DIMES will further provide a secure method of collecting pre-hospital data, extracting existing data, and exporting or sharing data for strategic planning and process improvement initiatives. By upgrading the technology used and by utilizing a web based program, DIMES will provide higher quality data collection.

Other useful applications can be created to work with DIMES, such as Palm® or Windows CE® version. Delaware is looking forward to integration into the 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.

The OEMS has developed a distant learning CD for each EMS provider for training on how to use the new DIMES system. The training will allow providers to navigate through the screens with a tutorial. The CD will be available once DIMES is completed.

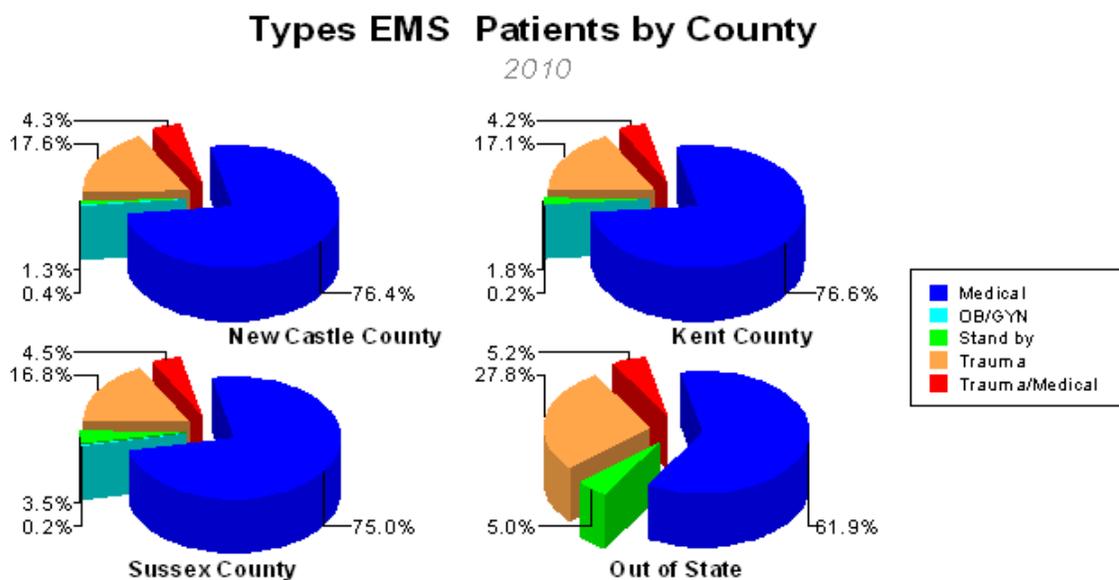


Clinical Performance

EMS was originally conceived to respond to accidental death, injury and cardiac conditions outside the hospital. However, EMS has become much more complex over time due to the rapid growth of health care technology. Several influential areas such as, trauma care, cardiology, resuscitation science and military medicine allow EMS to continue to cross the boundaries of numerous medical disciplines, including health care, medical transportation, public health and domestic preparedness.

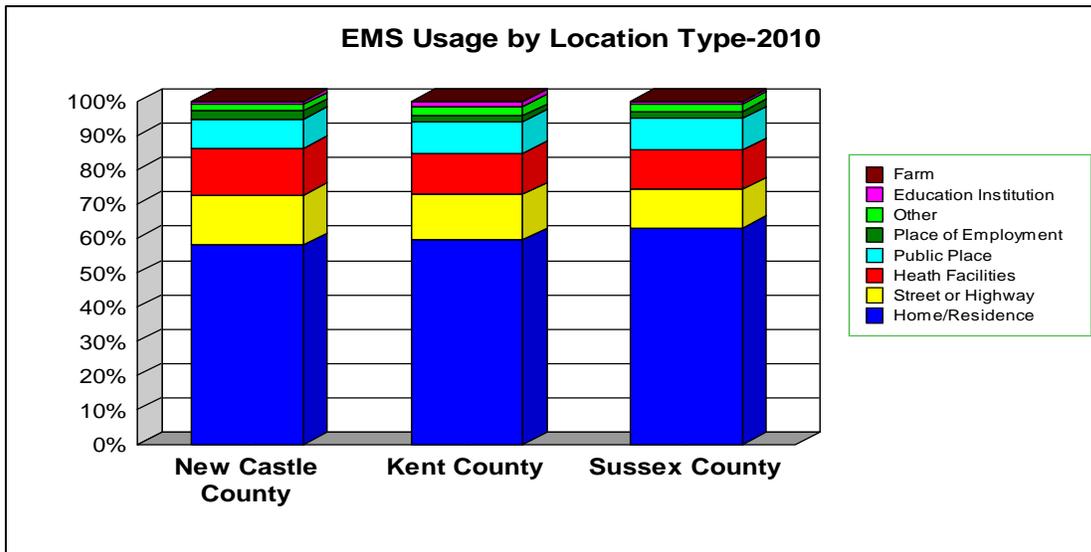
EMS provides care to those with perceived emergency needs and, when indicated, provides transportation to, from, and between health care facilities. Mobility and immediate availability to the entire population distinguish EMS from other components of the health care system (National Highway Traffic Safety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

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



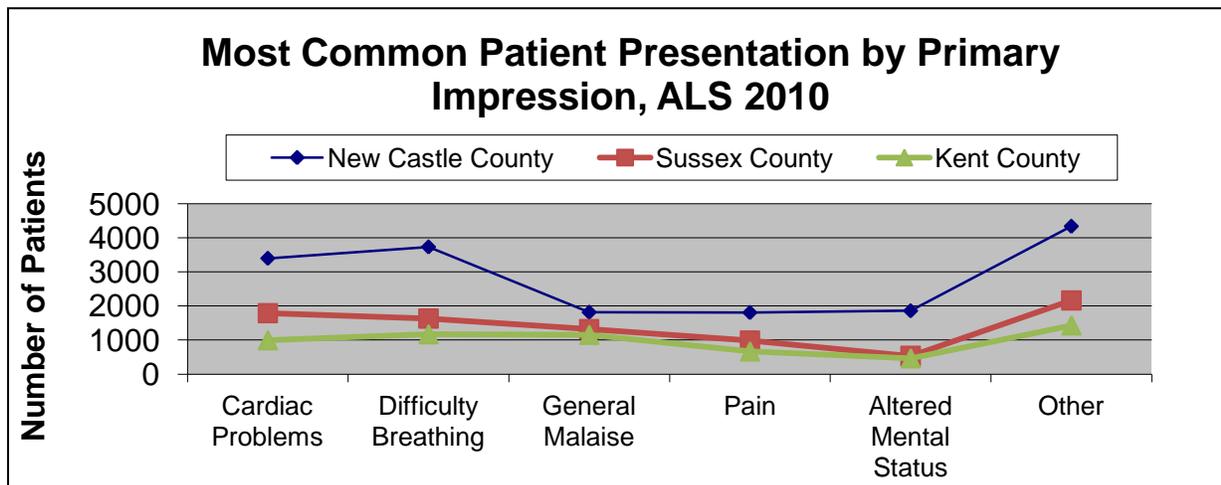
Types of patients:

- Medical patients are those individuals who are suffering from a condition such as chest pain, heart attacks, respiratory problems, altered mental status, seizures, strokes and infectious disease.
- OB/GYN refers to pregnancy and female related medical conditions.
- Trauma patients are those who suffer an injury caused by a transfer of energy from some external source to the human body such as 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.
- Standby is when EMS personnel wait in readiness, typically at large scale events such as marathons or concerts.

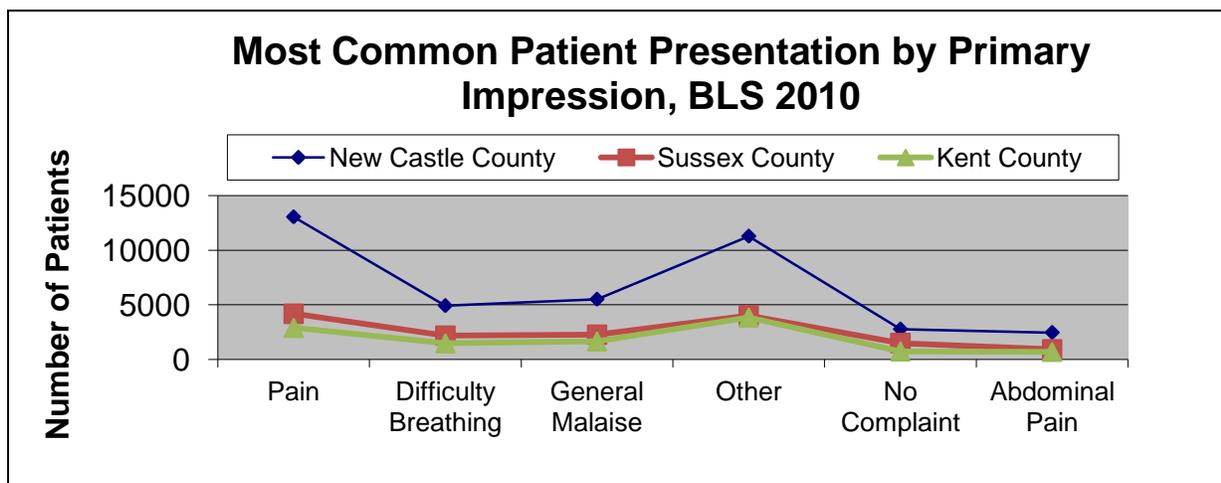


EMS usage by location type:

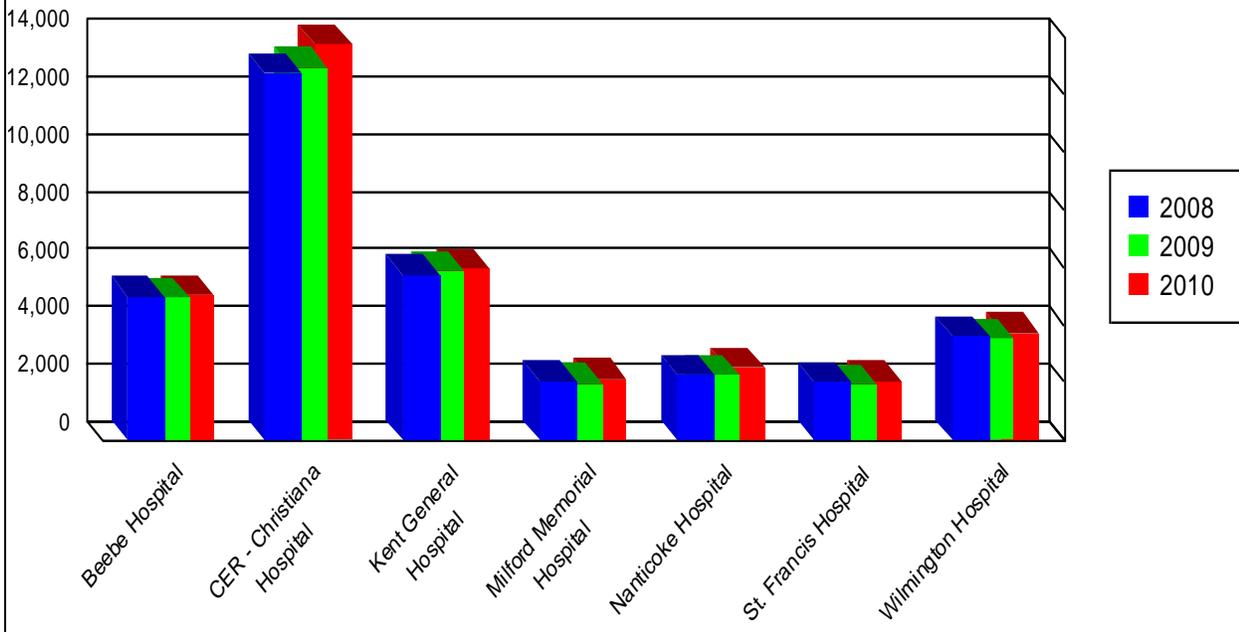
These graphs show the location of EMS calls which is helpful in designing dispatch protocols, developing operational systems to assist EMS providers in the rapid location of patients and to develop programs to reach critically ill and injured patients as quickly as possible with life saving treatments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



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.

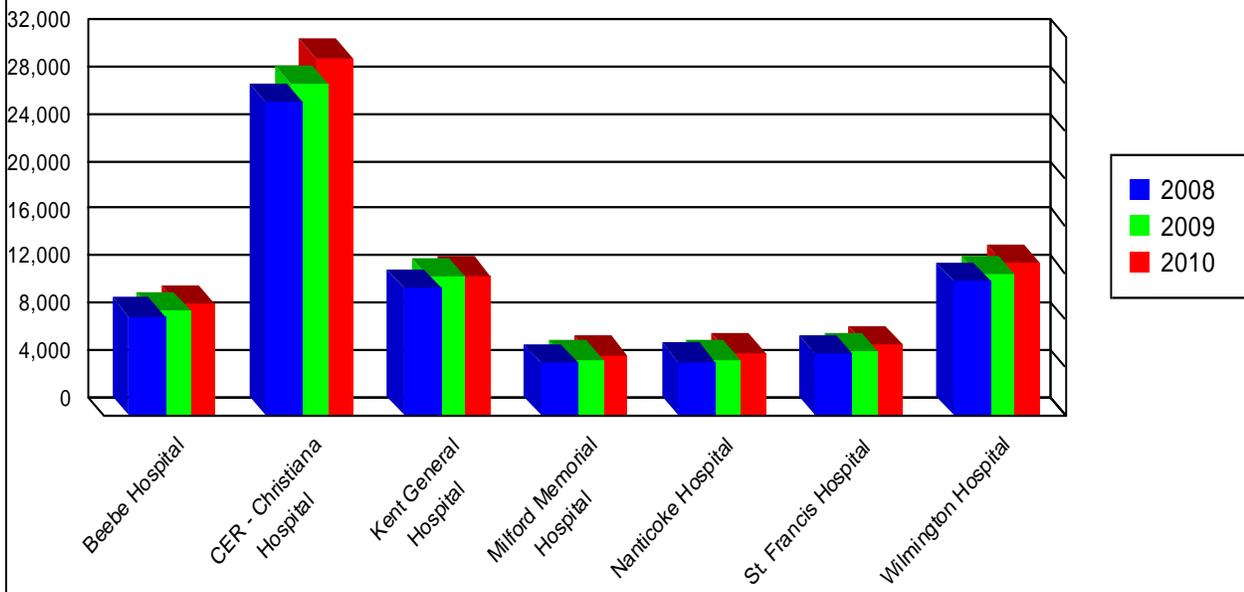


ALS Receiving Hospital Comparisons 2008-2010



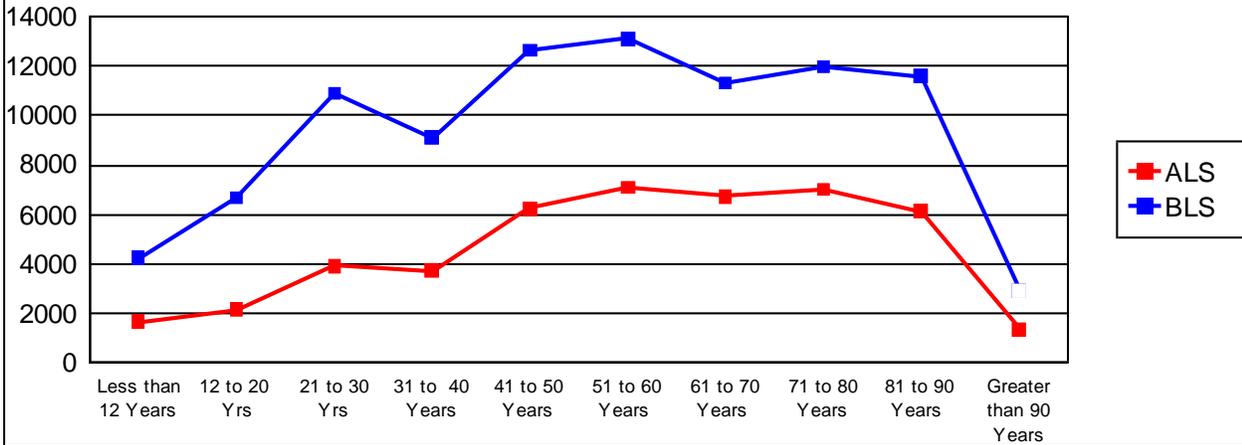
Note: Both ALS and BLS charts are based on the total number of patients transported by the specific EMS service. BLS responds to more patient runs and therefore transports more patients to the hospital. This is noted on the right hand side of each chart contained on this page.

BLS Receiving Hospital Comparisons 2008-2010



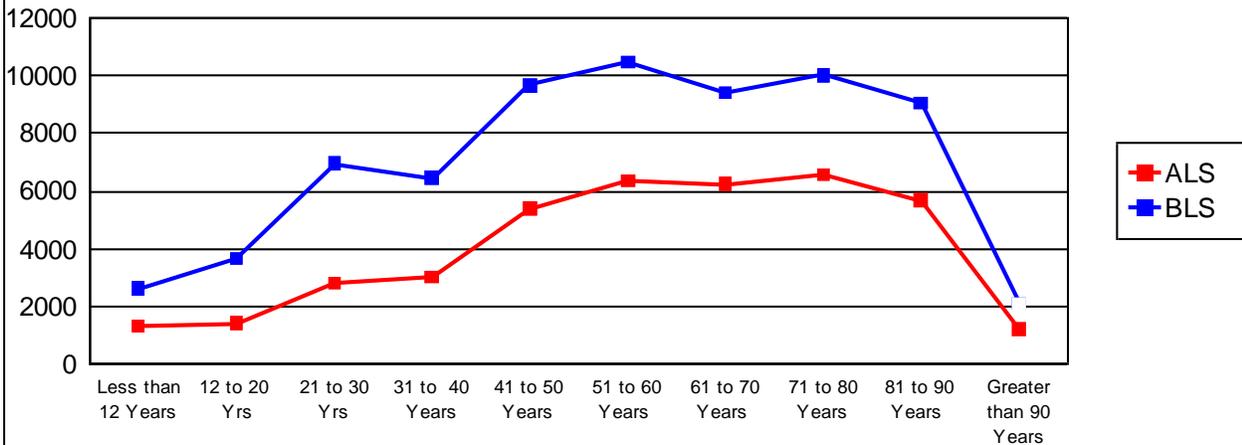
ALS and BLS Patient Age Comparison 2010

All Patients



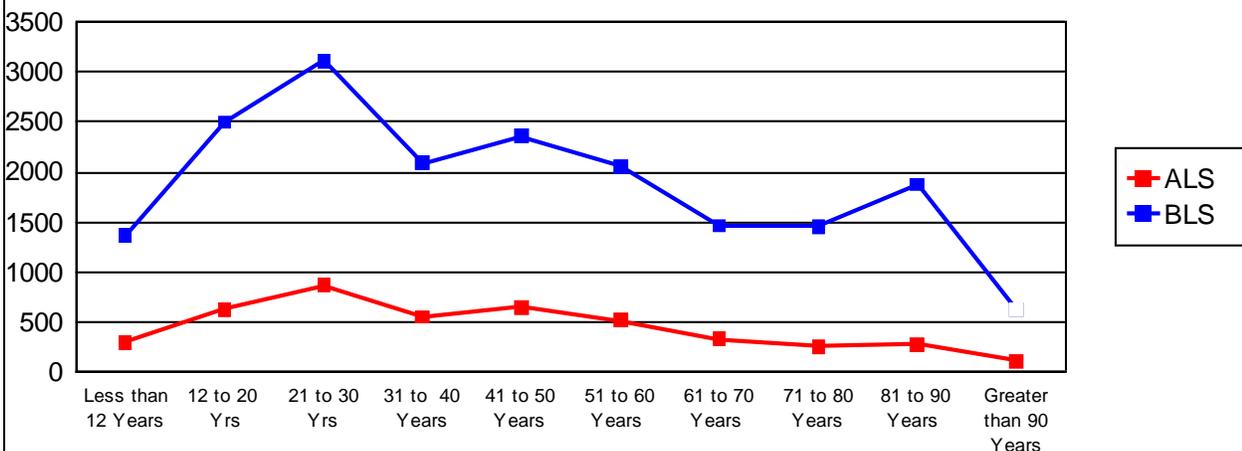
ALS and BLS Patient Age Comparison 2010

Medical Patients

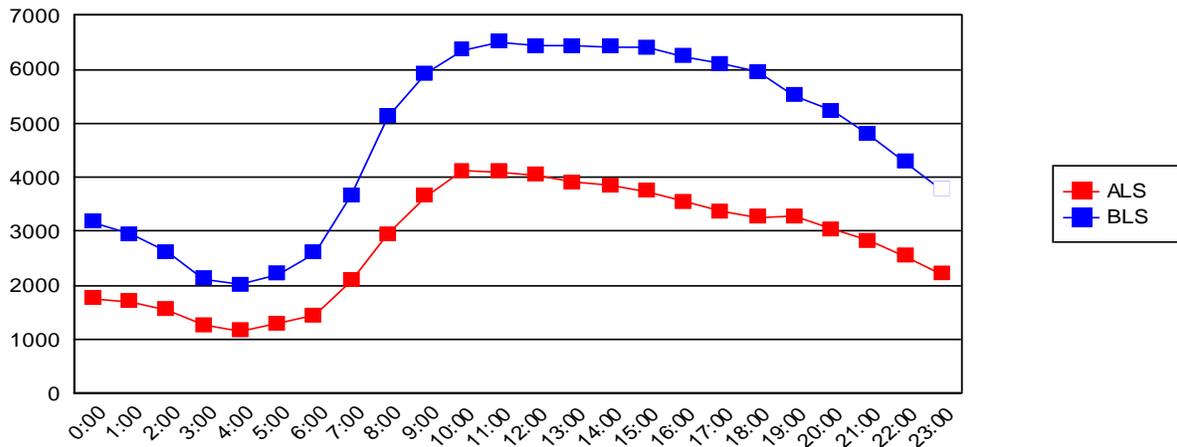


ALS and BLS Patient Age Comparison 2010

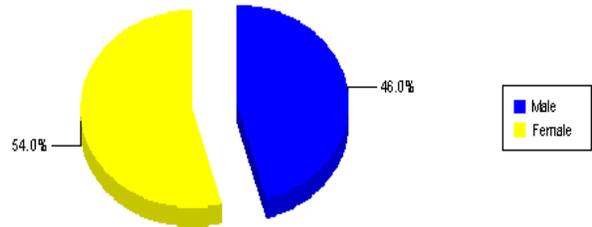
Trauma Patients



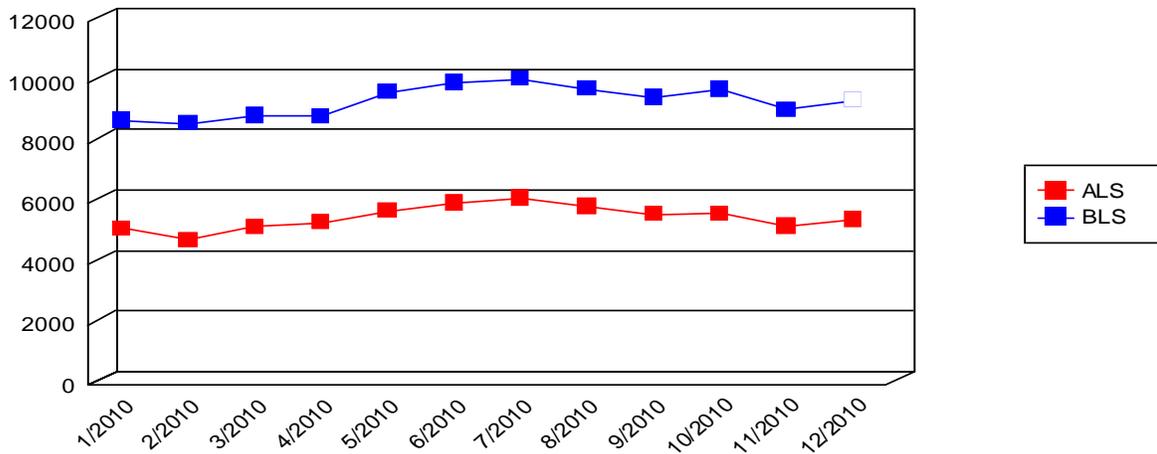
Time of Day When EMS Incidents Occur-2010



Gender of EMS Patients



ALS/BLS Incidents by Month-2010



Response Time Performance

The Delaware EMS system measures response time performance in fractiles. Fractile response refers to how the response time is measured against an established performance goal. For example, if a response goal is 8 minutes, the fractile response time 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.

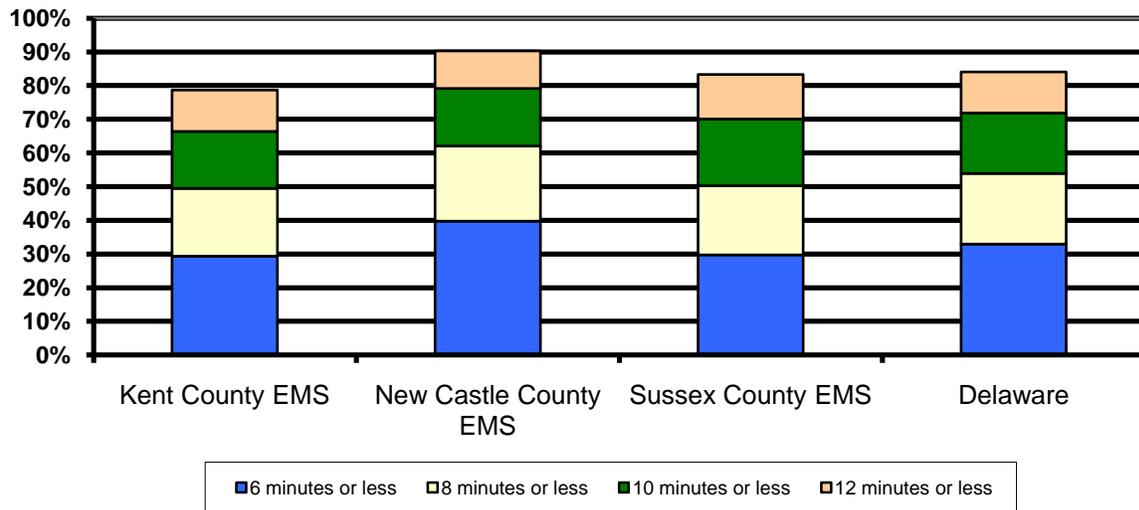
The response time goals for the Delaware EMS system adopted by the EMS Improvement Committee are based on cardiac arrest survival research. These response goals are nationally recognized and cited by both NFPA (1710) and the American Ambulance Association guidelines. It is recognized that these are ideal 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 recognizes 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, while remaining online with the caller, connects to a poison control center for instructions.

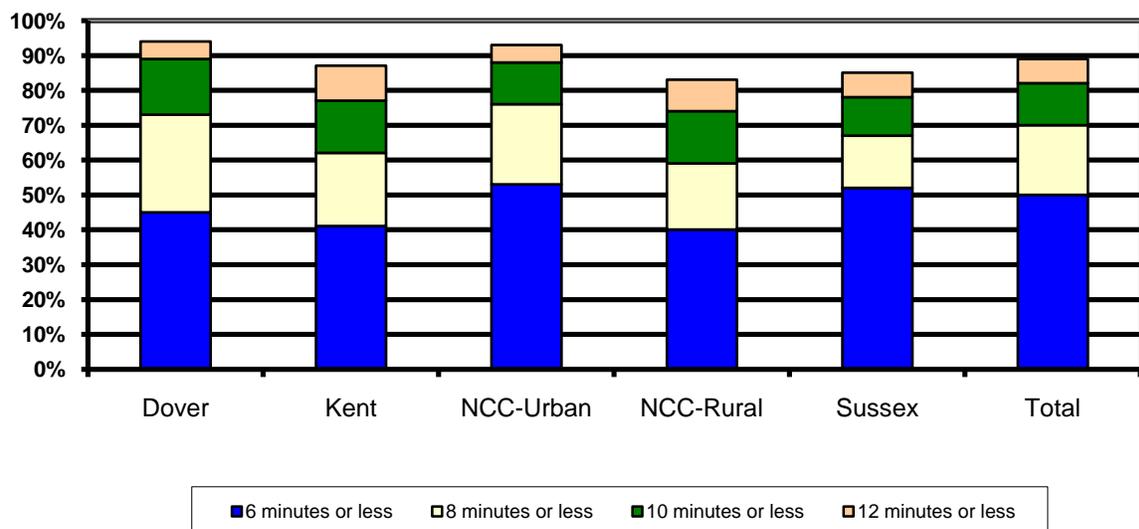


Advanced Life Support Response Time
Compliance for Delta/Echo Responses
January 2010 - December 2010

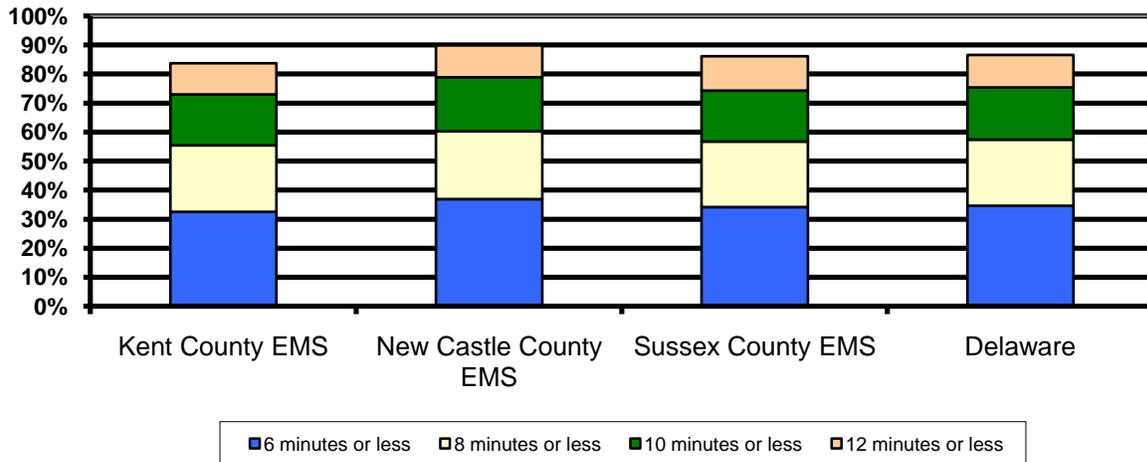


Goal: Each Advanced Life Support (ALS) paramedic agency within the Delaware EMS system provide an ALS paramedic unit, as defined by recognized state standard, on the scene within 8 minutes of the receipt of Delta calls on at least 90% of the time. BLS ambulance unit on scene within 10 minutes of the receipt of Delta calls on at least 90% of the times in urban areas and 70% of the times in rural areas.

Basic Life Support Response Time
Compliance for Delta/Echo Responses
January 2010 - December 2010

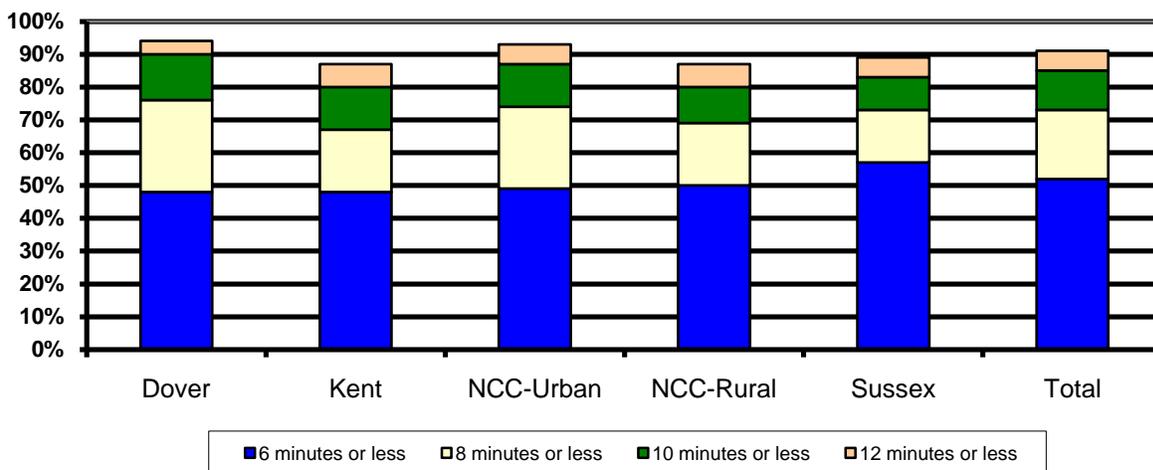


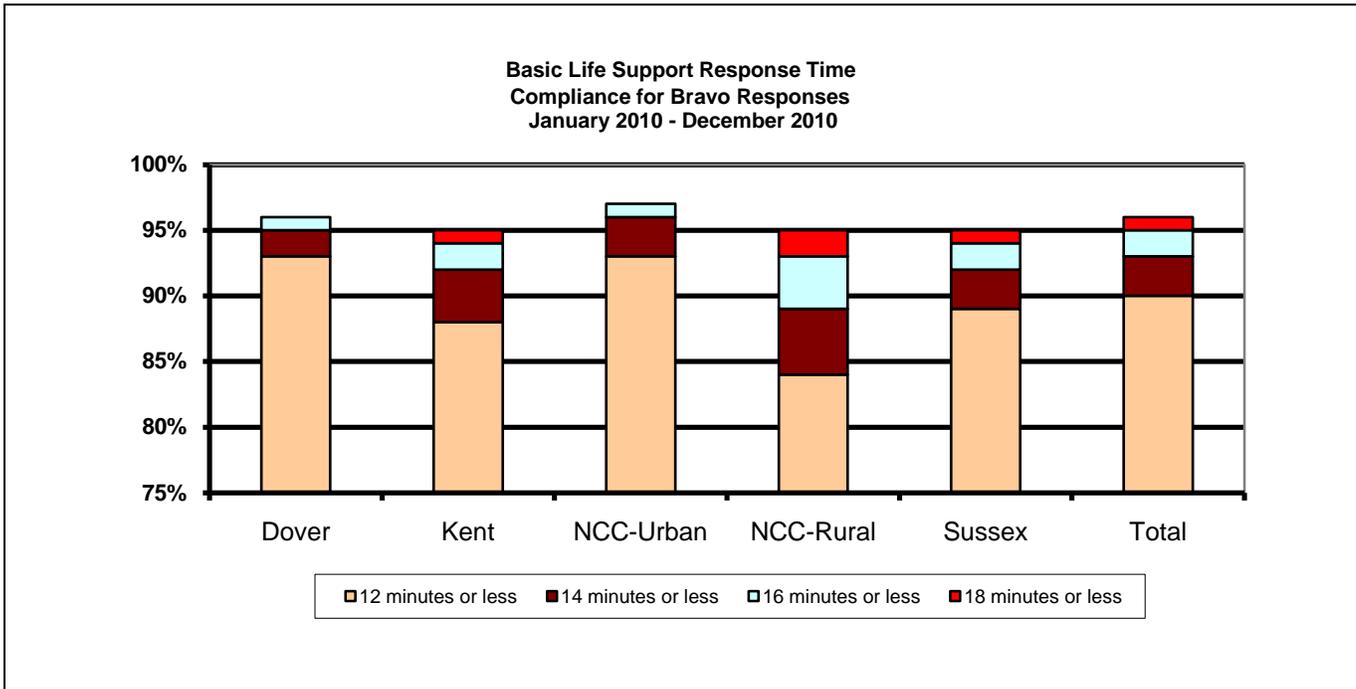
Advanced Life Support Response Time
Compliance for Charlie Responses
January 2010- December 2010



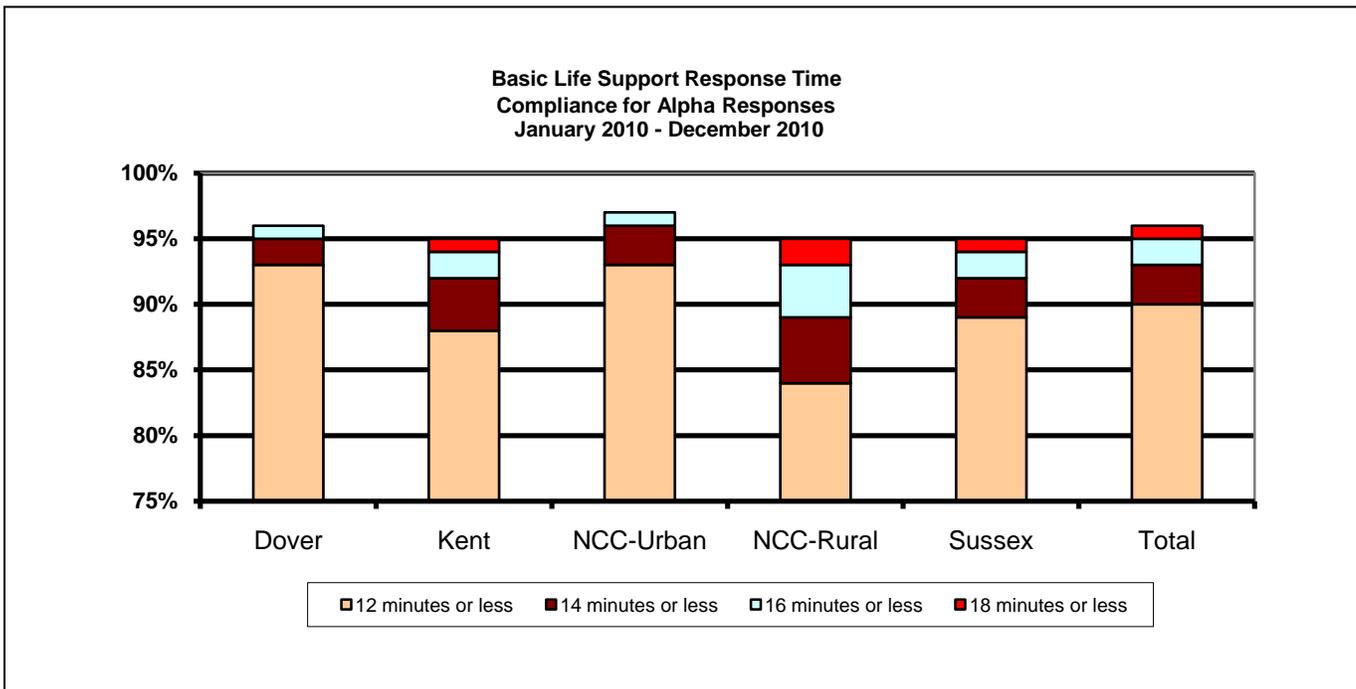
Goal: Each Advanced Life Support (ALS) paramedic agency within the Delaware EMS system provide an ALS paramedic unit, as defined by recognized state standard, on the scene within 8 minutes of the receipt of Charlie calls on at least 90% of the time. BLS ambulance unit on scene within 12 minutes of the receipt of Charlie calls on at least 90% of the times in urban areas and 70% of the times in rural areas.

Basic Life Support Response Time
Compliance for Charlie Responses
January 2010 - December 2010





Goal: BLS ambulance unit on scene within 12 minutes of the receipt of Bravo calls on at least 90% of the times in urban areas and 70% of the times in rural areas.



Goal: BLS ambulance unit on scene within 18 minutes of the receipt of Alpha calls on at least 90% of the times in urban areas and 70% of the times in rural areas.

Estimate of EMS System Cost

One important factor in evaluating the efficiency of an EMS system is measured in terms of cost. Delaware continues to refine the process to accurately reflect total EMS system costs. The Basic Life Support (BLS) Financial form was developed and distributed to all agencies starting in 2002. Additionally, all 911 centers, involving EMS dispatch, have submitted their costs to run their centers during 2010.

House Bill 332 outlines the requirement for EMS agencies to report cost. “All components of the EMS system should report revenues and expenses so that the system can be continually evaluated for its cost effectiveness. Members of the General Assembly, the Governor, the public and other policy makers should know the costs of Delaware’s EMS system in order to measure its effectiveness”.

Basic Life Support (BLS) Program Cost

The Delaware State Fire Prevention Commission recognizes the importance of collecting and providing financial information with designated agencies. With the adoption of the current Ambulance Service Regulations this requirement remains an important part of the data reporting requirements. However, the Commission recognizes that the Ambulance Service Providers have a number of reporting requirements which are duplicate reports in part. These reporting requirements include the annual Delaware Volunteer Financial Report, the Annual EMS Financial Report and the Annual Fire Company Financial Review/Audit Report. The Commission recently began a review of these requirements and working with the various agencies will look toward the development of a standard financial reporting form that will meet the requirements of the various agencies requiring this information.
David J. Roberts, Chairman Delaware State Fire Prevention Commission



The population figures below for 2010 were obtained from the 2010 Delaware Population Projections Summary Table. The County Cost Per Capita was obtained by calculating the total population for 2010 by the expended budget for 2010 for each agency. The cost per square mile was obtained by calculating the total geographical size by the expended budget for 2010 for each agency.

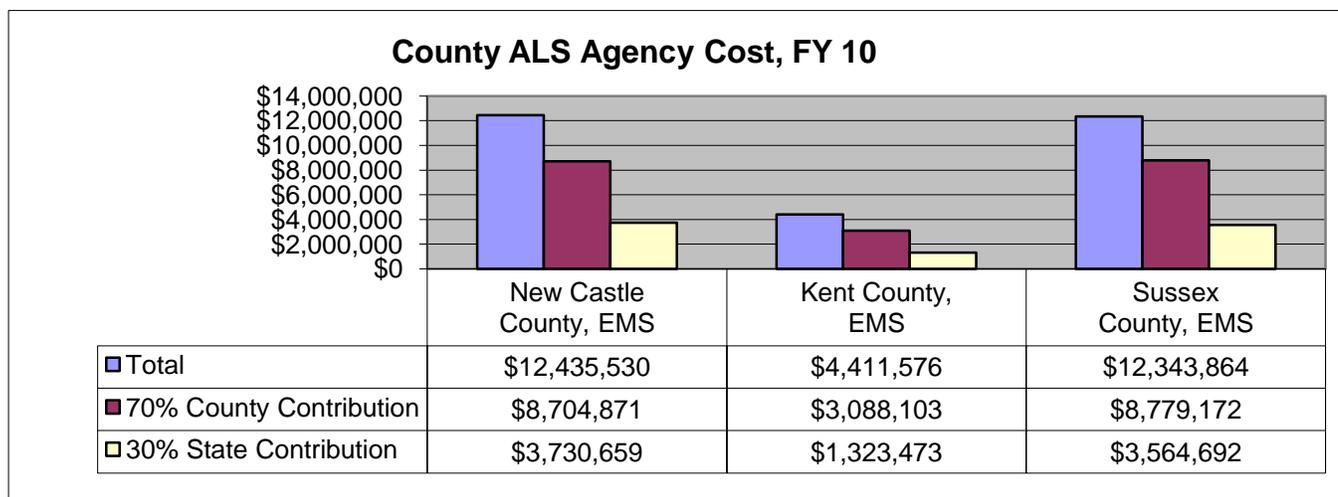


Advanced Life Support (ALS) Program Cost

| Area | Population (2010) | County Cost Per Capita* | Geographic Size | Cost Per Square Mile |
|--------------------------|-------------------|-------------------------|--------------------|----------------------|
| Kent County | 160,058 | \$27.56 | 594 square miles | \$7,427 |
| New Castle County | 538,170 | \$23.10 | 438 square miles | \$28,392 |
| Sussex County | 196,945** | \$62.68** | 950 square miles | \$12,994 |
| Delaware | 895,173 | \$32.61 | 1,982 square miles | \$14,728 |

*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.



Aviation and Dispatch Center Cost

DELAWARE STATE POLICE AVIATION PROGRAM COSTS

| | |
|-------------------------|--|
| Total Costs: | \$ 2,700,000.00 |
| Personnel: | \$ 1,750,000.00 |
| Helicopter Maintenance: | \$ 700,000.00 |
| Fuel Costs: | \$ 250,000.00 |
| Medical Supplies: | \$ 79,000.00 <i>(This amount includes the purchase of 2 lifepak 15 through a \$64,000 grant)</i> |



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: | \$ 3,163,894.00 |
| Personnel: | \$ 2,911,814.00 |
| Equipment: | \$ 247,445.00 |
| Training: | \$ 4,635.00 |

***Sussex County 911 Center:**

| | |
|---------------------|------------------------|
| Total Costs: | \$ 1,669,816.00 |
| Personnel: | \$ 1,528,766.00 |
| Equipment: | \$ 113,160.00 |
| Training: | \$ 22,600.00 |

Kent County 911 Center:

| | |
|---------------------|------------------------|
| Total Costs: | \$ 1,675,400.00 |
| Personnel: | \$ 1,556,500.00 |
| Equipment: | \$ 111,900.00 |
| Training: | \$ 7,000.00 |

Seaford 911 Center:

| | |
|---------------------|----------------------|
| Total Costs: | \$ 509,789.00 |
| Personnel: | \$ 496,239.00 |
| Operational: | \$ 11,750.00 |
| Training: | \$ 1,800.00 |

Wilmington:

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

| | |
|---------------------|----------------|
| Total Costs: | \$ 0.00 |
|---------------------|----------------|

Rehoboth 911 Center:

| | |
|---------------------|----------------------|
| Total Costs: | \$ 440,829.43 |
| Personnel: | \$ 423,325.31 |
| Operational: | \$ 15,734.12 |
| Training: | \$ 1,770.00 |

***Sussex County 911:** *"The Fiscal 2011 Budget changes the parameters for the incentive program provided to the dispatchers. The amount of the incentive will be increased from \$300.00 to \$375.00, with a maximum of \$750.00 per year. This program will provide a reward for dispatchers who meet the National Academy of Emergency Medical Dispatch (NAEMD) performance level on each of the various required judged items. This program rewards employees who maintain a high level of competence in responding to emergency calls, which in turn enables the Sussex County Emergency Operations Center to maintain its certified status. The Fiscal 2011 Budget again includes funding for shift differential pay for Emergency Communications Specialists who work the night shift. This supplemental fee of 75¢ per hour is comparable to what the State of Delaware offers their dispatchers, as well as that of other counties."*

Specialty Care

Trauma 43

Emergency Medical
Services for Children 50

Cardiovascular Care 55

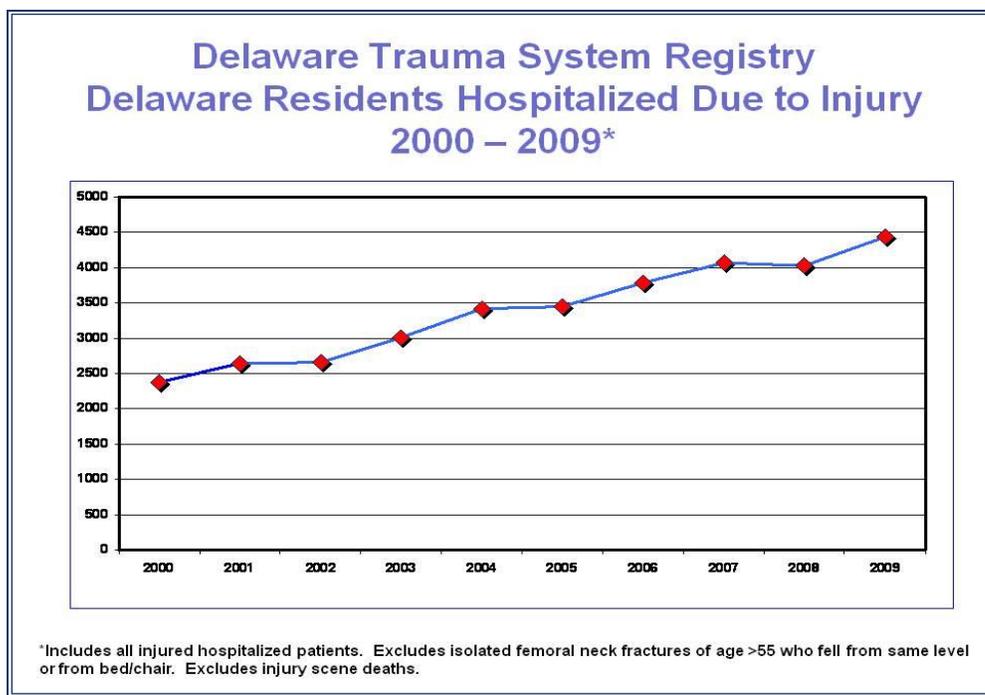
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Delaware Statewide Trauma System

Unintentional injury is the number one killer and disabler of Delawareans aged 1 to 44 years, and is among the ten leading causes of death for the remaining ages of 45 to over 65 years. *Intentional* injury, a separate category, is also among the leading causes of death in the 1 to 44 year age group. ***Unintentional injuries and homicide*** were the first and second leading causes of death for ***children and youth ages 1-19*** and accounted for 57 percent of all deaths to children and adolescents in 2004-2008 (Delaware Health Statistics Center. *Delaware Vital Statistics Annual Report, 2007*, Delaware Department of Health and Social Services, Division of Public Health: 2010).

Unintentional injuries include those caused by highway crashes involving motor vehicles, bicycles or pedestrians, by falls, and by farm and industrial mishaps. Intentional injury adds assaults, shootings, and stabbings to the above statistics. Trauma System Registry records show that **5,960** citizens and visitors to Delaware were injured seriously enough to require hospitalization in Delaware hospitals in 2009 and of these, **268** sustained fatal injuries. In addition, another **104** people were killed immediately in Delaware traumatic incidents in 2009. 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 us of our most precious resource---our youth.

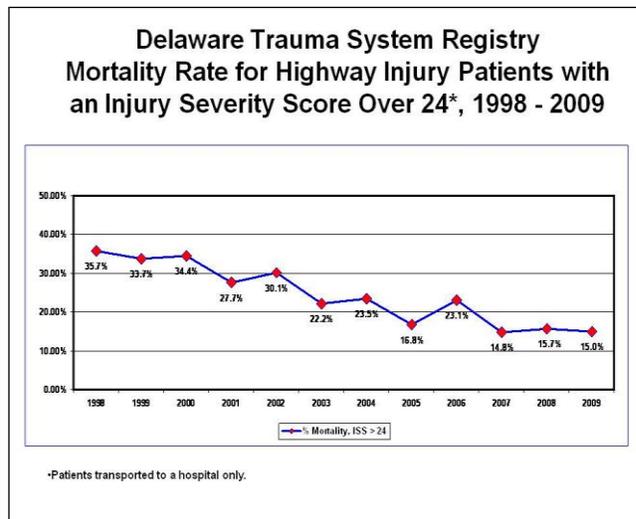
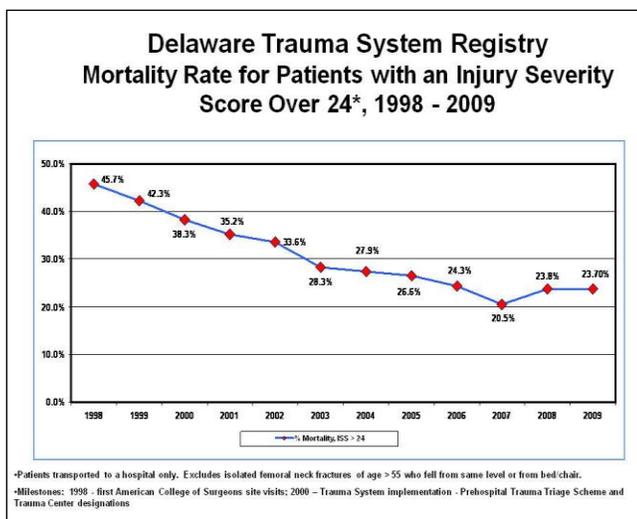
As demonstrated below, the number of injuries serious enough to require hospitalization continues to rise in Delaware.



Traumatic injury 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 develops can result in dramatic reductions, up to 50%, in preventable deaths due to injury (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*).

June 30, 2010 marked the 14th anniversary of the passage of legislation creating Delaware’s Statewide Trauma System. The passage of this enabling legislation was the first step in systematically improving the care provided to the injured of our state. Today’s Delaware Trauma System is comprised of a network of professionals who work together to ensure that trauma patients receive the appropriate emergency medical care for their injuries. The success of the statewide Trauma System is the result of much hard work by many people and agencies, led by the Division of Public Health (DPH) Office of Emergency Medical Services (OEMS). OEMS is the lead agency and provides oversight of the Trauma System, from the time a traumatic incident occurs through the full continuum of care. With the guidance of OEMS and the dedication of many individuals statewide, Delaware has developed one of the nation’s few truly inclusive statewide Trauma Systems, 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. Most importantly, this 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. Since July 1996, over 60,700 people have been cared for by Delaware’s Trauma System.

As shown below, the mortality rate of the most seriously injured patients has dramatically decreased as our Trauma System matured. The data shown in the slide on the left was discussed in an article accepted for publication in the August 2010 Journal of Trauma, with Dr. Glen Tinkoff, Trauma System Medical Advisor, as lead author. The data on the right shows the same analysis for only those patients injured in highway incidents. The mortality rate for this group of patients has also declined over the years.



Delaware’s Trauma System regulations are based 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 successfully completed every three 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:

- *Nemours / Alfred I duPont Hospital for Children*

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 CENTERS:

- *Beebe Medical Center*
- *Kent General Hospital, Bayhealth Medical Center*
- *Milford Memorial Hospital, Bayhealth Medical Center*
- *Nanticoke Memorial Hospital*
- *Peninsula Regional Medical Center (Salisbury Maryland) via reciprocity*

A Community Trauma Center is capable 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 TRAUMA SYSTEM HOSPITALS:

- *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. Participating hospitals quickly identify and transfer patients with significant injuries 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.



TRAUMA SYSTEM ACCOMPLISHMENTS:

2004 NHTSA Review Trauma System Recommendations and Progress to Date:

- The Delaware Legislature should establish dedicated funding for the trauma system.
Progress- None.
- The Level 1 resource hospital, when unable to provide care needed for any trauma patient being referred, should be obligated to arrange for care at an alternate hospital, and coordinate with the referring hospital.
Progress- Implemented.
- The state Trauma System Advisory Committee should construct a consistent response to the traumatized child. This could be done by:
 - Developing the duPont Children Hospital as a Level II Center or;
 - Assuring consistent subspecialty trauma care for children at Christiana Hospital or;
 - Arranging for pediatric trauma care at an out of state center in a consistent fashion.*Progress-* Implemented. A. I. duPont Hospital for Children was verified as a Level 2 Pediatric Trauma Center by the American College of Surgeons in November 2008 and received State of Delaware designation at that level January 1, 2009.
- In cooperation with the Delaware Emergency Management Agency, OEMS should develop a mass casualty response and surge capacity plan for the trauma system.
Progress- The Trauma System has received preparedness funds to support burn surge capacity-building. Plans were developed to care for 50 burned patients in hospitals throughout the state, including 6-10 severely burned patients for up to 72 hours while awaiting out-of-state burn center bed availability. Funding also provided hospital equipment and Advanced Burn Life Support and American College of Surgeons Disaster Management and Emergency Preparedness courses for hospital staff.
- The trauma medical director should have the formal authority to address unresolved system issues in a contemporary fashion with close oversight by OEMS and the Trauma System Advisory Committee.
Progress- Recognition of this position is included in the forthcoming revisions to the Trauma System regulations.

2010 NHTSA Review Trauma System Recommendations & Strategies for Implementation-

- The Secretary of Health and Social Services should pursue legislation to provide funding for the EMS and Trauma System. Sources that have been used by others are: fees on traffic fines, allocation of funds from tobacco tax, alcohol tax, and gaming revenues. Use the success of the Delaware Trauma System as a compelling example of the system's value for future funding.
Strategy- DEMSOC will need to most likely be the leader of this initiative. 2010 efforts to move such legislation forward within the Division of Public Health were unsuccessful. Champions of this funding legislation need to be identified, both in the legislature and in the private sector.
- DEMSOC should work toward the development of other specialty care systems, such as STEMI and stroke, modeled after the successful state trauma system.

Strategy- The pediatric system initiative utilizes the Trauma System as a model. Other systems evolving from OEMS would naturally tend to follow this same model which has proven successful in our state.

2011 CHALLENGES:

1. Financial support for the Trauma System

- Funding support for our Trauma System has never been pursued to the legislative level. Legislative initiatives from the Trauma System overall have been scarce to nonexistent.
- While Delaware hospitals, to date, have been motivated to “do the right thing for their communities”, they are facing the same financial challenges as Trauma Centers across the country---managed care, lifestyle preferences of physicians that do not include taking trauma call, malpractice insurance costs, uncompensated care, and expectations of increasing numbers of physicians for payment to participate in trauma programs.
- Some Delaware Trauma Centers are finding a source of reimbursement through billing for trauma activations and substance abuse Screening and Brief Intervention programs.

2. Further development of the Trauma System Quality Program

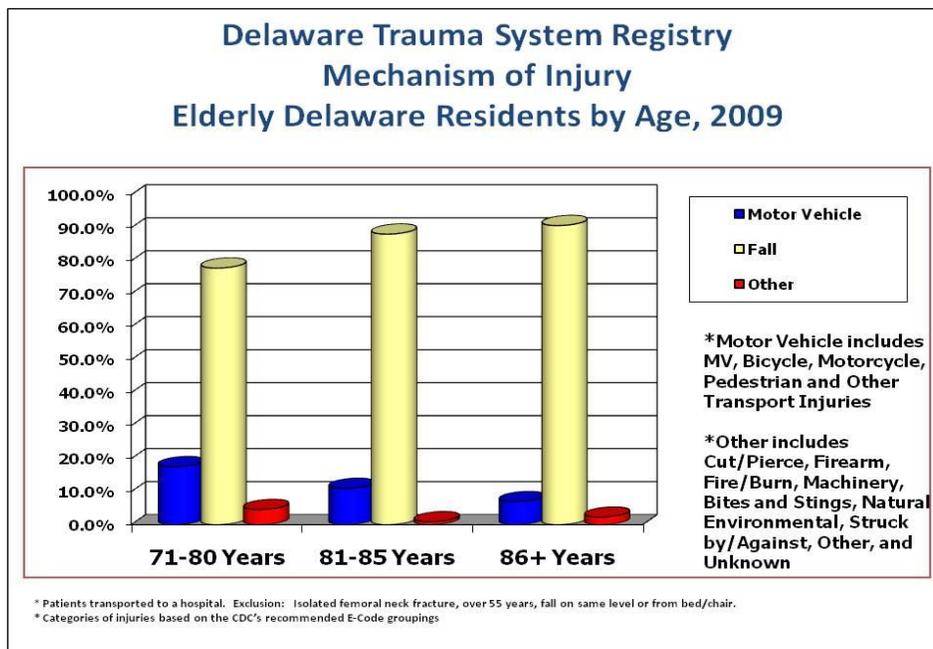
- Volume indicators are well developed and reported annually.
- Trauma System Registry data supports injury prevention programs with annual updates and revisions as requested or needed.
- Sentinel cases are discussed at the Trauma System Quality Evaluation (QE) Committee meetings.
- Some quality filters are routinely monitored:
 - Patients with Glasgow Coma Score less than 15 and Injury Severity Score over 24 who are not transferred to a facility with neurosurgical capabilities
 - Initial Emergency Department length of stay
 - Undertriage (patients meeting triage criteria without a trauma activation)
 - Mortality rate by Injury Severity Score
 - Comparison between patients under and over age 55 with Abbreviated Injury Score over 2 who are treated at Trauma Centers
 - Patients transferred out immediately following surgery in the initial receiving facility.
- Proposed criteria for automatic review by the Trauma Quality Committee are:
 - Double acute care transfers
 - Deaths of patients transferred to a higher level of care
 - Patients transferred directly from OR to OR
 - Surgical airways in the field
 - Patients transferred with blood running
 - Patients that bypass other Trauma Centers and go directly to the Level 1 Trauma Center from the scene
 - Delays in transfer leading to adverse outcome
 - Missed prehospital triage leading to adverse outcome

DELAWARE'S TRAUMA SYSTEM REGISTRY:

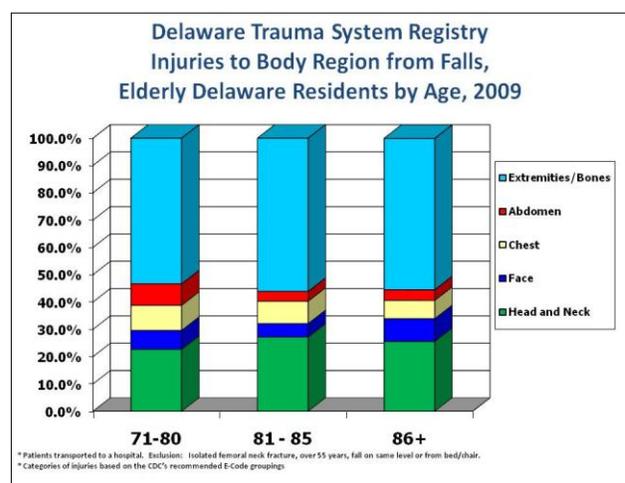
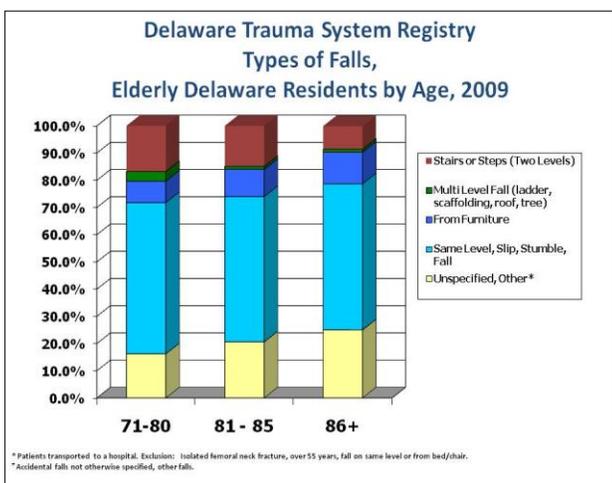
Data submitted by all eight Delaware acute care hospitals is compiled into the Trauma System Registry. Hospital Trauma Registrars gather data from prehospital tripsheets and hospital medical records to enter into the Collector trauma registry software program. They submit data on a quarterly basis to the OEMS Trauma System Coordinator.

System reports are then generated on various topics, including types, locations, and persons involved in trauma occurring throughout the state, as well as Trauma System quality parameters.

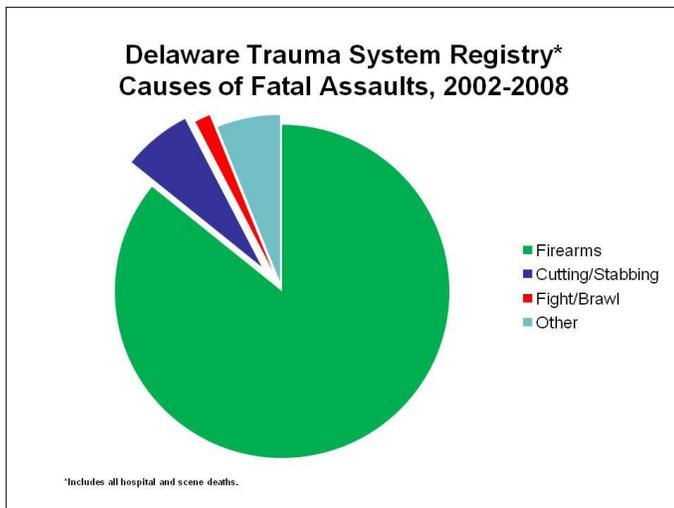
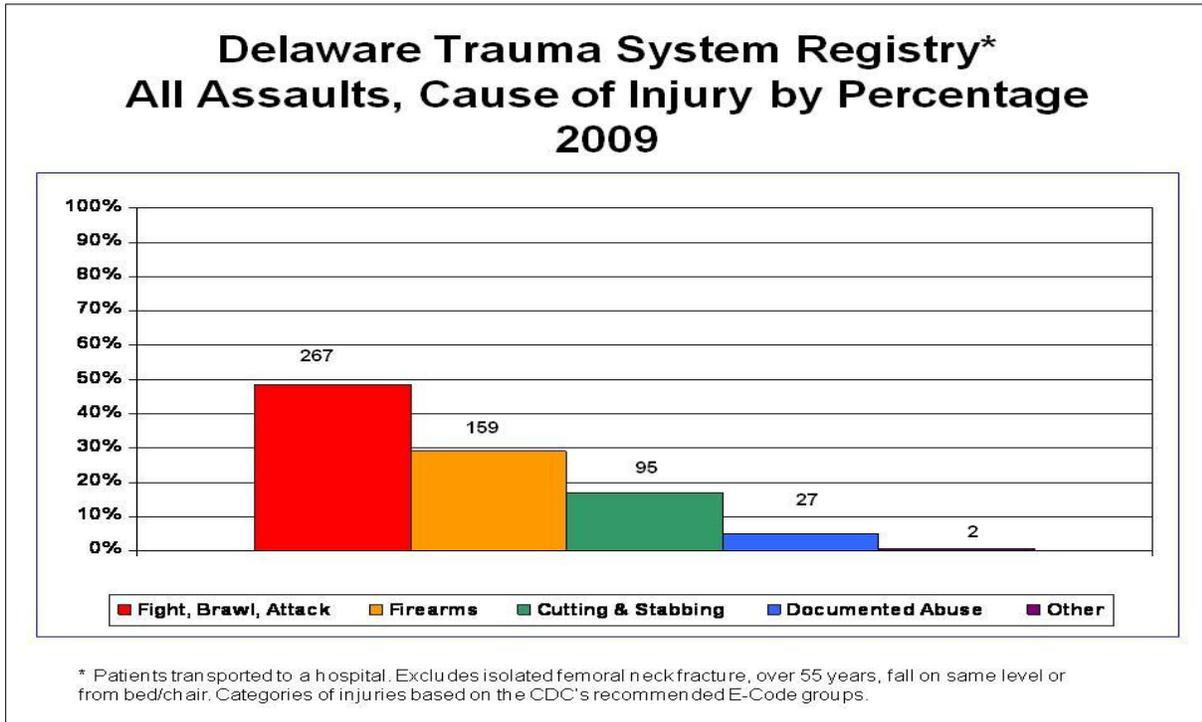
Trauma in the elderly is a significant health problem. Injuries are a leading cause of hospitalization, long-term care placement, and death in the elderly. As shown below, falls are the number one cause of injury in the elderly by far.



The graphs below show types of falls requiring hospitalization in Delaware and the kinds of injuries sustained by the elderly in falls.



Violent injuries are also a problem in Delaware. The graph below illustrates the breakdown on types of assaults that caused injuries requiring hospitalization in Delaware in 2009.



Breakdown of kinds of assaults resulting in death during a 6-year period in Delaware.

SUMMARY

Supporting the statewide Trauma System and its injury prevention programs as part of the state's economic responsibility will yield a substantial return through decreased injury-related deaths and permanent disabilities with loss of productivity, and will result in a healthier and safer Delaware.

Emergency Medical Services for Children (EMSC)



In 1984, legislation was enacted to fund Emergency Medical Services for Children (EMSC) programs in the states. Studies showed that providers were not receiving training on how to care for children and ambulances and emergency departments lacked the correct sized equipment needed to care for children.

Children's heart rates, respiratory rates and blood pressures all change as they grow. Their airways are shaped differently for intubation, IV sizes are smaller and medications must be carefully calculated according to weight. **One size does not fit all!** Emotional reactions to illness and injury vary by developmental age. Healthcare providers must have the pediatric training and equipment needed to care for children.

In 1997, Delaware was awarded its first federal grant through the Maternal and Child Health Bureau to improve Emergency Medical Services for Children (EMSC). Since 2010, a \$130,000 grant is awarded through Health Resources and Services Administration (HRSA) to Delaware. The program in Delaware is administered through the State via a contract with A.I. duPont Hospital for Children. In 2010, Delaware is still dependent upon annual federal grant funding for EMSC to meet children's needs in our ever-changing EMS System.

In 2010, the State EMSC Advisory Committee focused on the following activities:

- Completed National EMSC Performance Measure surveys and from those, identified which ambulances were not equipped with essential equipment based on the American Academy of Pediatrics (AAP) guidelines.
- Developed a plan to implement new Pediatric Emergency Care Standards for the State's eight acute care hospitals. It is anticipated that within two years all pediatric emergency care facilities in Delaware will be recognized for their ability to stabilize and/or manage pediatric medical emergencies.
- Worked with Delaware Technical and Community College Paramedic Technology Program to assure paramedic students completed a four hour rotation in a Nemours office with a pediatrician or pediatric nurse practitioner. This program is open to any paramedic or EMT requesting continuing education in pediatrics.
- Provided a pediatric emergency response demonstration and created a training video DVD on an All-Terrain Vehicle emergency scenario at Safe Summer Day in Brecknock Park, Kent County. This event involved police and EMS agencies, plus a simulated trauma center that would be involved in pediatric emergency care.
- Partnered with Safe Kids Delaware to provide the annual Childhood Injury Prevention Conference in June of 2010 in Dover. Over 125 injury prevention advocates attended from across the state.



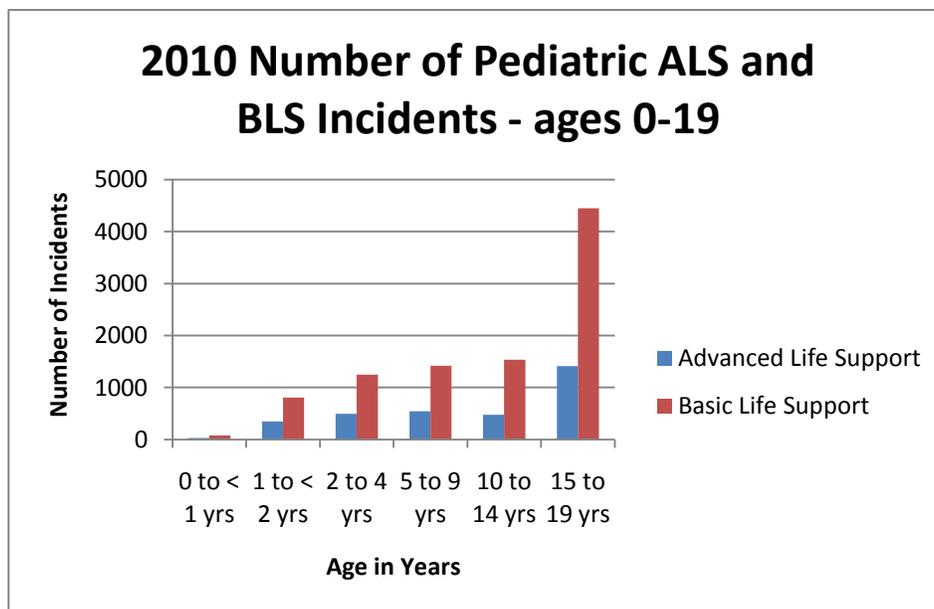
Photo submitted by
Robbie Murray,
Sussex County EMS

EMSC 2010 Data

EMSC 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 advanced life support (ALS or paramedic) and basic life support (BLS or emergency medical technician-basic) providers most frequently perform on children. The following provides aggregate data regarding pediatric emergency incidents in the State of Delaware for January 1, 2010- December 31, 2010. The total number of ALS incidents in the EDIN system in 2010 were 3,302. The total number of basic life support incidents in the EDIN system in 2010 were 9,533.

EMSC Graph 1

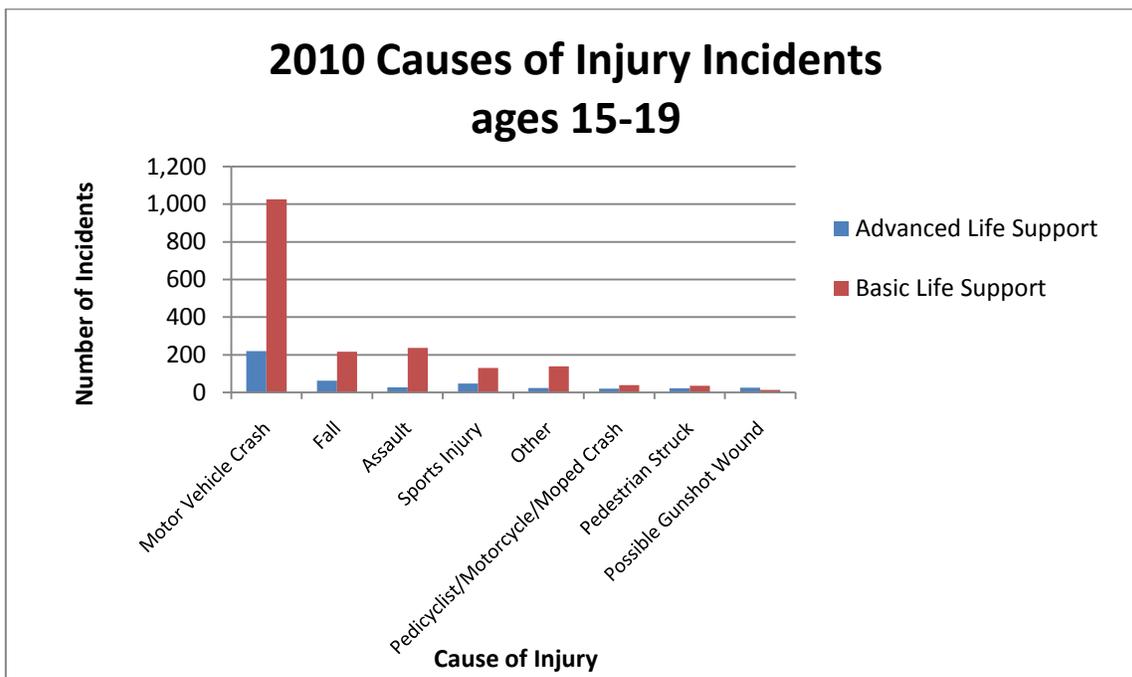
Total Number of Pediatric Reports (Ages 0-19) by Patient Age in 2010



Total ALS Incidents n=3,302

Total BLS Incidents n = 9,533

**EMSC Graph 2
Causes of Trauma Incidents in Ages 15-19**



*Please note on EMSC Graph 1 that adding ALS and BLS numbers in each age group will lead to inaccurate totals. Adding the two numbers may count a single patient twice. In this graph there were 467 ALS incidents and 1,897 BLS incidents.

Key Points from EMSC Graphs 1 and 2

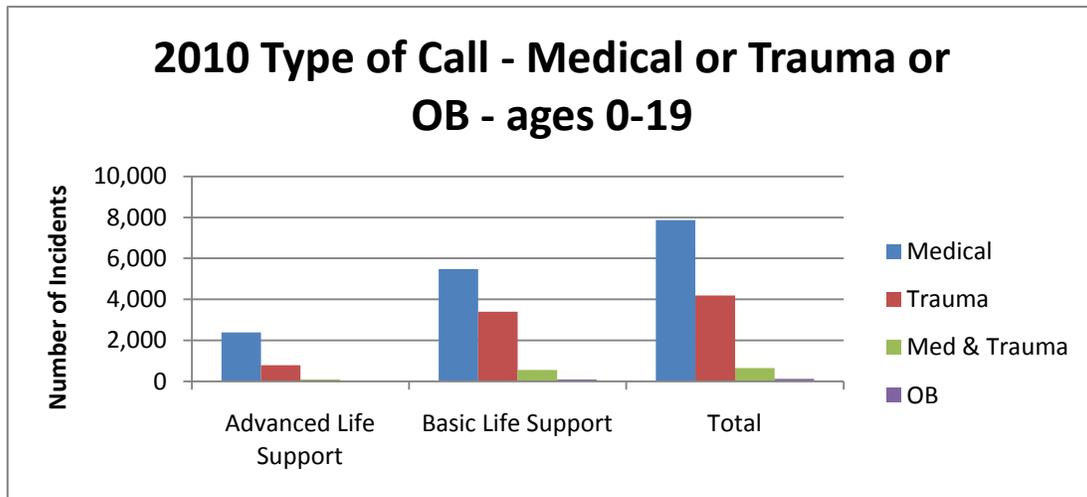
- **The greatest number of incidents for BLS providers is in the 15-19 year old age group.** Approximately 11 percent (1,025/9,533) of all the BLS runs for 0-19 age group are due to motor vehicle crashes, and 54 percent (1,025/1897) of all trauma calls for 15-19 year olds are due to motor vehicle crashes.
- **7 percent of ALS calls in the 15-19 year old age group were due to motor vehicle crashes.** Also, 47 percent (219/467) of all ALS trauma calls for 15-19 year olds are due to motor vehicle crashes.

As expected, ambulance services with the highest volumes of calls also see the highest number of children. For the BLS agencies - St. Francis Hospital ambulance service saw the greatest number of children in the City of Wilmington (1,539 calls). **The number of calls for ages 0-19 in the City of Wilmington decreased from 1,559 calls in 2009.** Outside of the city, Aetna Fire Company (840) and Christiana Fire Company (761) saw the highest volumes of children in the state respectively.

For the ALS agencies; New Castle County reported 1,831 (1,938 in 2009), Sussex reported 756 (down from 859 in 2009) and Kent reported 649 (730 in 2009) pediatric patients during 2010.

EMSC Graph 3

Type of Call Advanced Life Support vs. Basic Life Support Classification 2010



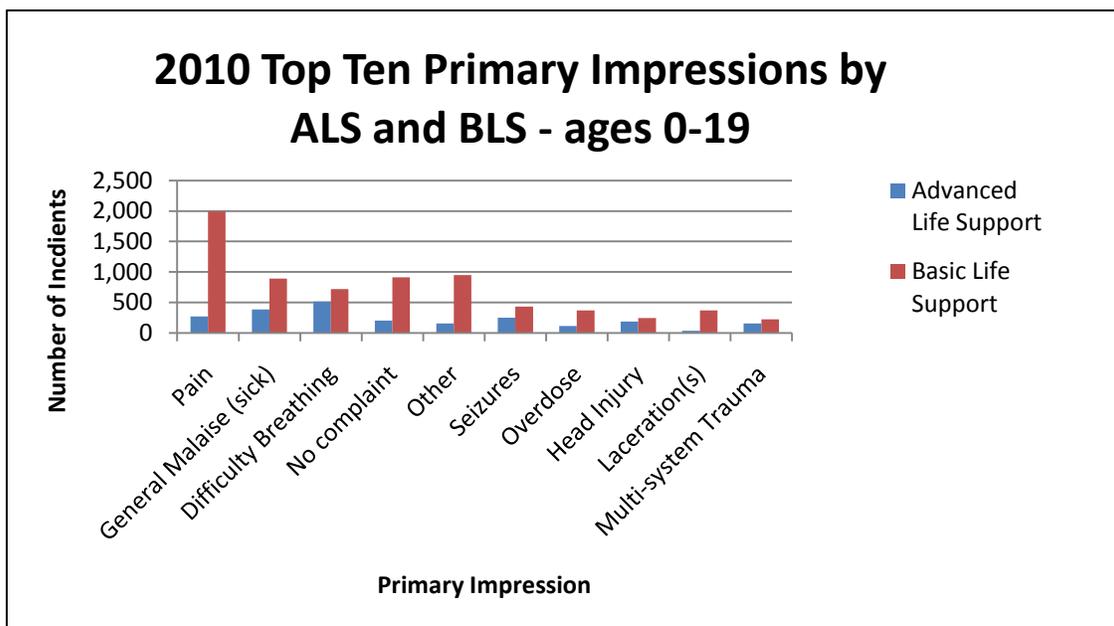
* Please note this includes Dead on Paramedic Arrival (DOPA), Refusal, Transport and Transfers of Service calls.

Key Points from EMSC Graph 3

- The majority of pediatric ALS emergency calls are for medical reasons (72 percent).
- Over half of all pediatric BLS calls are medical in nature (57 percent).
- Trauma calls made up 24 percent of the ALS pediatric calls and 36 percent of the BLS calls in children.

EMSC Graph 4

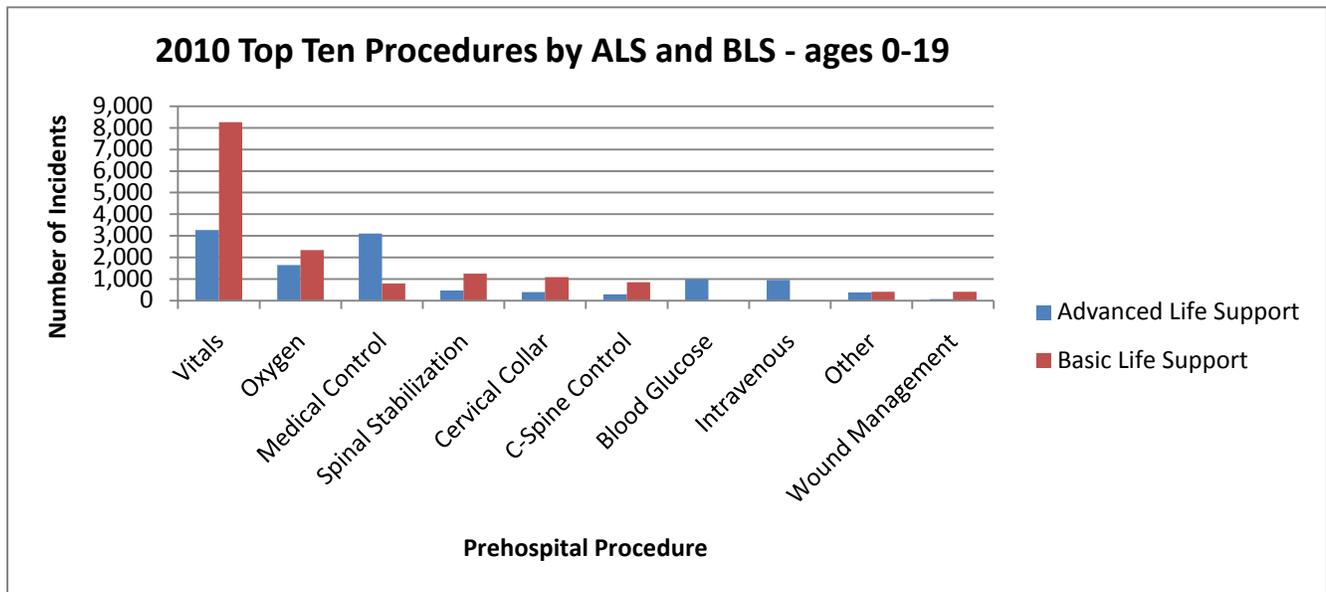
Top Ten Primary Impressions for Children 0-19 on EMS Patient Care Reports in 2010



Key Points from EMSC Graph 4

- Pain continues to be the top primary impression encountered by BLS for children age 0-19.
- Difficulty breathing continues to be the top primary impression encountered by ALS for children age 0-19.

EMSC Graph 5 Top Ten Procedures Performed on Children 0-19 in 2009



Key Points from EMSC Graph 5

Of the top ten procedures performed in the field, three of the procedures are related to spinal stabilization. ALS and BLS both frequently administer oxygen to children. ALS providers also frequently contact medical control, 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. The focus in 2011 is on development of the Pediatric Emergency Care Recognition System for Delaware's eight acute care hospitals.

Summary: EMSC has many notable accomplishments over the last twelve years. Despite thirteen 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

The leading cause of death among adults in the United States and other developed Western countries is out-of-hospital cardiac arrest (OHCA). Approximately 300,000 to 400,000 estimated deaths occur. Cardiovascular disease is not limited solely to the heart and great vessels but, refers to a multitude of diseases and conditions affecting the heart and blood vessels. In Delaware the two most common cardiovascular diseases are heart disease and stroke. Through public education and awareness a large majority of these diseases are preventable. With the combined efforts of multiple agencies in Delaware, the emphasis placed on education and awareness will be a major contribution in reducing the risk factors of cardiovascular disease through the creating of healthier individual lifestyles.

In 2010, Delaware Paramedics responded to over 6181 patients with cardiovascular related complaints. Delaware has a native aging population and a significantly rising influx of retirees. Due to the benefits associated with living in Delaware the retiree population is expected to continue to rise. A large number of Delaware hospitals have expanded their cardiovascular care programs and simultaneously Delaware EMS systems are integrating with these hospitals to insure a continuum of care for patients transported by EMS.

CARDIAC ARREST REGISTRY TO ENHANCE SURVIVAL (CARES) PROGRAM:

Submitted by Robert A. Rosenbaum, MD FACEP, EMS Medical Director, New Castle County

New Castle County EMS continues to participate in CARES, the Cardiac Arrest Registry to Enhance Survival, a project coordinated by the CDC and Emory University.

- NCC was among the first 25 participating agencies in this project which now includes 57 EMS agencies nationwide.
- NCC continues to deliver care that produces a higher rate of survival versus the comparison group of 56 other participating agencies.
- Patients who suffer cardiac arrest in the presence of EMS survive at more than two times greater frequency in NCC than the average rate of survival of our comparison group.

The inference of this data is that the quality of care being delivered by EMS in NCC including prompt recognition of cardiac arrest, defibrillation, quality CPR, medical management, and initiation of hypothermia after resuscitation, along with transport to an appropriate receiving facility for inpatient care provides patients with a substantially improved chance of survival. It should serve to illustrate the value of the critical care provided when patients in NCC call 9-1-1 and are provided with care in the pre-hospital setting.

The safety net of transport by EMS providers, rather than self transport, when a patient is critically ill should be emphasized to the public and would serve to validate that a properly resourced EMS agency is a benefit to the community.



The New Castle County Paramedics responded with the Wilmington Fire Department to a report of a patient experiencing medical problems on the third floor level of the scaffolding at a construction site. Wilmington Fire Department rescue personnel coordinating the removal and lowering of the patient from the elevated platform after he experienced chest pain and difficulty breathing.

- One area that stands out as an opportunity for improvement is bystander CPR. Documentation shows that only 20.9% of cardiac arrest patients in NCC have bystander CPR performed prior to EMS arrival, a rate far lower than the average of our comparison group.

A focused audit is being conducted to verify there are not additional cases that are being missed. This is an area medical direction, EMS, and emergency communications have targeted for improvement.

- Dispatchers are being trained and new protocols are in place to encourage callers to provide bystander CPR.
- "Hands only CPR" is hoped to increase the frequency of CPR provided by bystanders.
- EDUCATION in the community to increase the number of laypersons trained in CPR should be pursued.
- CONSIDERATION to a requirement that all DE High School graduates become CPR trained.

The involvement of NCC EMS in CARES has allowed medical direction to have a far greater understanding of the management of cardiac arrest in our community. It is an example of how a well run quality assurance/performance improvement program can provide value to an EMS agency and that with recognition of opportunities for improvement, the system can work to better meet the needs of the community.

STEMI/STROKE SPECIALTY CENTERS: The National Highway Traffic Safety Administration's assessments of Delaware's Emergency Medical System reports for years 2004 and 2010 recommend Delaware develop and implement emergency medical care triage and destination policies as well as protocols for patients requiring transport to specialty care centers. Among the specialty care centers recommended were ST Elevation Myocardial Infarction (STEMI) and Cerebral-Vascular Attack (CVA) STROKE centers.

Delaware has aggressively pursued the development of designated STEMI/STROKE centers and four Delaware hospitals offer full time emergent PCI for STEMI and five hospitals are certified by the Joint Accreditation Commission for Healthcare Organizations (JACHO) as Primary Stroke Centers.

Hospitals currently designated as STEMI centers are:

- Christiana Hospital, Newark, DE
- St. Francis Hospital, Wilmington, DE
- Kent General Hospital, Dover, DE
- Beebe Hospital, Lewes, DE

Hospitals currently JACHO certified as Primary Stroke Centers are:

- Christiana Hospital, Newark, DE
- Wilmington Hospital, Wilmington, DE
- St. Francis Hospital, Wilmington, DE
- Nanticoke Memorial Hospital, Seaford, DE
- Beebe Hospital, Lewes, DE

CARDIAC ALERT/CODE: 12 lead EKG analyses remains the standard of care for paramedics treating patients with cardiac related complaints or patients who present with signs and symptoms of acute myocardial infarction AMI/heart attack. Rapid recognition of AMI/heart attack by paramedics is the first step in a sequence of events which also includes rapid notification of the appropriate care facility and transport to the specialized care facility.

Time is the critical factor for AMI/heart attack patients. Utilizing this systematic approach for out-of-hospital AMI/heart attack related emergencies has reduced the interval from time of onset of symptoms to cardiac catheterization to less than 30 minutes. Studies continue to show that patients who experience this systematic approach have a lower mortality rate and shorter hospital stays.

PREHOSPITAL PROTOCOLS: One recent addition to the Paramedic Standing Orders is induced hypothermia for patients resuscitated from cardiac arrest. Research has shown improved neurological function for patients who have suffered cardiac arrest, are resuscitated but do not immediately wake up using this advanced procedure to cool the brain. The faster the brain is cooled the better the patient's outcome. Data shows the use of this technique is resulting in better than expected outcomes.



2010 AMERICAN HEART ASSOCIATION ECC GUIDELINES CHANGES: In 2010 the American Heart Association held its scientific session on Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiac Care Science which resulted in significant changes to the Basic Cardiac Life Support (BCLS) and Advanced Cardiac Life Support (ACLS) algorithms for treatment. In the past emphasis had always been the ABCs, Airway – Breathing – Circulation. Based on scientific evidence the AHA has changed the sequence to CAB, Circulation – Airway – Breathing and placing emphasis on performing chest compressions first which has resulted in higher survival rates of patients who suffered cardiac arrest. In the Advanced Cardiac Life Support treatment algorithms certain drugs commonly administered to treat specific heart rhythms have been removed. These sweeping changes affect the way everyone from the layperson to BCLS and ACLS providers treat victims of cardiac arrest.

STROKE: Another major factor in the cardiovascular care equation is stroke. Strokes accounted for 1461 Paramedic incidents in 2010. The therapeutic window for stroke patients is very narrow and requires the same systematic approach as AMI/heart attack emergencies. The rapid identification of stroke, notifying the appropriate specialty care center and rapid transport to a primary stroke center within the therapeutic window greatly enhances the patient's chances of survival.

EMTs and paramedics play a vital role in stroke management since EMS personnel must properly identify the signs and symptoms of stroke and initiate the proper sequence of events to greatly increase the patient's chances of survival.

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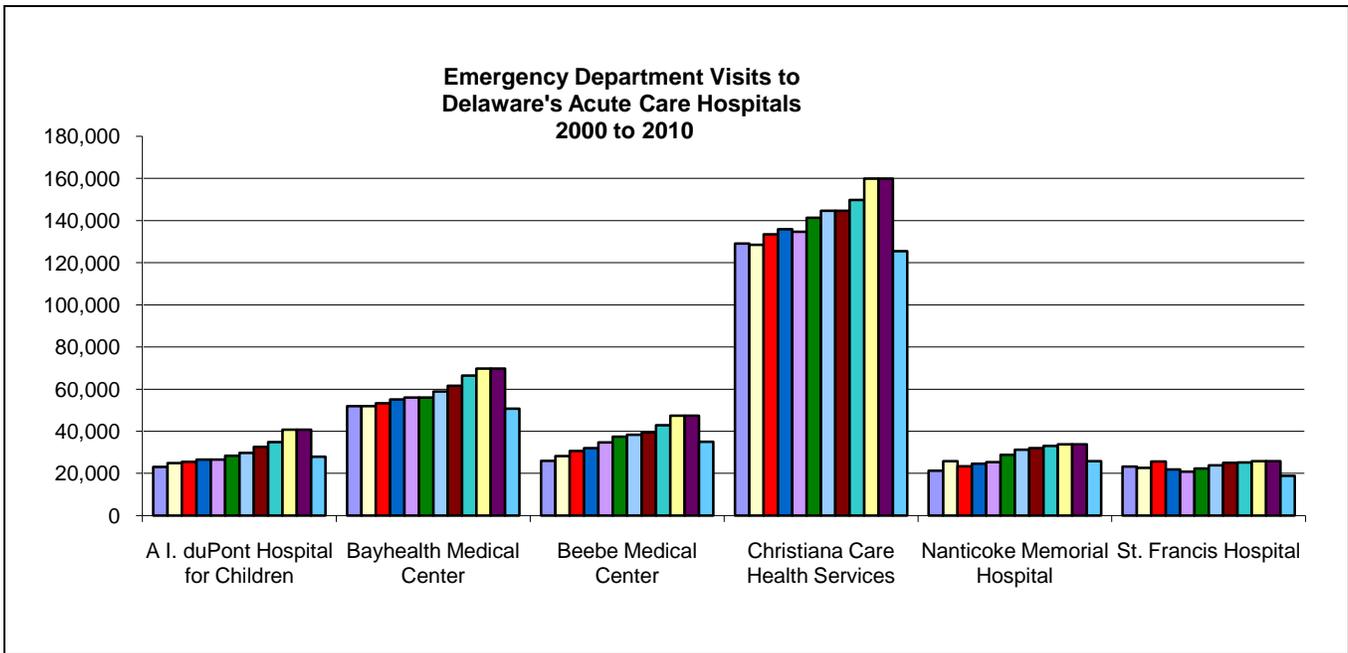
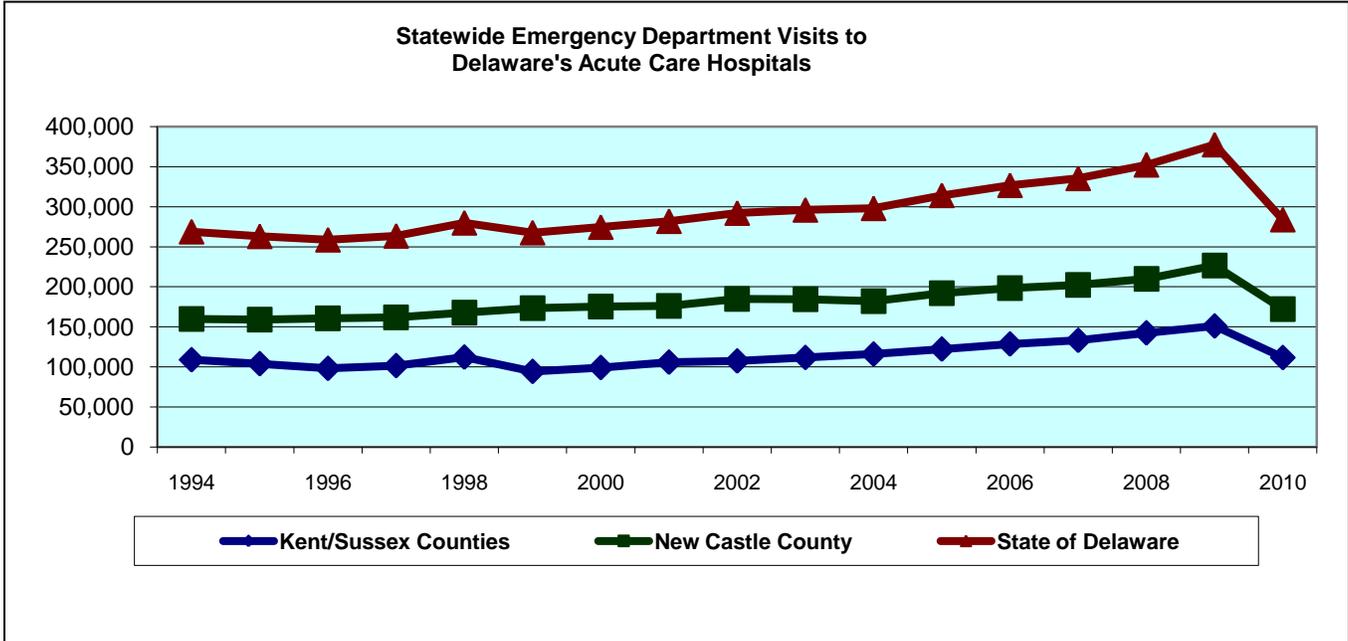
EMS System Resources

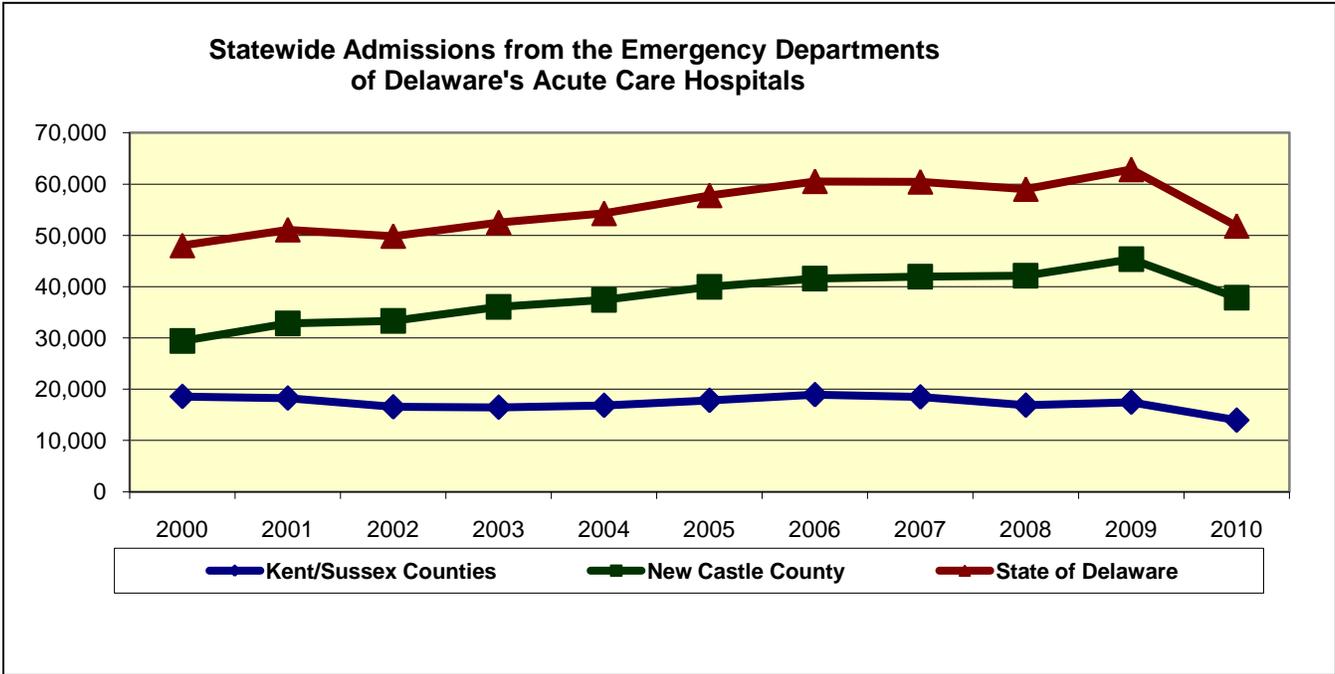
| | |
|---|----|
| Emergency Department and Hospital Diversion Data | 61 |
| Human Resources and Workforce Development | 64 |
| Education and Training | 65 |
| Domestic Preparedness | 67 |
| EMS Interfacility Transport | 69 |

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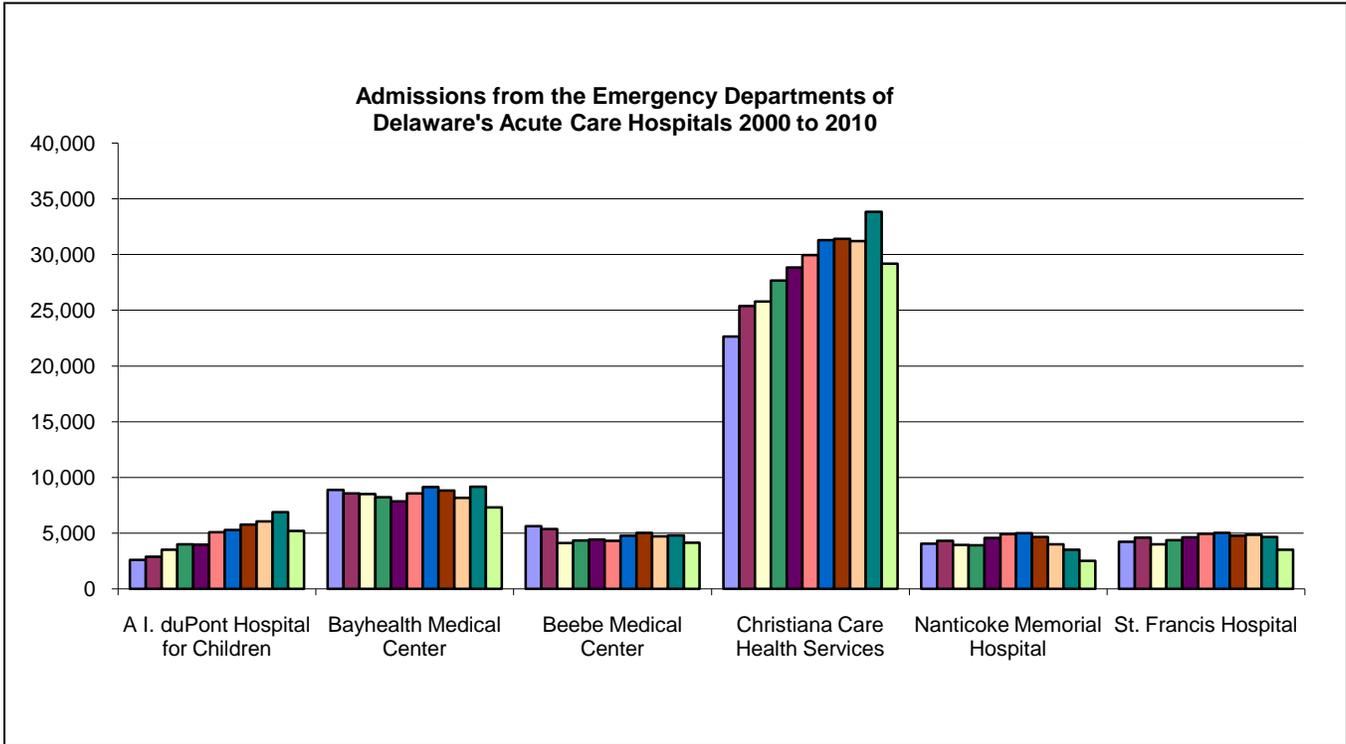
Emergency Department and Hospital Diversion Data

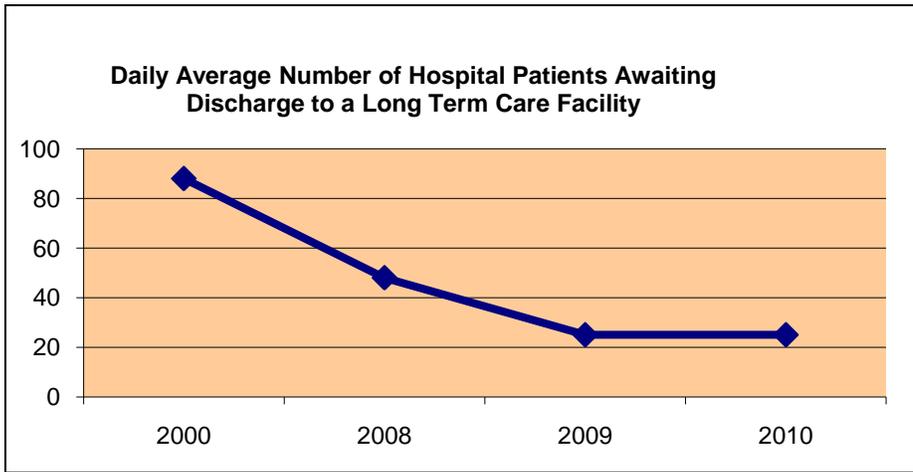
Information provided by the Delaware Healthcare Association indicates there were 283,846 visits to the Delaware acute care hospital emergency departments in 2010. This is an increase of 9,315 hospital emergency department visits (3.28%) statewide from the same period in 2000. In addition, there were 51,814 patient admissions from the emergency department for 2010, an increase of 3,802 (7.34%) from the same period in 2000.





There were fewer Emergency Department visits in 2010 than in 2009; however, this trend is not expected to continue. The decrease is due to a combination of public health publicity for flu vaccinations, a lighter than normal regular flu season and more H1N1 flu patients admitted directly into the hospital. In addition, the month of February 2010 had multiple heavy snowstorms which prevented patients from reaching the hospitals. Delaware also had an increase in walk-in clinics within the state.

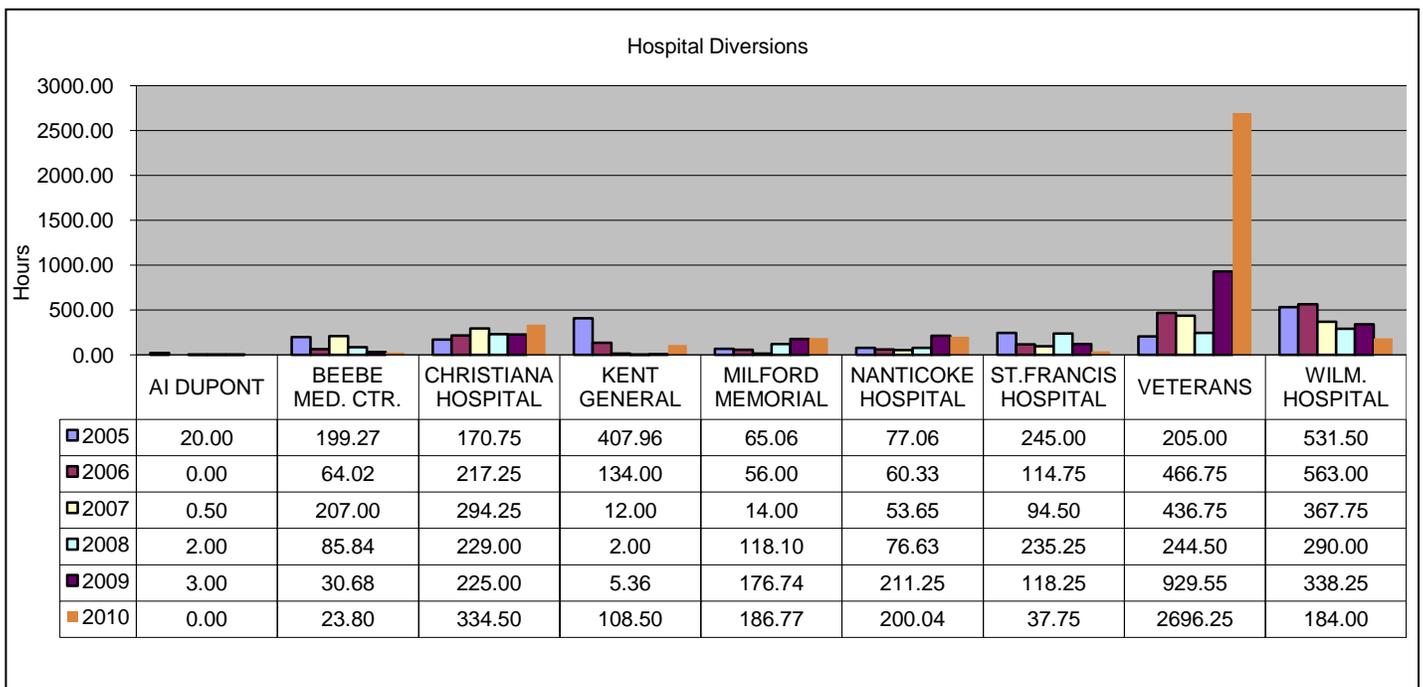




In 2010, there were still an average of 25 patients in Delaware acute care hospitals on any given day that no longer required hospital care, but the patient remained in the hospital awaiting discharge to post-acute care settings. This inability to discharge inpatients results in a shortage of inpatient beds available for the admission of emergency department 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.

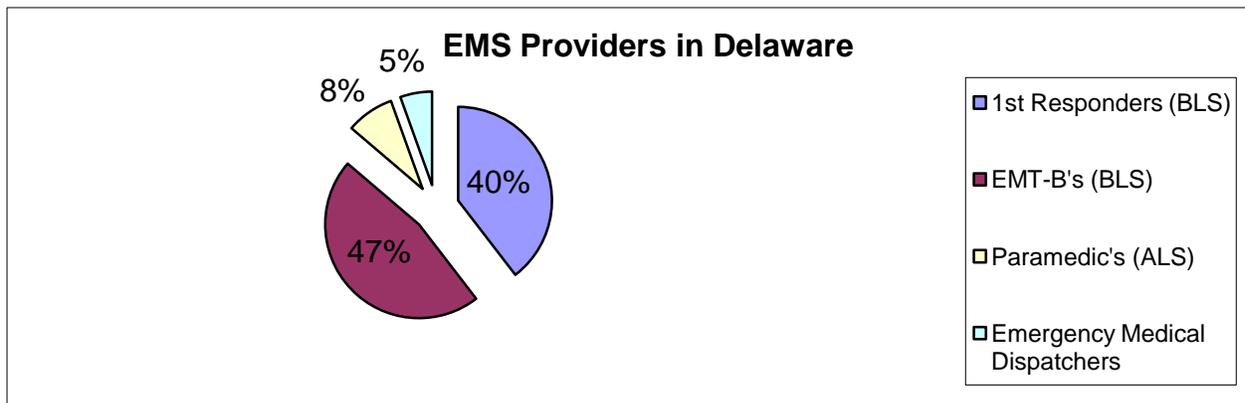
Note: There were several long term care facilities along with a dedicated pediatric long term care facility which opened between 2000 and 2008. In addition, several hospitals are educating patients and their families about short-term alternatives to waiting for a long term care bed within the hospital. It has drastically reduced the number of patients waiting for long term care beds.

The largest numbers of patients awaiting long term care beds are Medicaid and Medicare patients.



This graph shows EMS hours of diversions from hospital emergency departments. Delaware acute care hospitals continue to experience increases in emergency department patient visits during the 2010, and in many cases overcrowding. This overcrowding has many times resulted in increased ambulance diversion to surrounding hospital. Cardiac catheterization diversions are not included in this data.

Human Resources and Workforce Development



Above is a graph that shows the percentage 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 physicians give “on-line” medical direction to the providers and are the receiving physicians within the emergency rooms of the state.

Work continued in 2010 on recruitment and retention of EMS providers. There is a national shortage of EMS providers. Although Delaware is also affected by a shortage of EMS providers, the 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 state’s 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%.

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. 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.

Increasing demand for services fueled by a rising population and aging baby boomers has placed many volunteer fire companies into a position of hiring staff to cover basic life support (BLS) ambulance runs. On the next page is a listing by company of part-time and full-time paid personnel for 2010. This information also contains the shifts covered by paid personnel and if paid personnel also responds on fire/rescue calls.



New Castle County EMS Lt. Mark Allston poses with students from the Howard Vo-Tech High School following an October 2010 presentation to the Public Safety Track students regarding the county paramedic service.

Education and Training

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.

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. This program is offered through the Delaware State Fire School and a few private educational companies in the state. A 12-hour refresher course must be completed every two years to re-certify.



EMT Training at the Ellendale Fire Company. Photos by Aburk and Jonathan Walton

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. 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:

Submitted by Delaware Technical and Community College

EMT-Paramedic (EMT-P) is the advanced life support (ALS) standard of care for the State of Delaware. Delaware Technical & Community College offers paramedic education through a two-year Associate of Applied Sciences degree program that follows the National EMS Education Standards. Developing leadership and decision making skills as part of a student's clinical practice is emphasized throughout

the Program consisting of approximately 2,000 hours of classroom, simulation lab, clinical and field internship experiences.

The Program has continuously maintained accreditation through the Commission on Accreditation of Allied Health Education Programs (CAAHEP), since 1999. It is the only accredited paramedic program within the State of Delaware and will be reviewed for re-accreditation in 2011.

To obtain Delaware paramedic certification, candidates must successfully complete both a written and a practical skills examination by the National Registry of Emergency Medical Technicians. Additionally, they must maintain current certifications in advanced cardiac life support (ACLS), pediatric advanced life support (PALS), and a specialized trauma certification course (PHTLS or ITLS).

Paramedic Simulation Lab



In 2010 the Delaware Tech Paramedic Program graduated its 11th paramedic class. A total of 118 paramedics have successfully completed the Program since its inception. One hundred percent of the Program's graduates have successfully passed the National Registry of Emergency Medical Technicians Paramedic examination.

EMS INSTRUCTOR COURSE: In Delaware, the instructor level or Methodology course trains individuals 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 instructor course prepares the EMS instructor for the specific and unique subject matter that faces the emergency medical system. Delaware Technical and Community College requires an Associate's Degree and six years experience or a Bachelor Degree and four years of experience to instruct at the EMT-Paramedic level. All Paramedic Instructors must hold a Paramedic or RN, who practice 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, tactical 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 Licensure and Discipline 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. National Registry of EMT mandates 48 hours of CEUs for EMT-Basics every two years and 24 hours for Paramedics.

EMERGENCY MEDICAL DISPATCH: All public safety answering points (PSAP) that dispatch 911 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 two years, to maintain national certification.

Domestic Preparedness

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 evaluated and made revisions to the state Toxmedic standing orders. The cyanide exposure protocol was updated to reflect current research concerning the use of Sodium Thiosulfate in addition to Cyanokit. This revision will afford a great deal of adaptability in a situation involving mass casualties from cyanide exposure.

Over the past year, there have been many journal articles written about the risk of cyanide exposure to smoke inhalation victims. A particular risk exists to our country's firefighters who are exposed to smoke frequently in their service to the community. While the treatment of cyanide exposure had always been included in the Toxmedic protocols, the side effects of the treatment had presented a difficulty in treating suspected cyanide exposure in smoke inhalation. In addition, the Toxmedic protocols serve to guide only our state's Toxmedics, a small cadre of specially trained paramedics. These Toxmedics are intended to be the lead providers at incidents involving chemical releases. These incidents occur infrequently. However, incidents involving smoke inhalation unfortunately occur much more frequently often without the presence of a Toxmedic on scene. To address these concerns, the medical directors developed a smoke inhalation protocol that includes the use of the Cyanokit to address the cyanide component of smoke. The protocol is part of the state Paramedic Standing Orders, thus allowing the use of Cyanokit by all state paramedics. This will increase the chances that treatment can be offered to both civilian and firefighter smoke inhalation victims when needed.

Last year, many regions of the country saw an increase in the number of "chemical suicides". The majority of these cases involved the use of common household chemicals that, when mixed, produced hydrogen sulfide. Existing Toxmedic protocols did not address patients exposed to this substance. However, the medication required has been part of the cyanide treatment protocol since its creation. This year, the medical directors developed a hydrogen sulfide treatment to address the increased frequency of these "chemical suicides" and the risks they pose to our emergency responders.

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. In 2010, the Office of Emergency Medical Services worked with the Homeland Security Terrorism Preparedness Working Group and Public Health Preparedness to complete a project replacing nerve agent antidote kits for services whose kits have expired. These new DuoDote™ autoinjectors replace the Mark I kits that are no longer manufactured. Kits that remained after the replacement project were distributed to services who wish to begin participation in the program.

TECHNICAL ASSISTANCE: Since 2007, the Office of Emergency Medical Services, working with the Office of Public Health Preparedness and the Delaware State Fire School, has contracted a senior paramedic to provide EMS agencies with technical assistance on domestic preparedness issues. This position continues a number of projects to assess current preparedness efforts and plan for future preparedness initiatives. The goal of OEMS domestic preparedness efforts is to increase the readiness of all Delaware responders to prepare for an all-risk response.

CARBON MONOXIDE POISONING: There have been many articles published in prehospital medical journals about the dangers of Carbon Monoxide poisoning. Carbon Monoxide is an odorless, colorless gas produced by the incomplete combustion of many organic materials. It affects the body by inhibiting the ability of the blood to transport oxygen to the cells. Patients who are exposed to CO often exhibit very vague symptoms making it easy to mistake CO poisoning for other problems such as the flu. In addition to affecting the patient, the presence of CO in a residence may also affect responders who are sent there to aid the patient.

In 2010, EMS and fire services in the State of Delaware received pulse CO-oximeters through a program pursued by a group of EMS responders. This innovative group obtained grant funding for the purchase of Rad57 CO-oximeters for their agencies as well as many other response agencies in the state.

Over the past year, the CO-oximeters have seen an increased use in daily operations. Pulse CO-oximetry has been permitted for use by both ALS and BLS services in the state EMS protocols. For many years, pulse oximetry has been a helpful adjunct to prehospital providers in evaluating oxygenation of the patient. When used with good assessment technique, pulse oximeters can alert the practitioner to conditions that warrant intervention. It can also help gauge response to therapy such as to the extent of improvement achieved by the administration of nebulized or meter-dose bronchodilators.

Pulse CO-oximetry works in a similar manner to provide an assessment tool for gauging the extent of Carbon Monoxide presence in the bloodstream. Again, in conjunction with good assessment technique, it can help the provider by detecting the presence of a potentially harmful condition in a patient who may present with very vague symptoms. The pulse CO-oximeter has been added as an optional item for ALS and BLS services who wish to add them to their equipment lists.

In addition to patient care use, the pulse CO-oximeter had a valuable role in assessing firefighters exposed to the chemicals contained in smoke. By adding an additional parameter of assessment, it is hoped that firefighter rehab will better screen out those at risk for further illness or injury on the fireground scene.



EMS Interfacility Transport

The 911 System was designed to provide a universal access number for requesting emergency assistance. Calls to 911 are assumed to be of an emergent nature and are handled by the local law, fire, and emergency medical services responsible for the jurisdiction.

The 911 System should be used for life and/or limb threatening calls only. The emergency response system does not provide adequate resources for interfacility transport.

When the 911 System is used for interfacility transportation, resources allocated for emergency response are affected, thus decreasing the availability of life-saving resources and/or creating delays in response time for those who are in critical need of prehospital care services. Efforts to “Make the Right Call” and utilize interfacility agencies for routine transportation will surely make a difference on the state’s 911 system and EMS resources.

In order to provide an interfacility transport in Delaware:

- A prescribing practitioner (physician, physician assistant, or nurse practitioner) must order the transfer of the patient (this may also be accomplished through written standing orders).
- The prescribing practitioner must determine the appropriate method of transportation in consultation with the ambulance service provider (BLS, Paramedic, and/or specialty care personnel).
- The sending facility must coordinate the transfer with the receiving facility.
- The sending physician must coordinate with the receiving physician.

Interfacility ambulance services are used for the following Patients:

- Facilities requesting non-emergency patient transportation
- Skilled Nursing Facilities
- Physician Offices
- Clinics
- Acute Care Hospitals
- Home/Hospice Care Facilities
- Board and Care Facilities
- Urgent Care Centers
- Custodial Care Centers with a prescribing practitioner including jails, rehabilitation centers, etc.

In Delaware we have three types of interfacility Personnel:

- *Basic Life Support (BLS):* Ambulances are staffed with Emergency Medical Technicians (EMT’s). EMT’s provide basic care and patient monitoring including oxygen therapy, bandaging & splinting, etc. Interfacility transport EMT’s have the same scope of practice as 911 EMT’s and utilizes the same statewide treatment protocols. Delaware has nine Basic Life support interfacility agencies with a total of 88 ambulances licensed and operating in Delaware: CFT, Christiana Care, Delaware Park, Hart to Heart, LifeStar, Prime Care, St. Francis, Transcare, and Urgent.

- *Advanced Life Support:* Ambulances are staffed with at least one Paramedic and one EMT. Paramedics provide advanced life support care and monitoring including ACLS. The EMT provides support to the Paramedic. Interfacility transport paramedics have the same scope of practice as 911 paramedics and utilize the same statewide treatment protocols. Delaware has two paramedic interfacility agencies licensed and operating in Delaware: St. Francis and TransCare.
- *Hospital Based Transport Team:* Ambulances are staffed with transport team personnel and at least one EMT from the transport service. The transport team personnel are staffed with specialty care personnel typically representing at least one Registered Nurse, one Respiratory Therapist and may include a Physician. The transport team is able to perform those procedures and assessments authorized by a prescribing practitioner and overseen by the medical facility. The EMT provides support to the transport team. Delaware has two hospital based transport teams: Christiana Care Health Services and AI duPont Children’s Hospital.

In 2010, Delaware licensed the first two ALS interfacility agencies:

ST. FRANCIS EMS

Submitted by St. Francis EMS

St. Francis Emergency Medical Services is the 911 Basic Life Support ambulance provider for the City of Wilmington responding to over 17,000 emergency dispatches in 2010. The department utilizes five ambulances staffed 24/7 to provide this service.



In 2010, St. Francis EMS became the first EMS agency in the state to provide Advanced Life Support ambulance service with an Interfacility ALS License issued by the Office of EMS. They provide ALS and Critical Care transports to St. Francis Hospital and other regional hospitals.

St. Francis EMS now provides non-emergency ambulance transport service including dispatching 24/7. This growing service would not be in existence without the commitment of the Medical Director, St. Francis Hospital Administration, and Operational Chief, four Sergeants, sixteen Field Training Officers, four dispatchers, and forty BLS line staff.

TRANSCARE, INC.

Submitted by TransCare, Inc.

TransCare is a commercial EMS provider in Delaware with operational bases in New Castle and Milton. TransCare operates throughout the Mid-Atlantic area from New York to Baltimore, MD and as far west as Pittsburgh, PA. TransCare's operations started in 1994 and we began service to the greater Delaware Valley area in 2004.

Since 2004, we have quickly expanded in Delaware based on our high levels of customer service and focus on quality patient care. Our 100 employees proudly serve the First State and average more than 1,000 calls per month. TransCare operates 13 ambulances each day out of the New Castle base and five per day out of the Milton Base. TransCare services some of the largest medical centers in the state, providing BLS transport, transport for Critical Care and Neonatal teams and paratransit services.

With the receipt of our ALS License in December 2010, TransCare is now equipped and able to provide our client base with additional services, including paramedics to monitor patients with medications and equipment within the paramedic scope of practice, including ventilators. These transports would have previously required staffing with a nurse.

TransCare's Delaware operations team is led by Delaware Valley General Manager, John Christy, Delaware Operations Manager, Josh Rhoads and Delaware ALS Coordinator, Melissa Smith. John, Josh and Melissa all practiced as paramedics in the field and have more than 20 years paramedicine and ALS management experience. They are focused on quality care, excellent service and efficient transportation and treatment.

As a management team John, Josh and Melissa recognize that quality care and service only come from motivated and engaged providers at the crew level. At TransCare our management teams operate on a foundation of putting *People First* and observing in our daily work and behavior the company's STAR-CARE core values: **S**afe, **T**eam-based, **A**ttentive to human needs, **R**espectful, **C**ustomer accountable, **A**ppropriate, **R**easonable, and **E**thical.

Our employees, customers and community members can expect great service, quality care and STAR-CARE behavior from all of us at Transcare.



TransCare Paramedic Summer Desalniers and
EMT Kevin Robeson

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New Castle County

Advanced Life Support 75

Basic Life Support 90

Communication Center 93

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New Castle County Emergency Medical Services Division

Submitted by NCC EMS

OVERVIEW

Introduction

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 of 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 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 is also the first EMS agency in Delaware to achieve national accreditation from the Commission on Accreditation of Ambulance Services (CAAS).

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 2010, New Castle County EMS deployed nine (9) paramedic units during its high call volume periods, and eight (8) paramedic units during non-peak operating hours. A Paramedic Sergeant (field EMS supervisor) is on duty during each shift with a second Paramedic Sergeant augmenting field operations during peak call volume periods. An EMS Lieutenant serves as the overall shift commander on a 24-hour basis. Both the Paramedic Sergeant and EMS Lieutenant are equipped as advanced life support responders.

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

Further information regarding the New Castle County Paramedics is available on our web site at: www.nccde.org/ems.



A NATIONALLY ACCREDITED EMERGENCY MEDICAL SERVICE

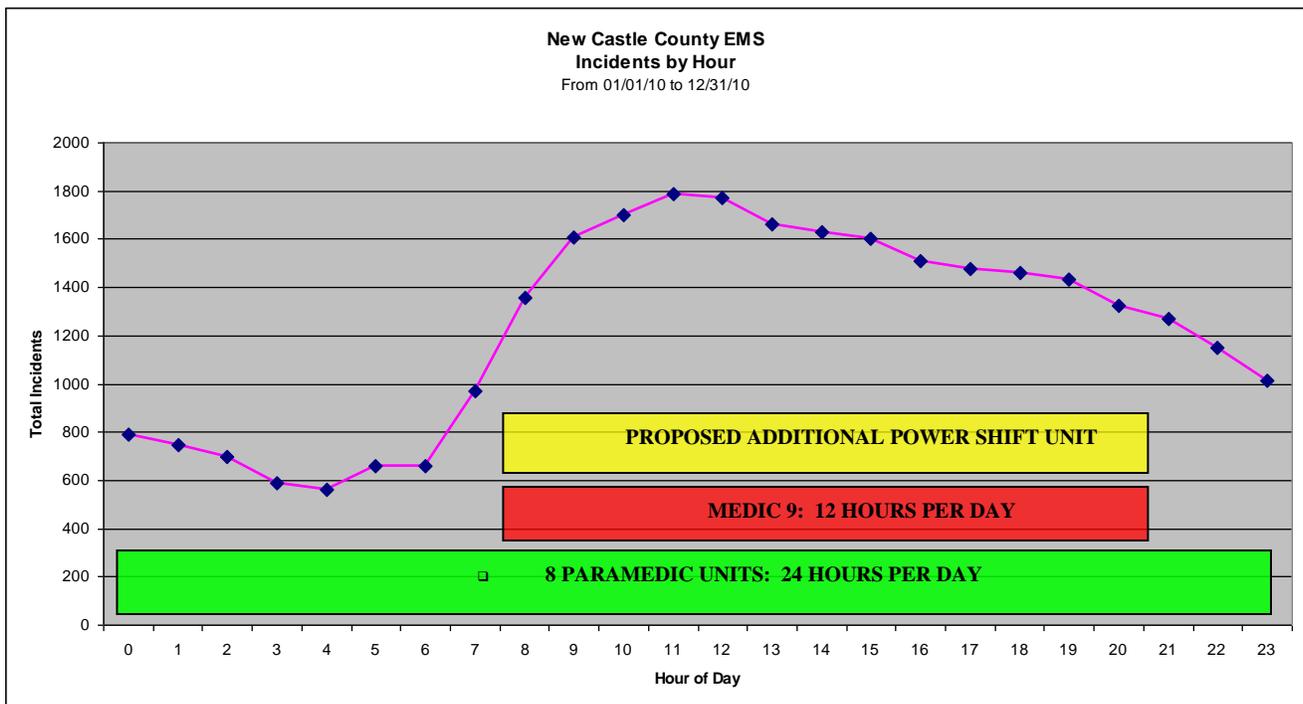


OPERATIONS

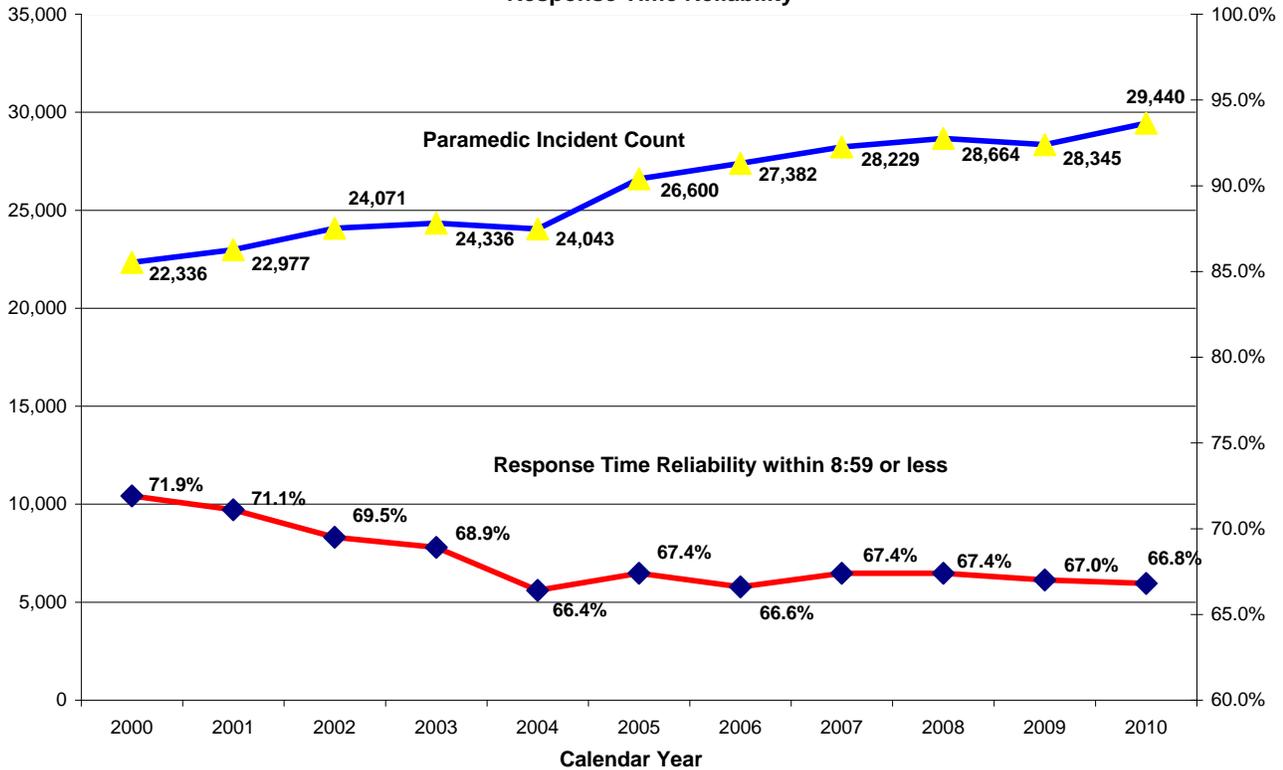
Paramedic Service Operational Demand

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. Utilization of “power shift” units, such as Medic 9, provides an opportunity to increase paramedic staffing during high call volume times each day.

The EMS Division currently deploys eight (8) paramedic units and a Paramedic Sergeant on a 24-hour basis, seven days a week. A ninth paramedic unit and second Paramedic Sergeant are added during peak call volume periods on a “power shift” configuration (0700-1900 hours) seven days a week.



Annual NCC*EMS Incident Count and Response Time Reliability



New Castle County EMS continues to note an increase in the number of paramedic incidents. The paramedic service response time for *all* incidents (combined Charlie, Delta, Echo and stand-by events) was 66.8% reliability within 8:59 minutes or less for calendar year 2010. Response time reliability based on dispatched priority level demonstrates a faster paramedic response time for potentially life-threatening, time sensitive (“Echo” level) incidents with a response time reliability of arrival 75.2% within 8:59 minutes or less.

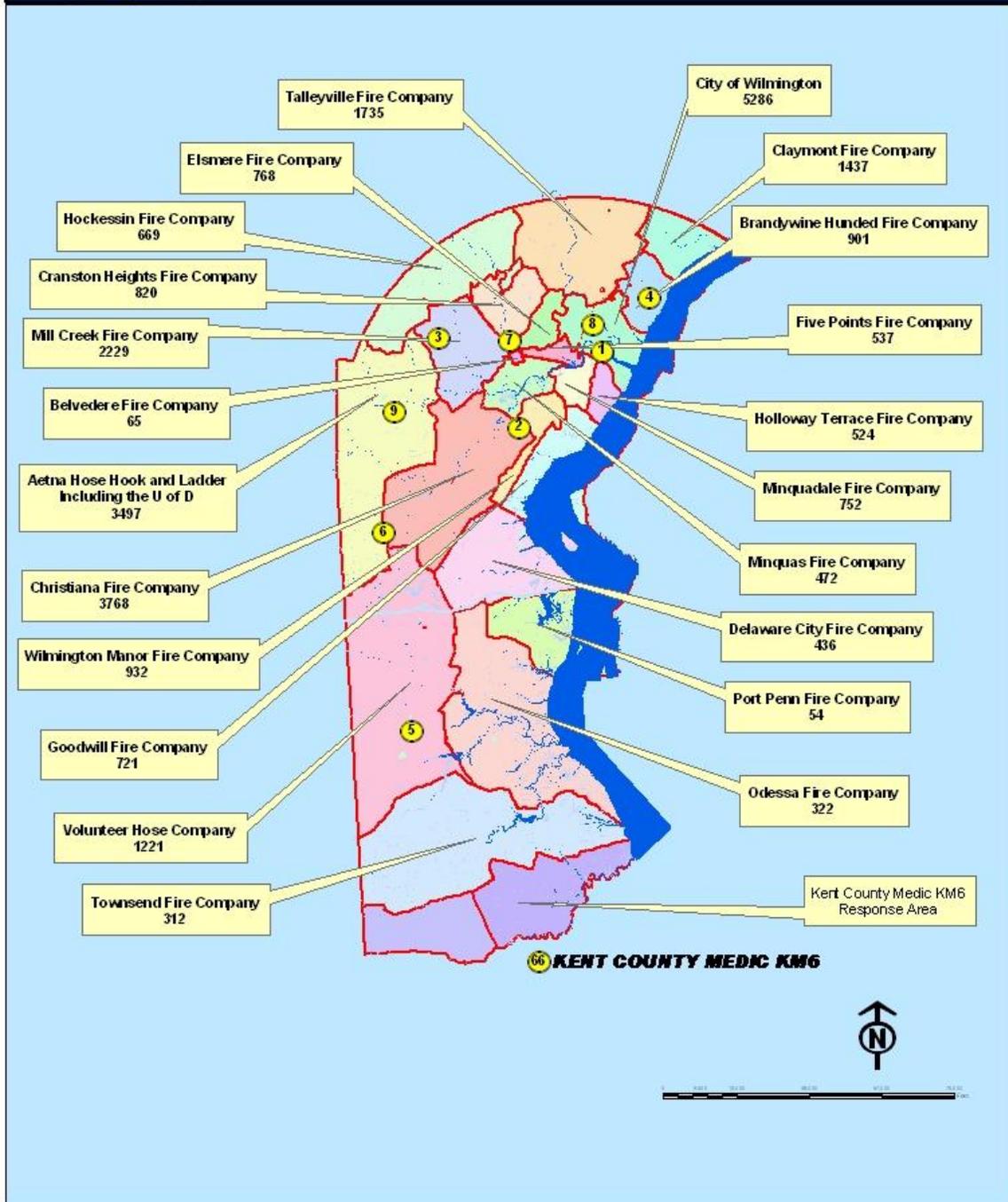
The Emergency Communications Center will prioritize emergency medical incidents in accordance with a national set of criteria. It is routine for the communications center to reassign paramedic units from a lower priority to a higher priority medical incident.



New Castle County Paramedics complete their assessment of a patient that has just been extricated by fire company special operations personnel. The patient had been trapped for over 2 hours after being caught under the collapse of a second floor deck. The patient was flown by state police helicopter to the Christiana Hospital.



New Castle County EMS Incident Count By Fire District for Calendar Year 2010

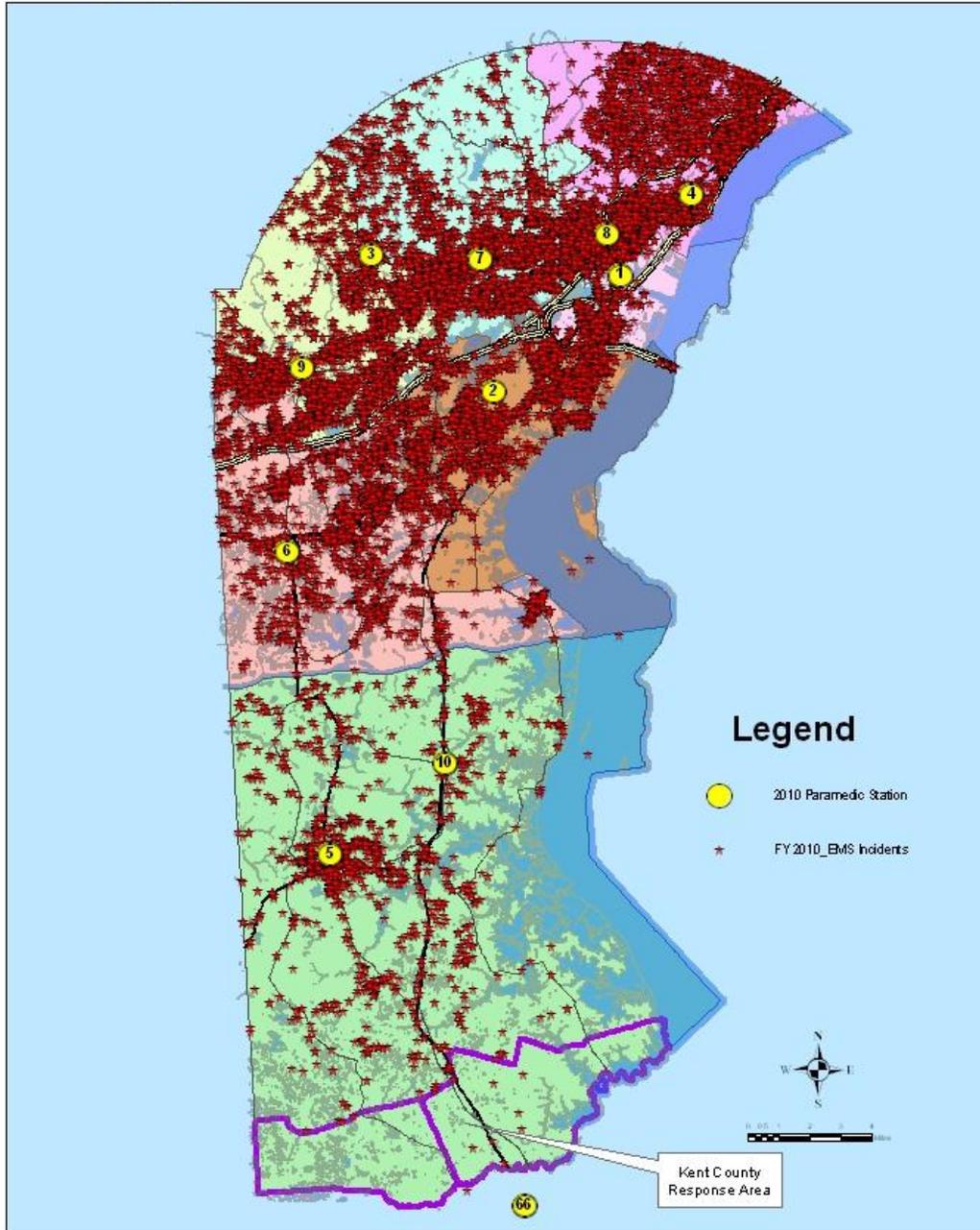


This map illustrates the number of New Castle County Paramedic incidents in each fire company district during calendar year 2010. The New Castle County Paramedics work closely with the fire company basic life support ambulances on a daily basis, and provide advanced life support capabilities to the County EMS System.

Source: New Castle County Computer Aided Dispatch (CAD) System



New Castle County Emergency Medical Services Paramedic Incidents - FY 2010



This map illustrates all of the New Castle County Paramedic incidents that occurred during fiscal year 2010 (July 1, 2009 to June 30, 2010). The map shows the concentrations and distribution of paramedic incidents throughout the county.

Source: New Castle County Computer Aided Dispatch (CAD) System

New Castle County Paramedic Unit Activity

| PARAMEDIC UNIT | 2010 |
|--------------------------------|---------------|
| Medic 1 (Wilmington) | 3,189 |
| Medic 2 (New Castle) | 3,985 |
| Medic 3 (Newark) | 3,330 |
| Medic 4 (Brandywine 100) | 3,320 |
| Medic 5 (Middletown) | 1,689 |
| Medic 6 (Glasgow) | 3,001 |
| Medic 7 (Prices Corner) | 3,468 |
| Medic 8 (Wilmington) | 4,076 |
| Medic 9 (12 hour/day unit) | 1,882 |
| Medic 10 (Special Duty) | 48 |
| Medic 11 (Special Duty) | 12 |
| Medic 12 (Special Duty) | 3 |
| Medic 13 (Special Duty) | 1 |
| Medic 20 (Special Ops) | 24 |
| ALS Bike Team | 0 |
| Single paramedic ALS responses | 2,408 |
| TOTAL RESPONSES | 30,436 |

New Castle County EMS Supervisor and Staff Activity

| EMS SUPERVISOR/STAFF | 2010 |
|------------------------------------|--------------|
| EMS HQ Staff (Chief & Asst Chiefs) | 81 |
| EMS Lieutenants | 453 |
| Paramedic Sergeants | 2,214 |
| TOTAL STAFF RESPONSES | 2,748 |



The New Castle County Paramedics again hosted EMS personnel from the Netherlands during 2010. The Dutch visitors rode with the New Castle County Paramedics in addition to the Delaware State Police helicopter, Crozer-Chester Medical Center EMS, and the PennSTAR flight program in Philadelphia. The Dutch visit is an annual event, and was informally named "Cloggy Medics 2010."

ADMINISTRATIVE ACTIVITY

Public Education/Injury Prevention Programs

New Castle County EMS continued to provide a limited number of public education activities to support its delivery of emergency medical care. Unfortunately, our agency has had to reduce its outreach activity as a result of fiscal restrictions throughout state and local government. A robust public education program can support the delivery and performance of an EMS system by improving the speed of public access and prompting appropriate bystander response before EMS arrives on scene. For instance, areas with higher rates of bystander CPR and bystander and/or law enforcement AED utilization generally have higher cardiac arrest survival rates.

Public Education Activities

CPR/AED Classes 17 courses conducted with certification of 259 persons

CPR Healthcare Provider 23 courses conducted with certification of 257 persons

First Aid Classes 5 courses conducted with certification of 73 persons

Vial of Life Program Collaborated with Christiana Care Emergency Departments and Visiting Nurse Association, and volunteer fire service to facilitate distribution of Vial of Life kits

EMS Division Displays Staffed 6 paramedic service displays or presentations with two EMS Division Honor Guard details for public safety funerals



New Castle County Paramedics participated in “Family Preparedness Day” activities hosted at Glasgow Regional Park. The event included displays from multiple agencies, including emergency medical services, fire service, law enforcement and other non-governmental organizations that contribute to community preparedness and disaster response. The Medical Command and Mobile Aid Station (“MEDCOM”) and a County paramedic unit were on display

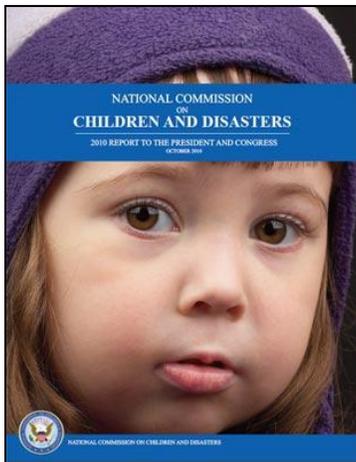
ACCOMPLISHMENTS

Continued Participation in National CARES Registry



The New Castle County Paramedics were one of the first 25 agencies to participate in the national Cardiac Arrest Registry to Enhance Survival (CARES) program operated by the Centers for Disease Control (CDC), American Heart Association (AHA) and Emory University. The CARES registry facilitates uniform collection of EMS response and hospital discharge data for cardiac arrest patients, and provides a platform for standardized data analysis. There are now 57 EMS agencies nationwide participating in the project.

National Commission on Children and Disasters Releases Report to President and Congress



The National Commission on Children and Disasters released their report to the President and Congress in October 2010. The independent Presidential Commission is charged with conducting a comprehensive study to examine and assess the needs of children as they relate to preparation for, response to, and recovery from all hazards, including major disasters and emergencies. In 2008, New Castle County EMS Chief Lawrence Tan received a congressional appointment to the ten member Commission.

A copy of the report is available from the Commission web site at: www.childrenanddisasters.acf.hhs.gov

NCCo Paramedics Eligible for Wilmington University Public Safety Scholarship Program



Photo courtesy of the Office of the Governor

New Castle County EMS Chief Lawrence Tan (*second from right*) joined Governor Jack Markell and Wilmington University President Jack Varsalona announcing the establishment of a scholarship program benefitting the public safety community throughout the state. The program, which commences with the 2010-2011 school year and ends with the 2013-2014 school year, offers tuition-free undergraduate or graduate classes at Wilmington University. The program is designed to encourage and assist uniformed public safety personnel continue their professional and personal self-development.

NCC*EMS Participation in Delaware “Move Over” Law Public Service Announcement



Representatives from the New Castle County EMS Division, including the two paramedics featured in the video, attended the premier of a new public service announcement at the Delaware City Fire Company. The event also served as the backdrop for the signing of Senate Bill #205 by Governor Markell. The new law makes it a felony in Delaware to cause injury to an emergency responder as a result of a failure to abide by the state’s “Move Over” Law. The measure is intended to increase the safety of emergency responders and highway maintenance staff that work along the roadways.

The 30 second video was created through a cooperative agreement with the United States Fire Administration and the Department of Homeland Security. Funding was provided by the Office of Justice Programs at the United States Department of Justice. The video features actual responders and was produced in Delaware. The New Castle County Paramedics were featured with members of the Delaware City Fire Company, Delaware State Police, New Castle County Police and Delaware Department of Transportation.

National EMS Week 2010 Activities Offer Thanks to EMS Personnel



EMS Week 2010 was used as a time for medical providers and local community members to come together, celebrate and honor those who deliver a critical public service each and every day. New Castle County EMS participated in several activities during EMS week including the hosting of its annual EMS Graduation and Appointment Ceremony and two BBQ sessions for EMS Division personnel. A tribute to the New Castle County Paramedics was broadcast on the local government access channel throughout National EMS Week.



Crash Victim and Family Thank Emergency Responders

Thirty-two emergency responders, including the New Castle County Paramedics involved in the case, joined the patient and his family at the Townsend Fire Company station for a reunion. Ian McPheeters, who was operating a truck that was involved in an early morning collision on August 27, 2010, was joined by his family to offer their appreciation for the rescue efforts. Members of the Townsend and Odessa Fire Companies, the New Castle County Paramedics, and Delaware State Police Aviation Section crew attended the event.

McPheeters was operating a truck that was involved in a serious collision on Route 1 just south of Townsend near Fieldsboro Road. The impact crushed the cab of his truck, rendering him trapped for over two and a half hours. He was transported by State Police helicopter to the Christiana Hospital, where a trauma team had been assembled following the "Trauma Alert" activation by paramedics.



(left to right) Mr. Ian McPheeters, P/Cpl. David Aber, P/Cpl. Richard Moerman and P/Sgt. Kenneth Dunn participate in an informal discussion after having an opportunity to meet the patient and his family following their response to a serious crash on August 27th.



(left to right) Chief Lawrence Tan, Paramedic Sgt. Kenneth Dunn, P/Cpl. Richard Moerman, Mr. Ian McPheeters, P/Cpl David Aber and Asst. Chief Richard Krett at the reunion held at the Townsend Fire Company station on November 17th.

NCC*EMS Attends Senator Carper's All Hazards Incident Preparedness Conference



The EMS Division attended the All-Hazards Event with Senator Thomas Carper and FEMA Deputy Administrator Richard Serino in the New Castle County Public Safety Headquarters EOC on June 1, 2010. The annual conference focuses on the need for enhanced communication between federal, state and local government during crisis situations.

NCCo Paramedics Recognized at Public Safety Awards Ceremonies



Nine Emergency Medical Services Division personnel were recognized in events held in March and November 2010 for their accomplishments and performance during separate Department of Public Safety Awards Ceremonies. County Executive and United States Senator-Elect Christopher Coons joined the Public Safety executive staff in recognizing employees from all divisions within the department. The following EMS Division personnel were cited for exemplary performance at both ceremonies:



- S/Lt. Joseph J. Dudley
- Paramedic Sgt. Kenneth N. Dunn
- Paramedic Sgt. Dawn E. Gulezian
- Paramedic Cpl. Robin K. Brown
- Paramedic Cpl. Isaac J. Hankins
- Paramedic 1/C Garry L. Collins
- Paramedic 1/C Crystal D. DiMauro
- Paramedic 1/C Michael P. O'Shaughnessy
- Paramedic 1/C Stacy L. Press Johnson
- Paramedic Katherine A. James
- Paramedic Lisa L. Lock
- Paramedic Laura R. Peterson
- Paramedic Brianne C. Sullivan
- EMS Lt. Frank V. Pietrazak, Ret.
- Paramedic Cpl. Michael P. Cavazzini, Ret.



NCCo EMS Division Personnel Recognized During Promotion Ceremony



Daniel G. Seador



Mark R. Logemann



Martha L. Russ

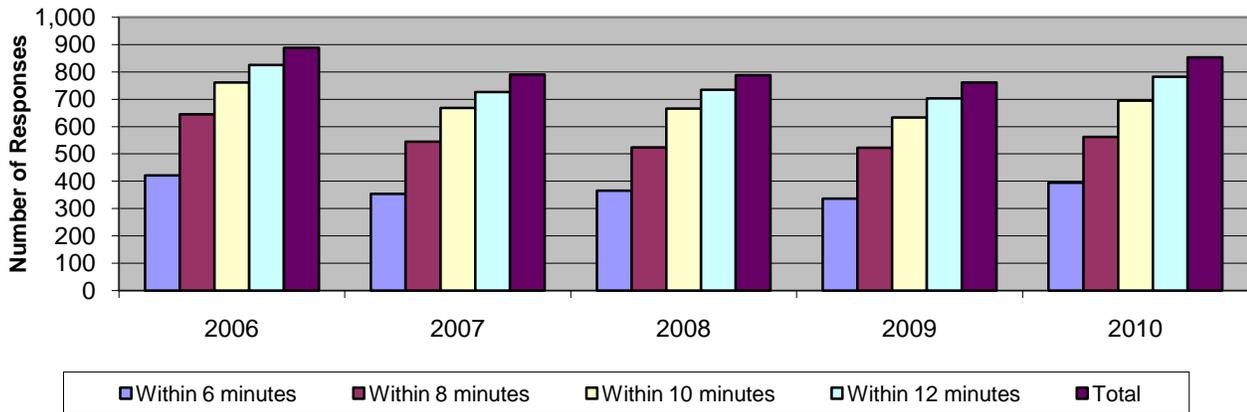
Three personnel from the Emergency Medical Services Division of the New Castle County Department of Public Safety were recognized during a promotional ceremony in 2010. Senior Lieutenant Daniel G. Seador was promoted to EMS Assistant Chief while Paramedic Corporal Mark R. Logemann and Paramedic Corporal Martha L. Russ were promoted to the rank of Paramedic Sergeant.

Assistant Chief Seador has been assigned as Commander, Operations Branch. Paramedic Sergeants Mark Logemann and Martha Russ have been assigned to Field Operations on a power shift rotation to augment field supervision and response capabilities during higher call volume and staffing periods.

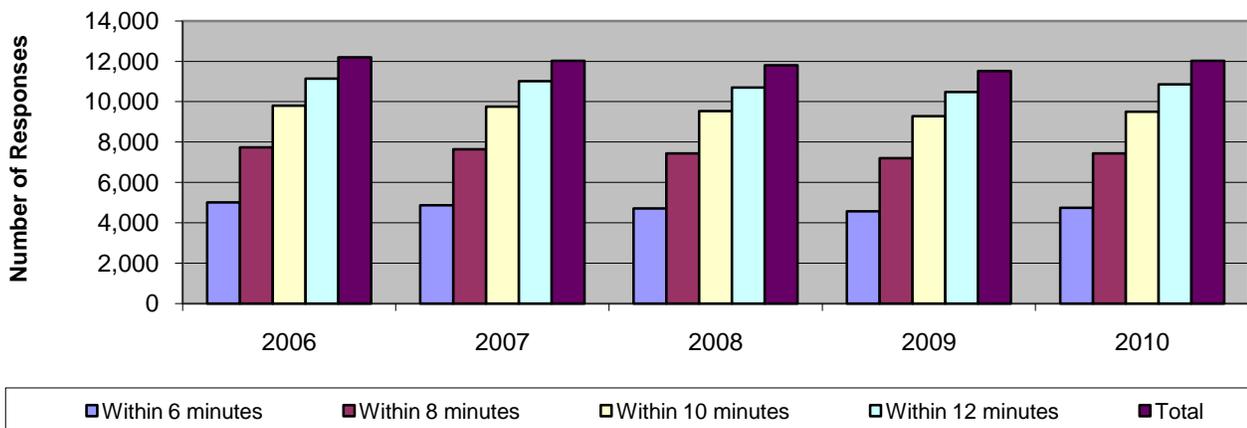


Our Mission is Your Life

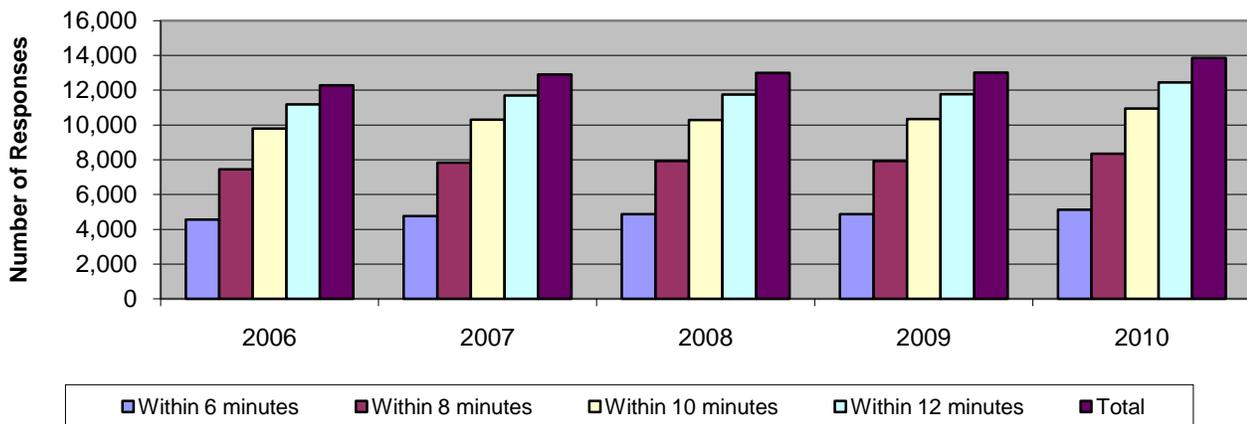
Echo Level Response, NCC EMS



Delta Level Response, NCC EMS

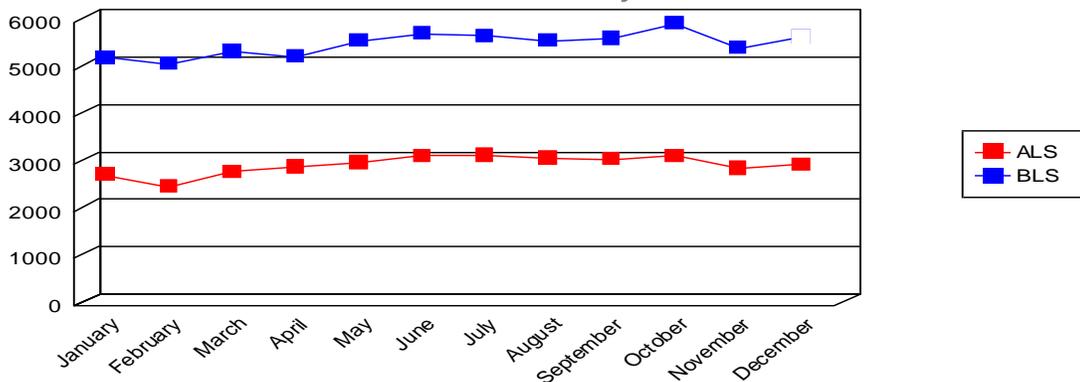


Charlie Level Response, NCC EMS



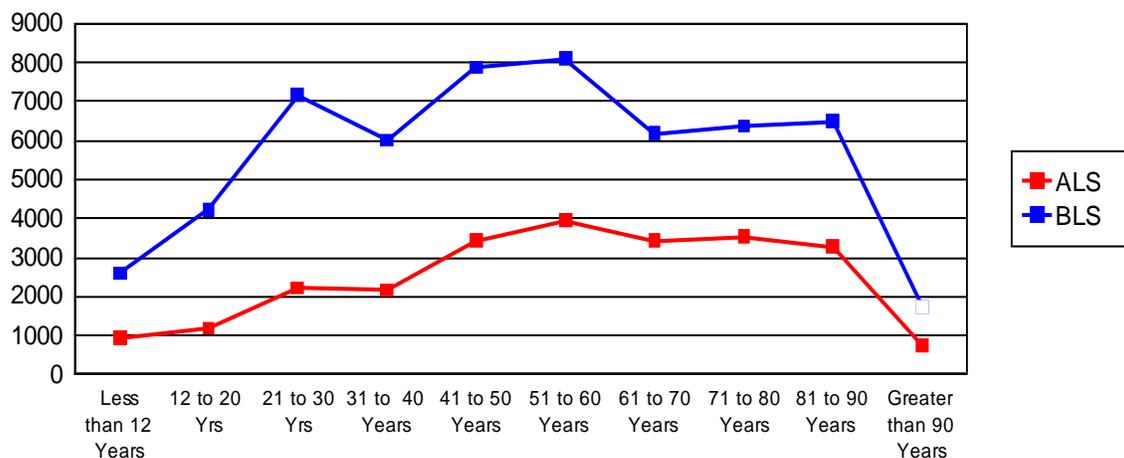
ALS/BLS Incidents by Month-2010

New Castle County

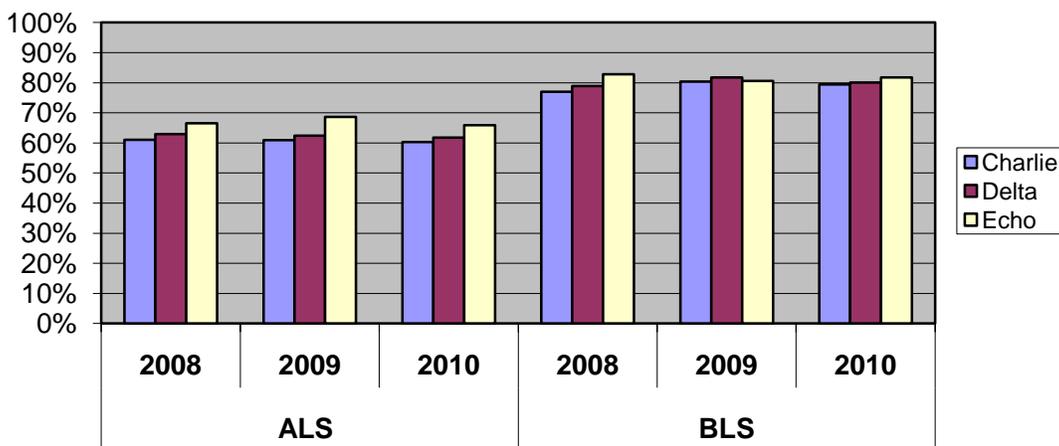


ALS and BLS Patient Age Comparison 2010

New Castle County



Percentage When New Castle County ALS/BLS Arrived On-Scene in 8 Minutes or Less on Delta/Echo/Charlie Level Incidents-2010



2010 New Castle County BLS Scratch Report

Submitted by New Castle County Dispatch

| Station | Total | Scratches | Scratch Percent |
|----------------------------|--------------|------------|-----------------|
| Aetna Hose Hook & Ladder | 7438 | 96 | 1.29% |
| Belvedere Fire Co. | 305 | 0 | 0.00% |
| Brandywine Hund. Fire Co. | 1950 | 13 | 0.67% |
| Christiana Fire Co. | 8123 | 2 | 0.02% |
| Claymont Fire Company | 3015 | 7 | 0.23% |
| Cranston Heights Fire Co. | 2033 | 1 | 0.05% |
| Delaware City Fire Company | 1250 | 1 | 0.08% |
| Elsmere Fire Co. | 1447 | 3 | 0.21% |
| Five Points Fire Company | 1199 | 1 | 0.08% |
| Goodwill Fire Company | 1353 | 2 | 0.15% |
| Hockessin Fire Co. | 1493 | 0 | 0.00% |
| Holloway Terrace Fire Co. | 1192 | 25 | 2.10% |
| MillCreek Fire Company | 3720 | 6 | 0.16% |
| Minquadale Fire Company | 1581 | 2 | 0.13% |
| Minquas Fire Co. | 1480 | 1 | 0.07% |
| Odessa Fire Co. | 674 | 24 | 3.56% |
| Port Penn Vol. Fire Co. | 213 | 0 | 0.00% |
| Talleyville Fire Co. | 3064 | 3 | 0.10% |
| Townsend Fire Co. | 595 | 53 | 8.91% |
| Volunteer Hose Company | 2492 | 76 | 3.05% |
| Wilmington Manor Fire Co. | 1953 | 2 | 0.10% |
| Total | 46570 | 318 | 0.68% |

New Castle County BLS Paid Personnel Chart By Company

| New Castle County | Total Paid personnel | Shifts covered | Days/ Time Covered |
|-----------------------------|----------------------|----------------|--------------------|
| Aetna Hose Hook & Ladder | 8FT - 40PT | | 24/7 |
| Belvedere Fire Co. | 1FT - 15PT | 12H | 7am-7pm 7days |
| Brandywine Hundred Fire Co. | 8FT - 4PT | 10H & 14H | 24/7 |
| Christiana Fire Co. | 7FT - 47PT | 24H | 24/7 |
| Claymont Fire Company | 9FT | 24H | 24/7 |
| Cranston Heights Fire Co. | 6FT - 15 PT | 24H | 24/7 |
| Delaware City Fire Company | 4FT | 24H | 24/7 |
| Elsmere Fire Co. | 4FT - 15PT | 12H | 24/7 |
| Five Points Fire Company | 2FT - 25PT | 12H | 24/7 |
| Goodwill Fire Company | 8FT - 10PT | 24H | 24/7 |
| Hockessin Fire Co. | 9FT - 10PT | | 24/7 |
| Holloway Terrace Fire Co. | 40PT | | 24/7 |
| MillCreek Fire Company | 9FT - 15PT | 24H | 24/7 |
| Minquadale Fire Company | 8FT | | 24/7 |
| Minquas Fire Co. | 6FT | | 24/7 |
| Odessa Fire Co. | 41PT | 12H & 6H | 24/7 |
| Port Penn Vol. Fire Co. | 3FT - 21PT | 24H | 24/7 |
| Talleyville Fire Co. | 11FT - 20PT | | 24/7 |
| Townsend Fire Co. | 2FT | 10H | |
| Volunteer Hose Company | 8FT - 15PT | | 24/7 |
| Univ of DE Emer. Care Unit | 0 | 0 | 0 |
| Wilmington Fire Department | 172FT | 24H | 24/7 |
| Wilmington Manor Fire Co. | 9FT - 11PT | | 24/7 |

New Castle County

Basic Life Support (BLS)

Submitted by various BLS agencies in New Castle County

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 transitioning from a predominantly 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 eight 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.

ACCOMPLISHMENTS AND NOTABLE EVENTS

Delaware City Fire Company:

Slow down and Move Over PSA: On August 17, 2010, at the Delaware City Fire Company, Station 15, members of the Delaware Fire Service, fire service personnel from the Tri-State area, National Fire Service Leaders and members of the General Assembly joined the Delaware City Fire Company and Governor Jack Markell in the premiere viewing of the Slow Down and Move Over PSA Video and the signing into law, Sentate Bill #205. The Delaware City Fire Company sponsored the video in conjunction with Stonehouse media Inc. After the tragic death of Firefighter Michelle Smith in December of 2008, the fire company wanted to do a Public Service Announcement in regards to the Slow Down and Move Over Law.



Brandywine Hundred Fire Company:

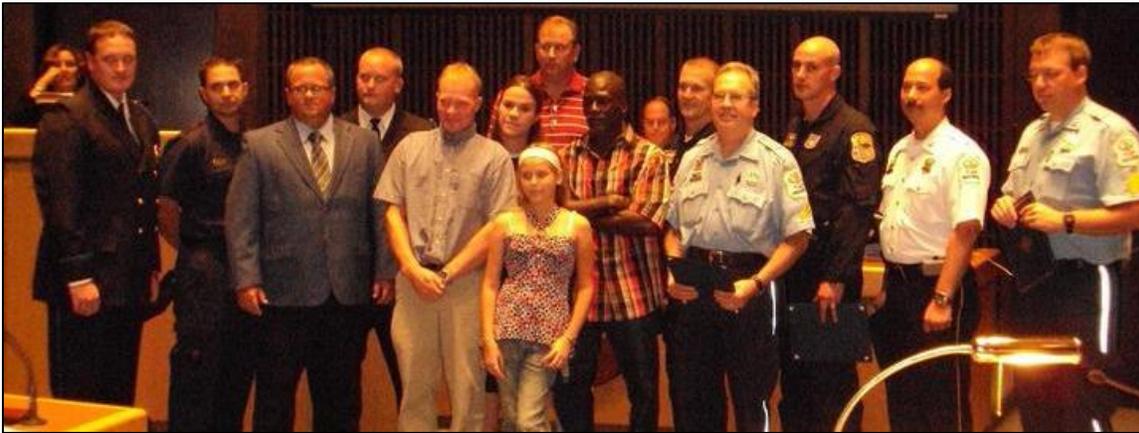
Fire and Injury Prevention: November 30, 2010, Brandywine Hundred Fire Company went to Mount Pleasant Elementary School for fire prevention. This event was the last session of a series of presentations for the school. The crew explained fire prevention and safety items to the two classes present in addition to showing them our gear. Students were then taken outside and shown the equipment on 11-1 and even got to flow water out of the booster line!



Firefighter Tusio being the “friendly firefighter” and shaking hands of students

Volunteer Hose Company:

Life Saving Award: Career firefighter, Employee Supervisor Tucker Dempsey and Volunteer Firefighter Sean Webber, along with the flight crew of Trooper 4, NCC Paramedics and bystanders, all were recognized at the New Castle County Council meeting held on September 28th for their efforts in a life saving incident. On Thursday afternoon, July 26th, the Volunteer Hose Company was alerted for a 3rd emergency for an injured person due to a cut from a saw. Firefighter Webber and Firefighter Dempsey responded immediately and arrived to find a male individual with severe injuries sustained to his neck. Several bystanders were already on scene, with one using the shirt off of his back to help control the bleeding. Firefighters Dempsey and Webber, along with New Castle County Paramedics and Trooper 4, were able to stabilize the patient and transfer him to Christiana Hospital, where he received further treatment for his life threatening injuries. The patient, who has since recovered from his injuries, was also present for the recognition. *Story By: Deputy Chief Paul Watts*



Volunteer Hose Members, Trooper 4, NCC Paramedics and bystanders receive Life Saving Award from New Castle County Council

Elsmere Fire Company:

Fire and Injury Prevention: October 12, 2010, the Elsmere Fire Company visited the Odyssey Charter School. Fire prevention chairperson Frank Maule spent the morning teaching the students about 911, stop drop and roll, how to escape a building or house if it were on fire and how a firefighter is just a person dressed in a special costume. One of the teachers, who were here from Greece, dressed up in his gear. After the classroom work, the children then went outside to go over engine 16-5 where many questions were asked not just by the students, but by the teachers as well. *Story by P.I.O. Frank Maule, E.F.C.*



Fire and Injury Prevention at Odyssey Charter School

World Trade Center: On the 17th of July 2010, steel recovered from the World Trade Center passed through Delaware from the Twins Spans to the Maryland Line. Several fire companies gathered to escort the steel through our state. This steel was being escorted to South Florida where it will become part of a 9-11-01 memorial. Five Points participated with over 17 members on three pieces of apparatus. Ladder 17 and 175 were in the convoy and B17 was positioned on Rt. 141 over I-95 so they could witness the event. The steel is being escorted from the area outside NYC where all the steel from the WTC was taken after the attacks on 9-11-01. It was escorted by New Jersey fire departments over the bridge to Rt. 9 where it was handed off to the Delaware companies who took it to the Maryland line. It was an honor to participate in such an event. *Story By: C. Hayes.*

*Patriot Flag Ceremony
to honor some of the
survivors from 911
Photo by T. Riale*



*World Trade Center
Steel passes through
Delaware Photo by
Mark Page*

Port Penn Fire Company:

Patriot Flag Ceremony: On November 28th the Port Penn Fire Company attended the Patriot Flag Ceremony in Delaware City. The flag is traveling around to all states before the 10th Anniversary of 911. On the tenth anniversary, it will be placed at Ground Zero in New York City at which time Ground Zero will be renamed Freedom Plaza. It was an honor to meet some of the survivors from 911 who spoke that day and help them fold the flag to be sent to the next state. They did announce that Vice President Biden has requested for the flag to come back to Delaware sometime in the spring. For more info on the Patriot Flag visit their website at www.patriotflag.org. *Story By: T. Riale*

Five Points Fire Company:

Jefferson Awards Program: June 15, 2010, to underscore our support of community service, Christiana Care has launched the Jefferson Awards program. Each month the program spotlights an outstanding employee or volunteer who provides community services outside of every day work duties. The inaugural winner of the Jefferson Award bronze medallion, Sue Sokira, embodies the spirit of the awards. When not at work as a Transfer Center Representative in the Emergent Transport Access Center at Christiana Care, Sokira is working as a fire fighter and EMT. The Jefferson Awards is a national program started in 1972 as a Nobel Prize for public service. Co-founders Jacqueline Kennedy Onassis, U.S. Sen. Robert Taft Jr. and Sam Beard urged a "Call to Action for Volunteers" in local communities. Monthly winners are eligible for national consideration by the Jefferson Awards for Public Service. *Story By: Christiana Care*

*Five Points Member Sue Sokira
receives first Jefferson Award*



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.

Communication Center

New Castle County

Submitted by David Roberts

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 2010 was 401,113. Another 90,647 non-emergency calls were also processed by our Emergency Call Operators. The Center dispatched or processed a total of 122,605 fire/medical incidents and 331,598 police incidents in year 2010. New Castle County Emergency Communication Center handled over 51.63 % of the 776,891 9-1-1 calls in the State of Delaware for 2010.

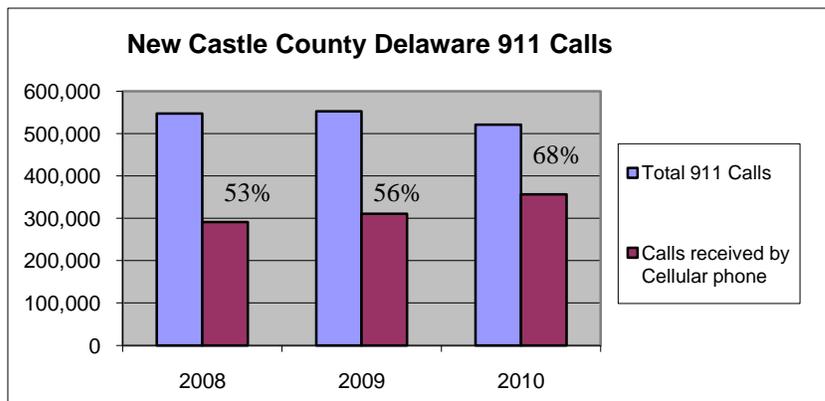
The New Castle County Emergency Communications Center was recognized as an Accredited Center of Excellence in Emergency Medical Dispatch by the National Academy of Emergency Medical Dispatch in October 2002 as the 87th agency in the world accredited; and then, re-accredited in October 2005 and November 5, 2008 until 2011. Additionally, we utilize the National Academy of Emergency Fire Dispatch protocols and currently working toward our national accreditation.

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, six 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 thirty full and part-time Emergency Call Operators, twenty-three New Castle County Police Communications personnel, twenty Delaware State Police Communications personnel, twenty-five full-time Fire/Medical Communications personnel, and an administrative staff of six personnel.

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. The New Castle County Emergency Communications Center operates within the New Castle County Public Safety Building.



Picture submitted by NCC 911 center



Data submitted by E911 Board

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Kent County

Advanced Life Support 97

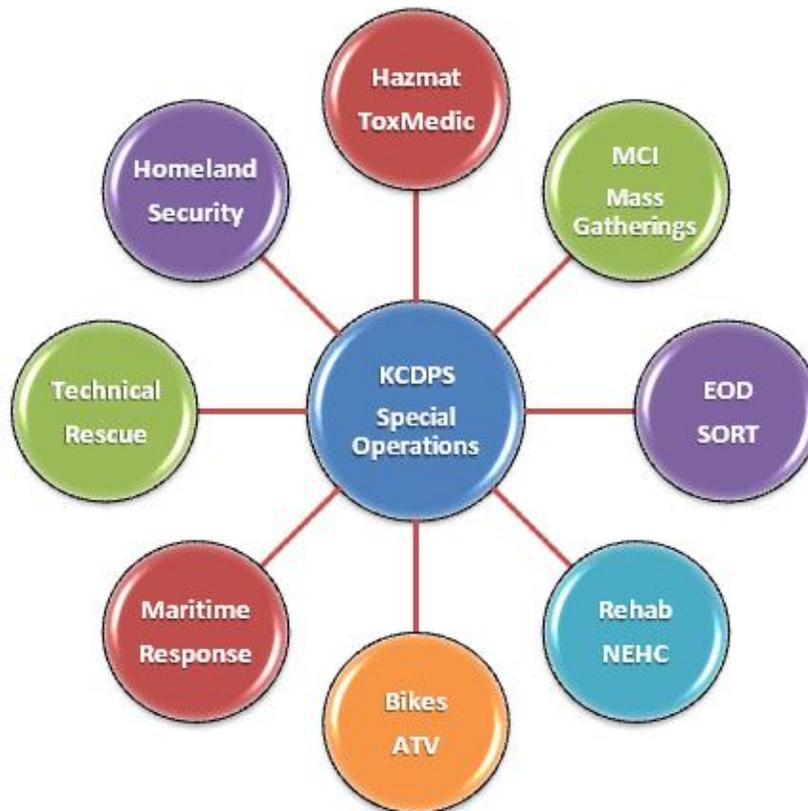
Basic Life Support 107

Communication Center 110

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Kent County Emergency Medical Services

Submitted by Kent County EMS



Overview

Special Operations encompasses the response categories of Mass Casualty Incident (MCI), Hazardous Materials Incidents (Hazmat), Technical Rescue Operations (confined space, high angle, trench, 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 early activation of the MCI response. The plan allows for any component of the system to “make the call”, therefore, 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 with regard to the automatic response levels. The Kent County MCI Plan is consistent with other County and State MCI Plans.

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 branch of the incident. All units have updated contact lists for local and regional medical facilities. Critical data is kept both in hard copy and electronically in the unit MDT. 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), and Nerve Agent Antidotes Kits (NAAKs). TANGO-1 may be deployed for additional ALS resources and initial hazmat/radiological survey. 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 are annually familiarized with the response support units and complete hands-on practical evolutions with the equipment.

Activity: There were no MCI incidents which required the deployment of these additional assets. 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 2011 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 in compliance with the NIMS.
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.
The goal is to expand the vehicle fleet to provide for 2 spare units.
4. Extended Operation and Re-call of personnel capability needs to be demonstrated through practical exercise.
Medics are issued personal pagers for Call-back and OT notification.

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 of, 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 along with the County Decon Units and TANGO-1. 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 Spec Ops trailer was pre-deployed for the State Fair. The County Decon Unit and TANGO-1 were deployed to cover several VIP events including Return Day.

Needs & Initiatives:

1. Additional medics have completed IPMBA training.
2. A standardized reporting form has been established to address operational needs when requested to cover a large event.

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.
2. A training program will be established and a schedule determined.

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, tow vehicle, and the Decon Support trailer remain housed at Little Creek VFD. TANGO-1 operates from KCDPS Headquarters.

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 ten Medics trained or awaiting training to the Hazmat Technician level which qualifies them to assist the entry team.

Activity: There were two VIP functions in 2010 which required the full response of our resources (Wilmington & Georgetown). The unit(s) participated in displays 2 times. The units were pre-deployed in support of the NASCAR races.

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.
2. Due to the continued and superlative support from the Little Creek VFD, there exists a lesser demand for Medics to operate the Decon Line. Therefore, Medics are focusing more towards the medical management of hazmat patients and the ToxMedic Protocols have been slightly expanded.

Technical Rescue

Response: The Kent County Technical Rescue Team is spearheaded by the Cheswold FD with support from several Kent County FDs. Currently there are 10 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 Cheswold FD and Hartly FD and is comprised of a custom heavy rescue unit with additional equipment contained in a support trailer. 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. Hartly FD has placed in service a “Light & Air” unit which has been included with the initial response of the Team. This unit also tows the Support Trailer for the Team. TANGO-1 is attached to this team response. Additionally, equipment and supplies are being acquired towards the establishment of a mobile “Base Camp” to address the logistical needs of an extended operation.

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. Several team members have completed large animal rescue training. Three members achieved Pro-Board certification in Rope Rescue. Recently six members completed Search Specialist training and four completed Advanced Structural Collapse training.

Activity: Team activations in 2010 included three structural collapse incidents and one confined space incident.

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” began in 2010 and continue in 2011. The team is working towards USAR / Pro-Board certification.

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: Specialized equipment has been obtained for direct support of SWAT Medics. Tactical Body Armor, rescue litters, radio microphone equipment have been added to the inventory. Regular duty body armor and ballistic helmets are standard uniform for all medics.

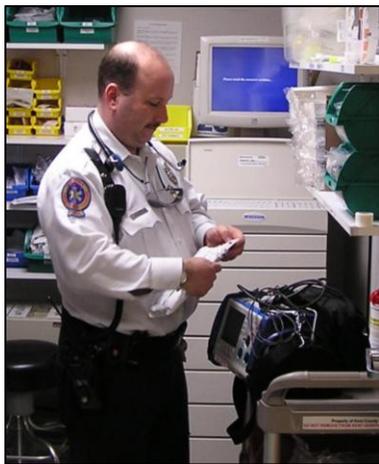
Training: Three medics completed Basic and Advanced Tactical EMS training and are embedded with the STAR Team in Smyrna. All current Kent County Paramedics received refresher briefings regarding EOD operations as part of the 2-year refresher cycle. Medics routinely receive refresher training regarding the assessment and treatment of blast and burn injuries.

Activity: Monthly training with the STAR Team continues. There was more than 50 hours of training activity. There were 4 missions with a total time commitment of 40 hours.

Needs & Initiatives:

1. SWAT Medics are alerted by alpha pager and/or the STAR phone tree process.
2. Additional equipment is being obtained to coincide with the expansion of this program.
3. Re-certification training has begun with one SWAT Medic due for this training each year.

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 Cyanokits as part of the ToxBox inventory and now have a Smoke Inhalation Protocol for fire ground support operations. All of the support trailers have sheltering, heat, and lighting capability. The Special Operations unit “TANGO-1” is in-service and 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: Specific training to support the new protocol has been completed. Medics are capable of deploying shelters and other support equipment.

Activity: Call volume varies from year to year. Some Fire Departments have added Medics to the initial dispatch for known working building fires or for residential complexes. Weather continues to be a factor during the extremes of heat and cold.

Needs & Initiatives:

1. The establishment of the “Power Unit” has served to help cover this issue during the daytime hours.

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.

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 Gator was used at Safe Summer Day, the Governor’s Fall Festival, and the Amish Country Bike Tour.

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 includes chemical protective suits and air purifying respirators. Ballistic helmets, goggles, and NIJ Level II 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. Two RAD 57 carboxyhemoglobin detectors have been put in service and have proven to be valuable tools in triage of multiple carbon monoxide exposure patients.

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 made available to all Medics as they are scheduled.

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.

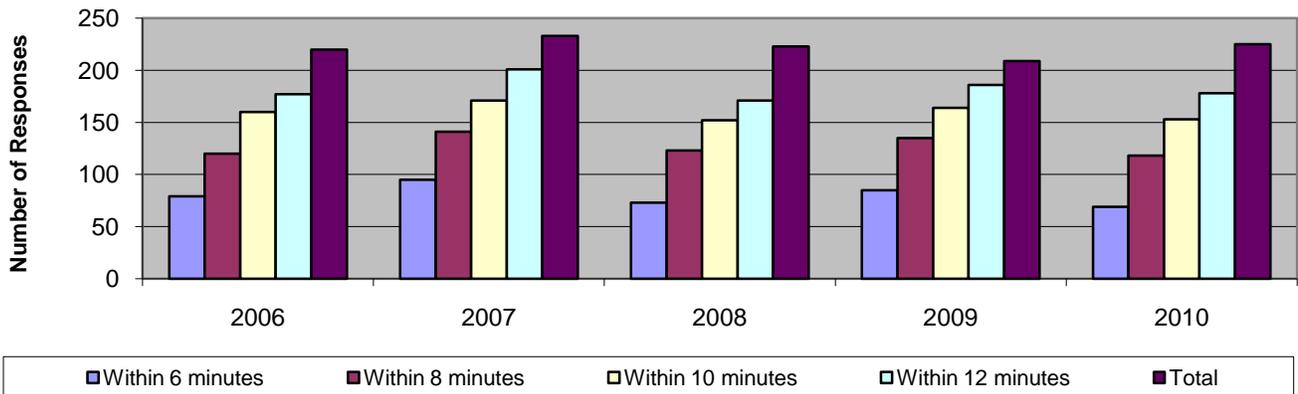
Conclusion

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.

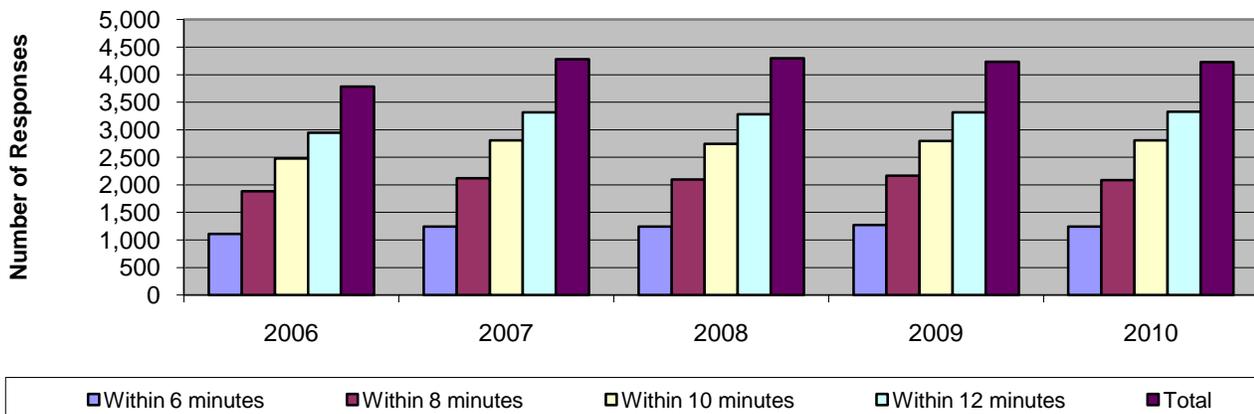
Vulnerability: Training and exercise has increased awareness and response capability as compared to previous years, thus reducing the vulnerability of the individual responder. Geographically Kent County remains central to several major metropolitan areas of national significance. Complacency as a result 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 “Special Operations” designation as part of an employee incentive program has swelled the number of medics intent on participating in some level of Special Operations. Providing training opportunities to support this interest is challenging. Resources continue to expand and develop to provide flexible response modalities and increased capability. A Statewide and Regional capability goal needs to be established.

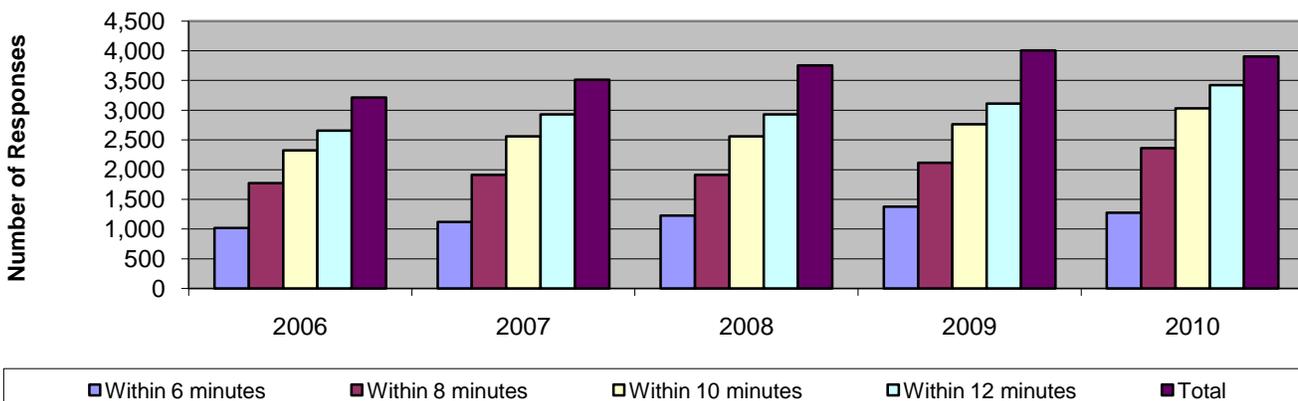
Echo Level Response, Kent County EMS



Delta Level Response, Kent County EMS

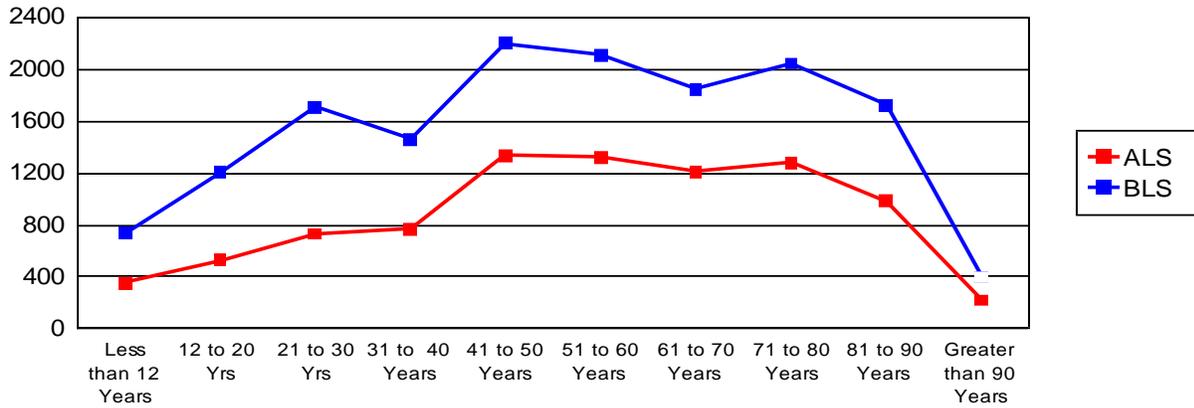


Charlie Level Response, Kent County EMS



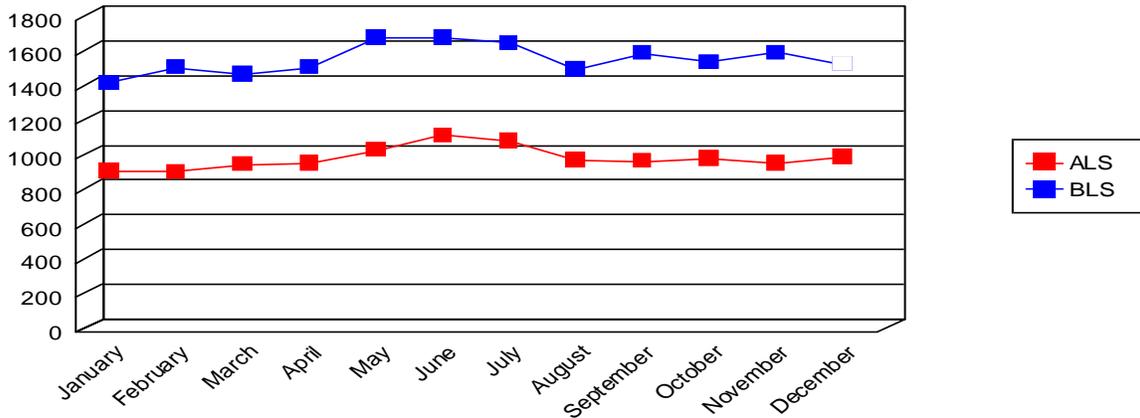
ALS and BLS Patient Age Comparison 2010

Kent County

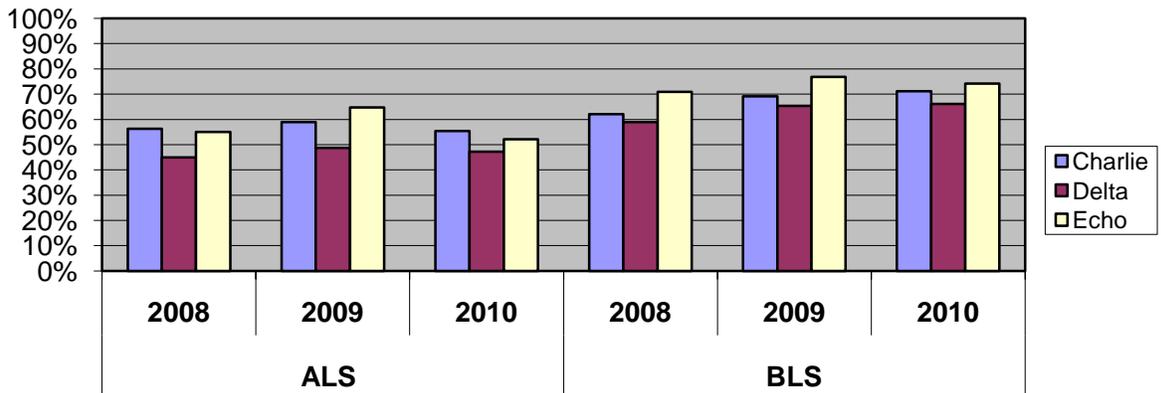


ALS/BLS Incidents by Month-2010

Kent County



Percentage When Kent County ALS/BLS Arrived On-Scene in 8 Minutes or Less on Delta/Echo/Charlie Level Incidents-2010



Kent County BLS Paid Personnel Chart By Company

| Kent County | Total Paid personnel | Shifts covered | Days/ Time Covered |
|---------------------------|----------------------|----------------|--------------------|
| Bowers Fire Co. | 2FT | 12H | 6am-6pm |
| Camden-Wyoming Fire Co. | 6FT - 19PT | | 24/7 |
| Carlisle Fire Company | 2FT - 10PT | 12H | 24/7 |
| Cheswold Fire Co. | 4FT - 10PT | 24H | 24/7 |
| Clayton Fire Co. | 0 | 0 | 0 |
| Felton Community Fire Co. | 8FT | 24H | 24/7 |
| Frederica Vol. Fire Co. | 2 | 12H | 6am-6pm 5 days |
| Harrington Fire Co. | 2FT | 12H | 6am-6pm 7 days |
| Hartly Fire Co. | 1FT | 8H | 8am-5pm 5 days |
| Leipsic Fire Co. | 4FT | | |
| Magnolia Vol. Fire Dept. | 15PT | 12H | 24/7 |
| Marydel Fire Co. | 7FT | | 24/7 |
| Smyrna American Legion | 6FT - 6PT | 12H | 6am-6pm 7 days |
| South Bowers Fire Company | 2FT | | |

2010 Kent County BLS Scratch Report

Submitted by Kent County Dispatch

| Station | Total | Scratches | Scratch Percent |
|-----------------------------|--------------|------------|-----------------|
| Bowers Sta. 40 | 292 | 14 | 4.8% |
| Camden-Wyoming Sta. 41 | 2243 | 85 | 3.8% |
| Carlisle Sta. 42 | 3022 | 116 | 3.8% |
| Cheswold Sta. 43 | 1584 | 25 | 1.6% |
| Felton Sta. 48 | 1162 | 30 | 2.6% |
| Federica Sta. 49 | 441 | 2 | 0.5% |
| Harrington Sta. 50 | 1858 | 39 | 2.1% |
| Hartly Sta. 51 | 778 | 11 | 1.4% |
| Leipsic Sta. 53 | 200 | 43 | 21.5% |
| Magnolia Sta. 55 | 809 | 8 | 1.0% |
| Marydel Sta. 56 | 432 | 57 | 13.2% |
| PrimeCare Sta. 63 | 6114 | 0 | 0.0% |
| Smyrna Amer. Legion Sta. 64 | 2836 | 156 | 5.5% |
| Total | 21771 | 586 | 2.69% |

Kent County

Basic Life Support (BLS)

Submitted by various BLS agencies within Kent County

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 private ambulance companies.

ACCOMPLISHMENTS AND NOTABLE EVENTS

Camden-Wyoming Fire Company:

Safe Summer Day: On June 12, 2010, numerous agencies from Kent County gathered at Brecknock Park for Safe Summer Day. This program is put together for the citizens of Kent County to teach everyone safety on a broad array of topics. The Camden-Wyoming Fire Company was on hand to participate in the mock trauma scenario supported by the Delaware Office of EMS. This year highlighted child safety on all terrain vehicles. The company also performed a vehicle rescue demonstration for everyone in attendance. Story by John Wothers



*Safe Summer Day at Brecknock Park
Photo by April Wothers*

Magnolia Fire Company:

EMS Training: February 1, 2011, members gathered at the station for "EMS Review". Instructed by Ambulance Captain Kelly, the members reviewed the ambulance and all EMS equipment. The members also welcomed Kent County Paramedics who brought one of their units into the station to familiarize the members with their equipment, the location and their expectations when we arrive to assist. Story by L. Wolf



*Magnolia Fire Company EMS
review class*

Dover International Speedway:

Twice a year the Dover International Speedway is home to NASCAR 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.



EMS at Dover Races

Clayton Fire Company:

“See Something, Say Something” campaign: In coordination with the US Department of Homeland Security, the Delaware Department of Safety and Homeland Security is launching a local “See Something, Say Something” campaign to encourage Delawareans to join the fight on terrorism by reporting suspicious activity to law enforcement. Terrorism can happen anywhere. Even a small state like Delaware is at risk. Our citizens are our first line of defense when it comes to defeating terrorism.

As part of the program several members of the emergency services, and other affiliated agencies took part in a photo shoot to advertise this campaign. Report Suspicious Activity to 1-800-FORCE-1-2.



Firefighters Dylan Chambers and Sarah Davis represented Clayton Fire Company for the “see Something, Say Something” Campaign.

Paratech Award: At the company meeting in October 2010, Chief Lightcap, presented the following members with a Paratech Awards for their part in the rescue of a person who was partially trapped under a vehicle where the Paratech Air Bag was used to rescue him. The incident occurred on Sunday August 29th, on Clayton-Greenspring Rd., just north of Clayton. Chief Lightcap presented a certificate and chevron from Paratech to each member listed. By receiving the Paratech Award this also entitled those members that have never received a company sponsored Green Extrication award to receive one. The members receiving the award were: Beth Evans, Gary Faulkner, Joe Jones, Pat Kelleher, Steve Marynowicz, John Pridemore, Aaron Robinson, Jack Davis, Robert L. Lightcap, Wally Hudson, Harvey Scott, Ron Burnett, Skip Carrow, Jeff Hurlock, Jeff Lightcap, Mike Harrington, Dylan Chambers, Rodney Whalen and Sarah Davis.



Members of Clayton Fire Company receiving Paratech Award

Carlisle Fire Company:

Mispillion Life Ring Project: On August 16, 2010, Dee’jion Fullman lost his life, simply trying to retrieve a basketball that had rolled in to the Mispillion River. Dee’jion went into the water to retrieve his basketball and never returned home to his family. As a result of this tragedy, Carlisle Fire Company has formed The Mispillion Life Ring Committee to raise money and awareness regarding safety among our waterways in an effort to help preserve the life of our citizens. To accomplish this goal, Carlisle Fire Company would like to provide Life Ring Stations along the River Walk and areas of concern through donations from various companies. The cost of each Life Ring Station is \$536.00. The committee is also working to provide Water Safety Education Awareness to the citizens of Milford and the surrounding areas. All additional contributions will go towards a one-time scholarship in the memory of Dee’jion Fullman, to be awarded to a student from his graduating class. On Thursday, December 9, 2010, I.G Burton’s of Milford supported the Mispillion Life Ring Project. I.G Burton sponsored a Station along the Mispillion River Walk and made a generous donation to the Dee’jion Fullman Scholarship fund sponsored by Carlisle Fire Company.



IG Burton Making a Donation to the Mispillion Project



Harrington Fire Company:

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 tourists 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.

DVFA Annual Conference:

The 16th annual Delaware Volunteer Firefighter's Association (DVFA) conference was held at the Sheraton Dover hotel and conference center in September of 2010. 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.

Dover and Little Creek Fire Department:

Flight operations awareness and safety class: On April 27, 2010, the Dover Fire Department and Little Creek VFC held a joint Flight Operations Awareness and Safety class. Members were familiarized with the operational capabilities and safety aspects of several different helicopter airframes that they may encounter. Due to the uniqueness of each individual aircraft, members conducted EMS drills where a patient was loaded into each different aircraft. Flight crews were on hand to instruct members on the emergency shutdown procedures of each helicopter. The DFD greatly thanks the flight crews of the Delaware State Police, Maryland State Police and Christiana Care LifeNet for their time and service to our communities. Helicopters on site: Delaware State Police Aviation Unit Bell 407 (Trooper 2) Delaware State Police Aviation Unit Bell 412 (Trooper 4 "Heavy") Maryland State Police Aviation Unit: EuroCopter AS365N1 Dauphin II (Trooper 6) Christiana Care LifeNet: Messerschmitt-Bölkow-Blohm/Kawasaki BK-117 (LifeNet 6-1).



Flight Operations awareness and safety training Photo by DFD

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 2010 and will continue to improve in 2011 and beyond.

Communication Center

Kent County

Submitted by Kent County Dispatch

The Kent County Emergency Communications Center receives 9-1-1 calls through a variety of phone exchanges through Kent County, Northern Sussex County and Southern New Castle County. The total number of 9-1-1 calls processed in year 2010 was 92,146. Another 72,071 non-emergency calls were also processed by our dispatchers. The Center dispatched or processed 21,771 medical incidents and 6124 fire incidents in year 2010.

The Kent County Emergency Communications Center is recognized as an Accredited Center of Excellence in Emergency Medical and Fire Dispatch by the National Academy of Emergency Dispatch.

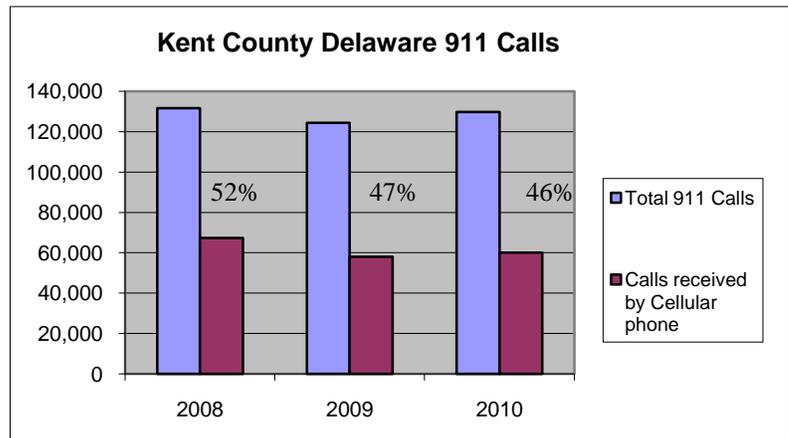
The Kent County Emergency Communications Center operates 24 hours a day on a year round basis. We provide Fire/EMS Communications to 18 Volunteer Fire Companies, 2 EMS Companies and the Kent County Paramedics. The Center is staffed with 20 Fire/EMS dispatchers.

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 the race week Kent County provided trained dispatchers to answer and dispatch EMS/Fire calls to the emergency responders that are working the event.

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



Photo submitted by Kent County 911



Data submitted by E911 Board

Sussex County

Advanced Life Support 113

Basic Life Support 125

Communication Center 127

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Sussex County
Emergency Medical Services
Caring People, Quality Service
Submitted by Sussex County EMS

Overview

In 2010, Sussex County EMS (SCEMS) celebrated nineteen 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 overseen by two District Supervisors. During the summer tourist season, an additional 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, technical 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 private aeromedical services, as well as taking part in the Delaware Statewide 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

2010 Highlights

Field Operations:

Call Volume:

After an atypical decrease in call volume in 2009, Sussex County EMS experienced its usual 5% increase in responses in 2010. This increase is consistent with the annual increase that has been observed over the last decade. Over the past five years, SCEMS has experienced a 24% increase in the number of responses to calls for service. Our department has eight paramedics units in service 24 hours a day strategically positioned throughout the county in an attempt to minimize response time to calls for service.

| 2010 Incident Responses | |
|---------------------------------|---------------|
| Unit | Responses |
| EMS 100 (Eastern Supervisor) | 767 |
| EMS 200 (Western Supervisor) | 611 |
| Medic 101 (Lincoln) | 2,207 |
| Medic 102 (Laurel) | 2,058 |
| Medic 103 (Dagsboro) | 1,964 |
| Medic 104 (Lewes) | 2,661 |
| Medic 105 (Millville) | 1,700 |
| Medic 106 (Long Neck) | 1,824 |
| Medic 107 (Bridgeville) | 2,224 |
| Medic 108 (Georgetown) | 1,743 |
| Medic 109 (summer "Power Unit") | 127 |
| Other | 152 |
| Total | 18,038 |

Table 1: 2010 Incident Responses by Unit (Source: EDIN)

Due in large part to Sussex County's status as a summer vacation destination, SCEMS sees a substantial increase in call volume during the summer months, especially in the beach areas. Again this year, the roaming power unit, Medic 109, was put in service to help cover higher demand on summer weekends.

**Sussex County EMS
Call Volume - 2010**

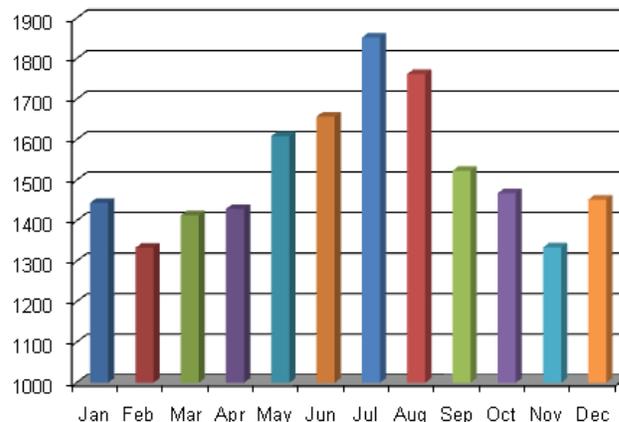


Table 2: Calls by Month (Source: EDIN)

Snowstorms:

Collectively, Sussex County endured a series of the most significant and challenging snow storms in recent memory, affectionately dubbed “Snowmageddon.” The first storm entered the area on January 30 and by the time the last snowfall ended on February 10; parts of Sussex County had received over 42 inches of snow with periods of gale-force winds. During the height of the storm, for three days, our paramedics were deployed to local fire houses. In coordination with the volunteer fire companies and DelDOT, our personnel made a successful response to every call for service for which they were dispatched. As a result of this experience and other storms, SCEMS developed teleconferencing capabilities on its phone system to allow for frequent phone conferences with our employees deployed at remote locals. We are also in the process of finalizing an all-hazards plan to deal with deployment during storms.



Figure 1: Over 40 inches of snow blanketed parts of Sussex County bringing response challenges (Source: SCEMS)



Figure 2: SCEMS plow used to keep stations and headquarters operational (Source: SCEMS)

Special Events Coverage:

SCEMS provided EMS coverage for numerous special events including Return Day, Punkin Chunkin, Apple Scrapple Festival and the July Fourth Celebrations utilizing both traditional crews and paramedic bike teams.

The July 4th weekend is our busiest weekend of the year. We deploy several additional units to cover the numerous holiday celebrations in Rehoboth Beach, Bethany Beach, Laurel, and Slaughter Beach. At the Rehoboth Beach celebration, a Seaford firefighter responding to a fire call in Dewey Beach suffered a sudden cardiac arrest. Firefighters from Seaford and Rehoboth Beach companies immediately initiated CPR and called for an ambulance and paramedic units. SCEMS’s Bike Team members responded to the scene and assisted with resuscitation efforts with support from Rehoboth Beach Fire Company EMS and additional SCEMS resources. The firefighter was shocked with an AED, had compressions delivered via a LUCAS automated CPR device, was intubated using Rapid Sequence Intubation, and had an intraosseous needle inserted in his leg for drug administration. The paramedics and EMTs were able to get a return of spontaneous circulation prior to arrival at the hospital and hypothermia was induced in the hospital by the ED staff. After six days in a coma and 21 days in the hospital, the firefighter was discharged to home neurologically intact. This is truly a tribute to the chain of survival and its entire interconnected links.



Figure 3: SCEMS bike medics complete annual IPMBA training (Source: SCEMS)

Personnel:

Staffing:

The number of current paramedic vacancies increased to five (as of December 31, 2010) despite an increased recruiting effort. This effort has included increased recruiting of Nationally Registered Paramedics from out-of-state and the graduation of two paramedic student employees from the Delaware Technical and Community College. Both of the paramedic student graduates have completed the clinical competency and field orientation process. SCEMS did not sponsor any new students in the 2010-2011 paramedic program.



Figure 4: A Shift (source: SCEMS)



Figure 6: C Shift (source: SCEMS)



Figure 5: B Shift (source: SCEMS)



Figure 7: D Shift (source: SCEMS)

New EMS Director:

Robert Stuart was appointed as our fourth EMS Director after the retirement of Glenn Luedtke in January 2010. Prior to joining Sussex County EMS, Bob was a member and past Ambulance Captain of the Millsboro VFW Ambulance Company. Bob was hired by Sussex County in 1990 to attend paramedic school at Kent General Hospital as part of the first class of paramedics sent to school to begin our system. Bob served in the field as a paramedic for seven years before being promoted to the position of Professional Standards Division Manager in 1998. With the resignation of the EMS Director in July of 2000, Bob was appointed Acting Director and served in that capacity until the arrival of Glenn Luedtke, who was appointed Director in January of 2001. For the next nine years, Bob served as Deputy Director with his primary responsibility being the financial management of the department. With the retirement of Glenn Luedtke in January of 2010, Bob and was once again appointed Acting

Director. Bob officially became the Director of Sussex County EMS on July 9, 2010 when his appointment was made permanent by the County Council. Bob has an Associate's Degree in accounting and is currently completing his Bachelor's Degree in Business Administration. Bob also serves as Vice-Chair of the Delaware Emergency Medical Services Oversight Council.



Figure 8: Robert Stuart becomes fourth Director of Sussex County EMS (Source: SCEMS)

Employee Wellness:

SCEMS implemented an Essential Jobs Functions Evaluation as a new aspect of the employee wellness program. Over the past several of years, SCEMS has been working with Pro Physical Therapy (ProPT) to objectively determine the physical requirements of the job of a paramedic in our system. This analysis included direct observation by ProPT staff followed by formal measures of weights, frequencies, repetitions and forces required to complete the essential job functions of a paramedic. Following the completion of the Functional Job Analysis, ProPT developed an objective test that will evaluate whether an employee has the ability to perform these functions. ProPT then performed this EJJ evaluation on ten of our current employees to validate the test. Our Occupational Health Provider is utilizing this information to evaluate new employees coming into the system, employees returning to work after a significant illness or injury, and employees undergoing their routine biannual physical. In an attempt to improve our employee's access to fitness equipment, we've moved some fitness equipment to stations in the eastern and western sides of Sussex County while maintaining our well-equipped fitness center located at Station 103.

Competition Team:

Once again, our competition team competed in the "JEMS Games" held in March 2010 during the EMS Today Conference in Baltimore, Maryland. The team included Paramedics Michael Carunchio, Jeff Cox, Stuart Hensley, and Jill Wix. This year's competition included eighteen teams the United States. During the competition, paramedic teams were judged on their performance and speed during mock patient care situations and scenarios. After advancing to the final round of the competition with two other teams, they were judged on how effectively they triaged and treated multiple victims of a tour bus crash. For

their performance, the team was awarded a silver medal for their second place finish. In previous years, our team has earned both silver and gold medals in the JEMS Games and placed third in an international EMS competition in Israel sponsored by Magen David Adom Israel.



Figure 9: SCEMS Competition Team takes Silver Medal in 2010 JEMS Games (Source: SCEMS)

Education and Quality Management

Sussex Technical High School EMT Class:

The Sussex Technical High School (STHS) / Sussex County EMS (SCEMS) joint EMT training program approved by Sussex County Council last March began this school year with 24 students. The school is providing administrative support, some equipment and space for the class, while SCEMS is providing the instructors and any needed additional equipment. We feel this will be a benefit to the students, the volunteer fire companies who will hopefully welcome the graduates as EMT's into their departments, and ultimately to SCEMS as some of the graduates choose to move on to a career in EMS at the advanced level. The students went through a stringent screening process that also included field experience on our medic units. Meetings were held with the students and their parents during and after the selection process to address issues and concerns.



Figure 10: SCEMS began a partnership with Sussex Technical High School to offer an EMT Course to a select group of high school seniors. (Source: SCEMS)

New sepsis protocol:

The 2010 Delaware State Paramedic Standing Orders allowed for the use of point of care testing of blood lactate levels. This protocol will help paramedics identify patients potentially suffering from sepsis so that treatment can be initiated sooner. The medics will then be able to give earlier notification of sepsis patients to allow receiving hospitals to be better prepared to continue treatment upon arrival of the patient. In 2010, we purchased lactate meters so that we could fully implement the new Delaware sepsis protocol.



Figure 11: Point of care testing equipment was tested to measure blood lactate levels of potential sepsis patients (Source: SCEMS)

Clinical Improvement Program:

In 2010, we extended our existing clinical agreement with Beebe Medical Center to include clinical experience with the Anesthesia Department. This new agreement, in conjunction with the long standing agreement with Nanticoke Memorial Hospital, has allowed for more capacity with clinical experience in Operating Rooms maintaining airway management competency. We now have the ability to have all of our paramedics gain clinical experience with anesthesia during their two year recertification cycle. In addition to intubation experience, we are also moving forward with utilizing our human patient simulator to periodically evaluate paramedic assessment abilities.

Drills and Exercises

Del Tech Disaster Drill:

SCEMS participated in a disaster drill with the Delaware Technical and Community College Paramedic Program held on the Terry Campus on April 23. The drill was a joint exercise between the paramedic, nursing, and Homeland Security college programs at DTCC. SCEMS provided MCI resources such as tarps, cones, etc. and our staff shadowed the EMS participants and provided guidance and direction during the exercise.

Radiological Drill:

In May, SCEMS participated in a FEMA evaluated Radiological Emergency Preparedness (REP) Plume and Ingestion Pathway Exercise at the Emergency Operations Center in Georgetown. The scenario involved an accidental release from the nuclear power plant in New Jersey. Sussex County EMS represented health care in the EOC at the local level and provided information about how the situation would impact the delivery of EMS care throughout the affected areas.

School Shooter Exercise:

In June, SCEMS participated in an active shooter table top exercise with several agencies including the School official, local fire and EMS, hospitals, local and state police, DelDOT, and the Delaware Emergency Management Agency.

DRBA Exercise:

In September, SCEMS participated in a table exercise with Delaware River and Bay Authority officials from both Delaware and New Jersey. This exercise simulated the response to an explosion on a Cape May – Lewes Ferry in the middle of the Delaware Bay. Over 100 simulated patients were triaged and transported to receiving facilities in Delaware and New Jersey.

Figure 12:
SCEMS Paramedic functioning as Transportation Officer in Beebe Medical Center Drill (Source: SCEMS)



Figure 13:
SCEMS HazMed team reviews new Medical Surge Truck during drill (Source: SCEMS)



Equipment and Logistics

Paramedic Station 102:

Paramedic Station 102 in Laurel was dedicated in a ceremony held on Wednesday, January 6, 2010, becoming the first of its kind in Sussex County, a station built specifically for Emergency Medical Services (EMS). The station is strategically placed to allow rapid access to Route 13 to provide care to the citizens and visitors of Laurel, Delmar, and Blades as well as backup to the Seaford area. The station was designed to fit into the surrounding residential community and includes features designed to sustain 24 hours a day, 7 days a week ALS coverage. The two bay garage houses the primary medic unit and a reserve truck. The station was designed with green technologies including solar electrical panels, energy rated windows and appliances, extra wall insulation, energy and efficient and natural lighting.



Figure 14: Newly opened Paramedic Station 102 is dedicated in January 2010 (source: SCEMS)

Gear Bags:

Over the last several years, SCEMS has been attempting to decrease the amount of weight being routinely carried by our paramedics and to improve the method by which they carry this weight as a result of two ergonomics studies performed. In 2010, we implemented backpack-style bags system-wide in an effort to provide for the suggested method of carrying paramedic equipment on the backs of our employees rather than on one shoulder. This is coupled with new composite oxygen bottles and an intense effort by our equipment committee to reduce the weight of the bags by redistributing equipment will hopefully reduce injury to our paramedics from routinely carrying heavy equipment



Figure 15:
New backpacks
implemented
(Source: SCEMS)

2011 INITIATIVES

Cardiac Monitor Replacement:

We will begin a program of replacement for our aging cardiac monitors. We currently utilize Physio-Control LifePak 12 Monitor/Defibrillators in our department. Many of these monitors are over ten years old. This model of monitor is no longer manufactured and the manufacturer will end its support for this monitor over the next several of years. An ad hoc committee has been formed of field paramedics and administration to look for a replacement for the LifePak 12.

Recruiting and Retention:

We entered 2011 with five paramedic vacancies and, for the first since 2004, no sponsored student-employees in the Delaware Technical and Community College Paramedic Program. Over the past five years we have had a median attrition rate of six paramedics per year. With the cessation of our sponsorship of paramedic students, we're increasing our recruiting activities in an effort to hire more out-of-state paramedics needed to offset the existing vacancies and anticipated annual attrition.

Education of BLS:

Since the early 1990s we have offered the Medic Assist course to BLS companies. This course is designed to train EMTs to assist paramedics in the performance their ALS skills. As examples, the course includes preparing IV bags for use by the paramedic and correctly placing ECG leads on the patient. We have recognized that the BLS providers could benefit from more exposure to SCEMS training so we are beginning to offer several other courses to the local volunteer fire and EMS departments. These courses are directed primarily towards Mass Casualty Management and Fire Ground Rehab.

Infrastructure:

Radio coverage in our EMS Headquarters has always been sporadic and in some locations absent. Through the use of a grant from DEMA, we will be installing a bidirectional amplifier at our EMS Headquarters to allow for radio and cellular communications throughout the building. Also, we will be finalizing emergency power generation at Station 103/Special Operations and requesting funding for a generator and key fob access system for Station 102 in Laurel.



Sussex County EMS

P.O. Box 589

Georgetown, DE 19947

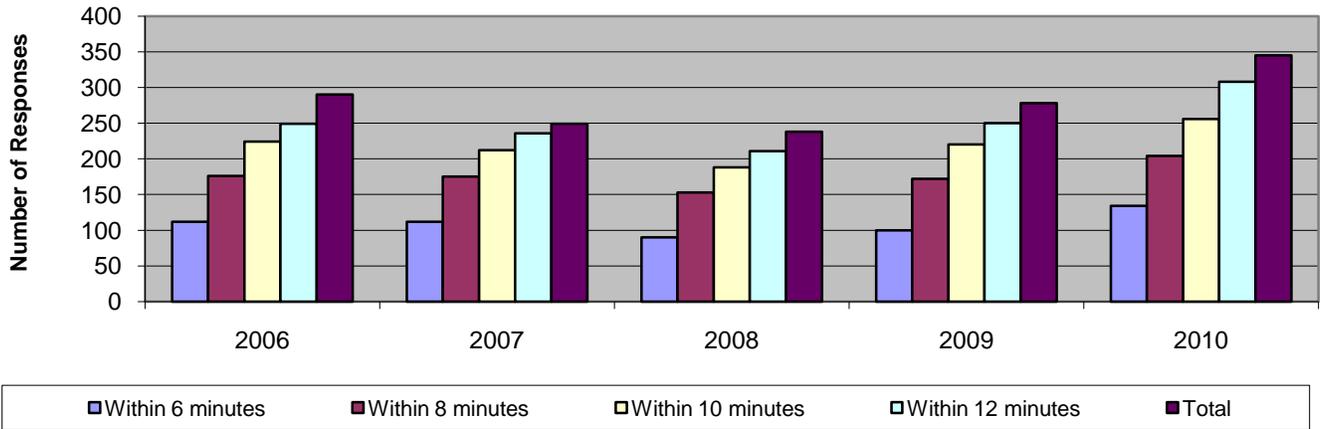
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Caring People, Quality Service

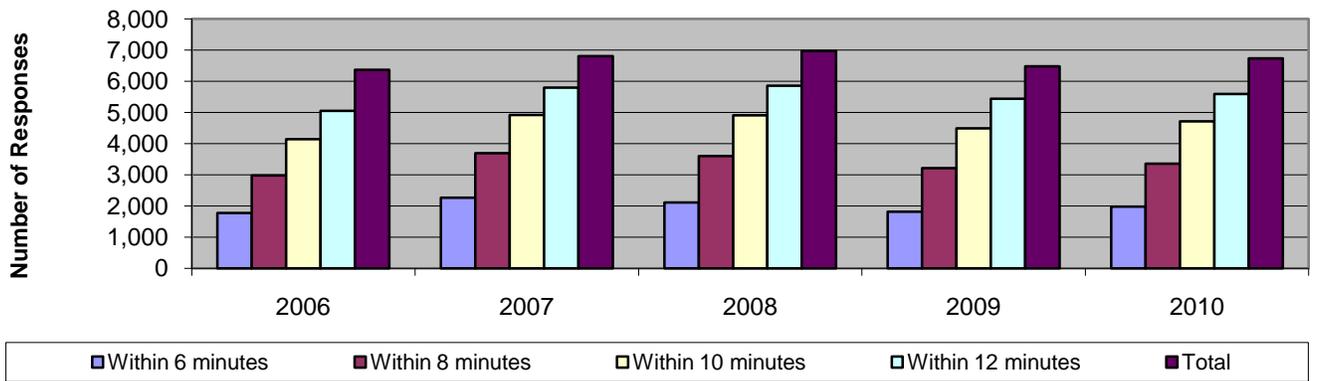
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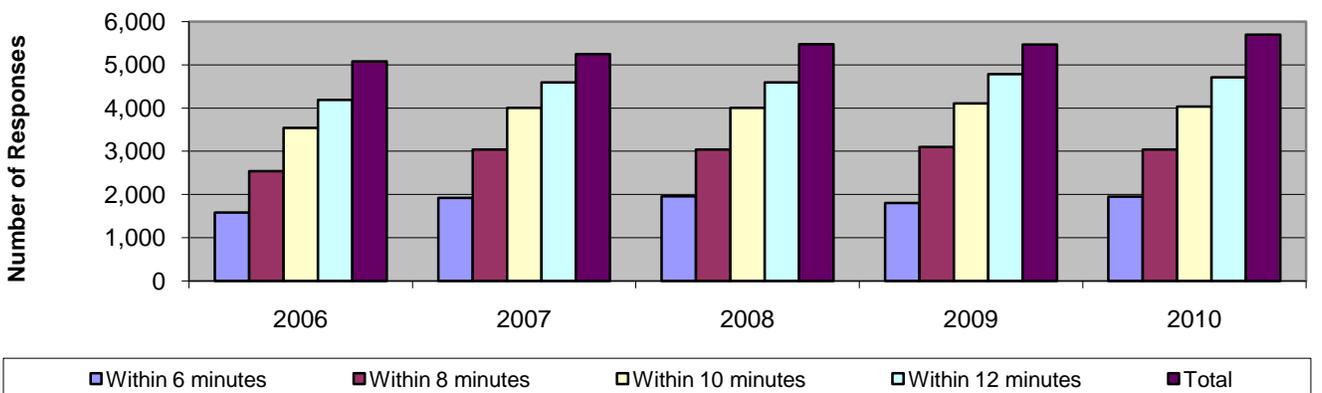
Echo Level Response, Sussex County EMS

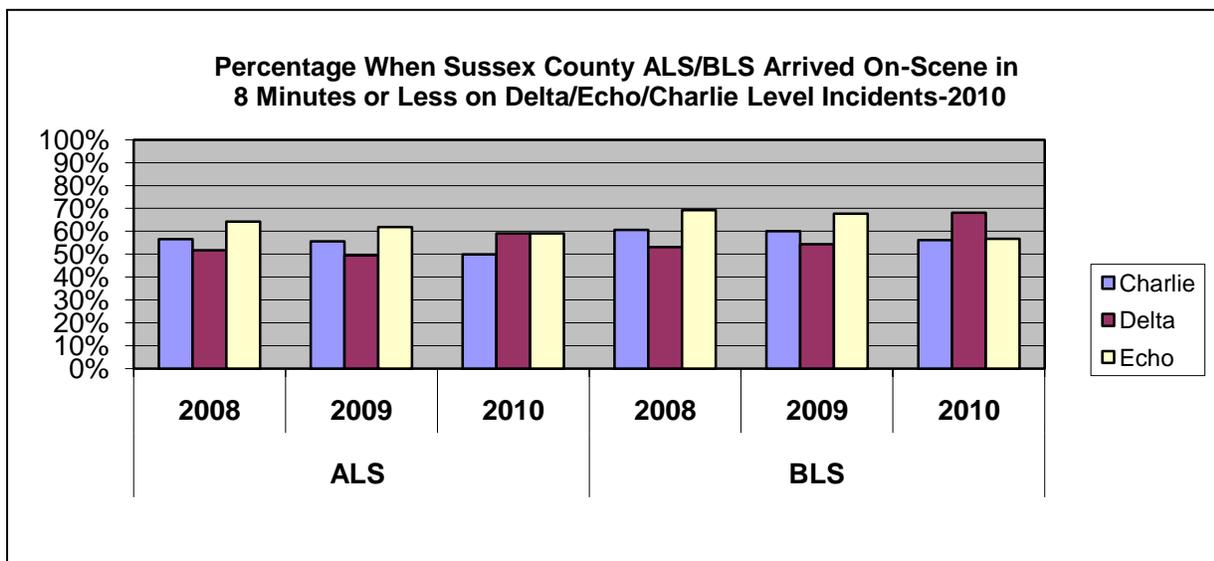
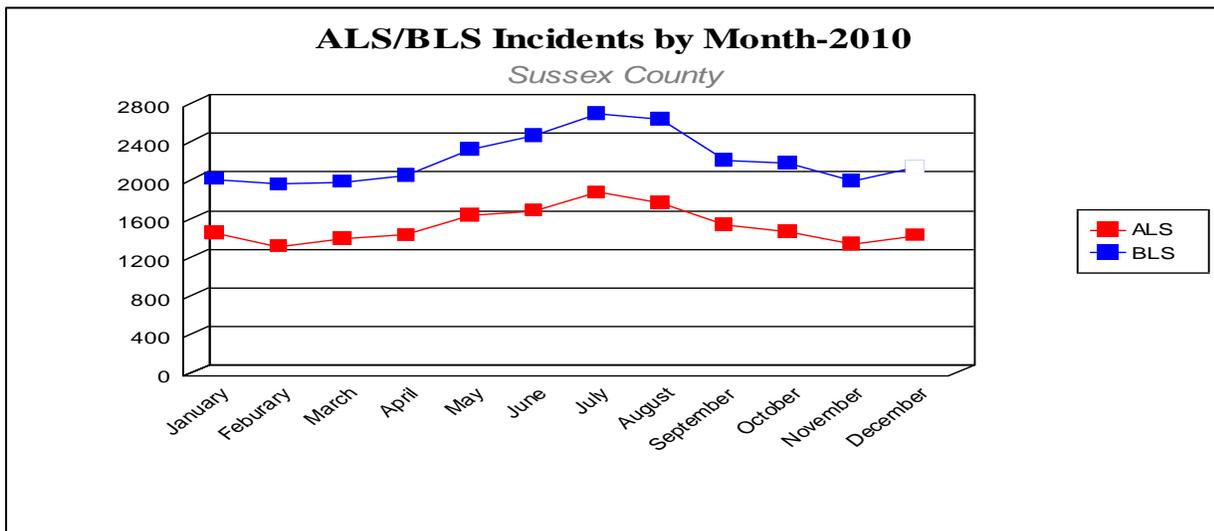
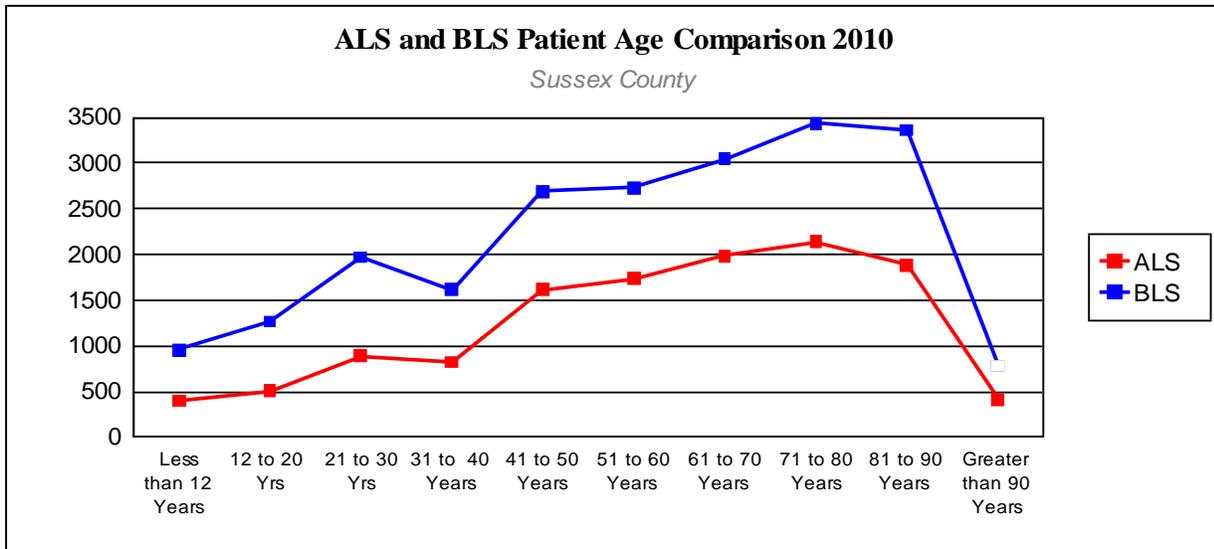


Delta Level Response, Sussex County EMS



Charlie Level Response, Sussex County EMS





| BLS Paid Personnel Chart By Company | | | |
|--|-----------------------------|-----------------------|---------------------------|
| Sussex County | Total Paid personnel | Shifts covered | Days/ Time Covered |
| Blades Fire Co. | 3FT - 8PT | 12H | 6am-6pm 7 days |
| Bethany Beach Fire Co. | 8FT - 20PT | 24H | 24/7 |
| Bridgeville Fire Company | 2FT - 15PT | 12H | 6am-6pm 7 days |
| Dagsboro Fire Co. | 3FT - 15PT | 12H | 24/7 |
| Delmar Fire Co. | 8FT - 8PT | 24H | 24/7 |
| Ellendale Fire Co. | 4FT - 20PT | 12H | 24/7 |
| Frankford Fire Co. | 3FT | 12H | 24/7 |
| Georgetown American Legion | 3FT - 6PT | 12H | 6am-6pm 7days |
| Greenwood Fire Co. | 1FT - 30PT | 12H | 6am-6pm 7days |
| Gumboro Vol. Fire Co. | 3FT - 9PT | 12H | 6am-6pm 7days |
| Laurel Fire Dept. | 7FT - 10PT | | 24/7 |
| Lewes Fire Dept | 9FT - 10PT | 24H | 24/72 |
| Memorial Fire Co. | 1 FT - 4PT | 12H | 7am-7pm 5 days |
| Mid Sussex Rescue Squad Inc. | 10FT - 15PT | 24H | 24/7 |
| Millsboro Fire Co. | 6 FT - 10PT | 12H | 5am-5pm 7days |
| Millville Vol Fire Company | 9FT - 18PT | 24H | 24/7 |
| Milton Fire Co. | 1FT - 7PT | 12H | 24/7 |
| Rehoboth Beach Vol. Fire Co. | 8 FT - 30PT | 24H | 24/7 |
| Roxana Vol. Fire Co. | 2FT (66) : 1FT M-F (84) | 12H & 8H | |
| Seaford Vol Fire Co. | 8FT - 5PT | 24H | 24/7 |
| Selbyville Fire Co. | 3FT - 8PT | 8.5H & 12H | 5 days |

| 2010 Sussex County BLS Scratch Report | | | |
|--|--------------|------------------|------------------------|
| Submitted Sussex County Dispatch | | | |
| Station | Total | Scratches | Scratch Percent |
| Bethany Beach Fire Co. | 607 | 3 | 0.49% |
| Blades Fire Co. | 660 | 40 | 6.06% |
| Bridgeville Fire Co. | 720 | 29 | 4.03% |
| Dagsboro Fire Co. | 412 | 19 | 4.61% |
| Delmar Fire Co. | 1247 | 6 | 0.48% |
| Ellendale Fire Co. | 788 | 17 | 2.16% |
| Frankford Fire Co. | 205 | 9 | 4.39% |
| Georgetown Fire Co. | 2174 | 141 | 6.49% |
| Greenwood Fire Co. | 502 | 13 | 2.59% |
| Gumboro Fire Co. | 295 | 9 | 3.05% |
| Indian River Fire Co. | 1842 | 86 | 4.67% |
| Laurel Fire Co. | 1599 | 49 | 3.06% |
| Lewes Fire Co. | 2261 | 14 | 0.62% |
| Millsboro Fire Co. | 1838 | 144 | 7.83% |
| Millville Fire Co. | 1263 | 50 | 3.96% |
| Milton Fire Co. | 861 | 26 | 3.02% |
| Seaford Fire Co. | 2535 | 111 | 4.38% |
| Selbyville Fire Co. | 407 | 19 | 4.67% |
| Memorial Fire Co. | 114 | 5 | 4.39% |
| Roxana Fire Co. | 730 | 10 | 1.37% |
| Rehoboth Fire Co. | 2511 | 216 | 8.6% |
| Total | 23571 | 1016 | 4.31% |

Sussex County

Basic Life Support (BLS)

Submitted by various BLS agencies within Sussex County

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.

ACCOMPLISHMENTS AND NOTABLE EVENTS

Bethany Beach Fire Company

Second Year of EMS Service: The Bethany Beach Volunteer Fire Company Emergency Medical Services has just entered its third year of service. The service is thriving and growing every year and the members of the Bethany Beach Volunteer Fire Company look forward to providing this essential service in the years to come. Our call volume increased from the previous year by 9% for a total of 920 calls for service. We were able to handle 97% of these calls, with other agencies covering any additional emergencies during the busy summer months. We transported 479 patients to a medical facility with 76% of these patients going to Beebe Medical Center in Lewes, Delaware. Other hospital destinations included Atlantic General Hospital in Berlin, Maryland, Peninsula Regional Medical Center in Salisbury, Maryland and Millville Medical Center in Millville, Delaware. 67% of our calls were medical emergencies and 33% of our calls were a result of a traumatic event. 53% of the patients contacted were male and 47% were female. Our busiest month was July with 179 calls for service; at one point on July 4th we were handling 6 calls at one time. Our busiest days were on Fridays, followed by Saturdays, then by Sundays. The busiest hour of the day was 12 Noon. Our average call duration was 1 hour and 13 minutes. We utilized 1934 personnel for a total of 1907.97 personnel hours. We traveled a total of 14,605 miles.

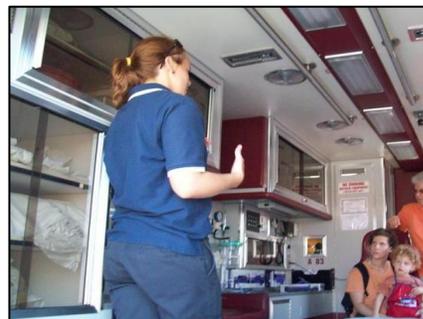
Kids Night Out: Every summer the Bethany Beach Fire Company, Fire Prevention Committee holds several Kids Night Out events at the Bethany Beach Fire Headquarter. This event brings children of all ages into the fire station and teaches them about fire and injury prevention. The children get the chance to climb on fire apparatus and see some of the tools used by firefighters to save people's lives. The children also get a chance to spray water from a fire hose used by firefighter and see a fully dressed firefighter in his gear. This is a great time for the children and parents alike. On this night, nearly 45 kids and their relatives enjoyed a fun night at the fire station.

Millsboro Fire Company

Lowe's Safety Day: On September 18, 2010, members of the Millsboro Fire Company, along with the Millsboro Police Department and the Sussex County Paramedics, were on hand to help Lowe's celebrate their annual Safety Day. Also lending a helping hand were members of the Boy Scout troop from Millsboro. Story by B. Mitchell



EMT Martin shows a "future EMT" how to take a blood pressure Photo by: Joe Hopple



Lowe's Safety Day. Jessica Rogers gives a tour of the ambulance

Laurel Fire Company

Prom Promise: On May 28, 2010, local groups came together to support the Delaware Office of Highway Safety to conduct a Prom Promise Event at the Laurel High School. A mock crash took place in front of the High School to show students the dangers of drinking and driving. The event was to give awareness to the students who will be driving this busy weekend. Groups including, Nanticoke Memorial Hospital, Laurel Fire Dept., Laurel Police Dept., Hannigan-Short Funeral Homes and Carey's Towing came together to stage the event. The event was coordinated by Merritt Burke of the Office of Highway Safety and narrated by Laurel Fire Dept. Deputy Chief Mike Lowe. A moving part of the program was a presentation by Brad Owens, whose sister was lost in a D.U.I crash last May. Story by Mike Lowe



Laurel Fire Company participates in Prom Promise
Photo by: Bonnie King

Rehoboth Beach Volunteer Fire Company

Breast Cancer Awareness: The Rehoboth Beach Volunteer Fire Company Career Staff are wearing pink work shirts for the Month of October to Support Breast Cancer Awareness. Along with the support Steven Grunwald, from Southeastern Emergency Equipment, has delivered a Pink Backboard with the Breast Cancer Awareness Ribbon on it. It is one of only two boards ever made to date.



Breast Cancer Awareness Photo by: Sean Humphreys

Lewes Fire Company

New Ambulance: The Lewes Fire Department, Inc. recently placed in service a new 2010 Road Rescue Ultramedic III Ambulance on a 2009 GMC C-4500 Chassis. The new unit was purchased from general funds with assistance from the Greater Lewes Foundation, in the amount of \$750.00, and is the first new ambulance purchased by the Lewes Fire Department, Inc. since 2001. The Lewes Fire Department, Inc. answers nearly 3000 EMS emergencies annually, and operates 3 ambulances. The new unit is now assigned to Station 1 in Lewes and is equipped with many modern safety features including a ZICO O2 lift and 4 - 5 point harness seats. The total cost of the new unit is just over \$175,000.00.



Milton Fire Company's
New Ambulance



Summary:

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.

Communication Center(s)

Sussex County Emergency Communication Center:

Submitted by Sussex County Dispatch

The Sussex County Emergency Operations Center / Fire and Ambulance Callboard employs 20 full time Fire / EMS Dispatchers, 1 Quality Assurance Supervisor, and 1 Assistant Chief Dispatcher.

Fire Service Mobile Project: Sussex Communication Center is working with the CAD vendor to deploy Mobile Data Terminals to the volunteer fire service in Sussex County that will interface with the CAD system to provide the latest technology as well as providing the field units more information in the apparatus which includes driving directions, automatic vehicle location, and touch screen status update. Sussex has started the “Go Live” testing with some fire apparatus MDTs.

Computer Aided Dispatch System: In 2010 the Center had two (2) upgrades of the CAD system to the latest software and hardware technology to meet the growing needs in Sussex County. The Center is also working with the Mapping and Addressing Department to keep the maps current by doing bi-monthly map updates to the system.

EMS Mobile Project: The Center continues to support the Sussex County EMS with Mobile Data Terminals, which operate in the same function as the fire service mobiles.

Beta Test Site: Sussex County Emergency Operations Center / Fire and Ambulance Call Board, continues to be a Beta Test Site for TriTech Software Systems. Sussex also remains a Beta Test Site for the National Academies of Emergency Dispatch. The site tests protocol changes and updates along with the testing for new protocols.

Diversion Reports: The Center compiles a diversion report for the three (3) hospitals in Sussex County as well as the two (2) hospitals in Maryland that border Sussex County. As of January 01, 2011, the updated statewide Diversion Policy was implemented in Sussex County.

Re-accreditation: The Center is accredited until 2012. We continue to work towards meeting the standards set by the National Academy of Emergency Medical Dispatch.

Dispatcher Incentives: “The Fiscal 2011 Budget changes the parameters for the incentive program provided to the dispatchers. The amount of the incentive will be increased from \$300.00 to \$375.00, with a maximum of \$750.00 per year. This program will provide a reward for dispatchers who meet the National Academy of Emergency Medical Dispatch (NAEMD) performance level on each of the various required judged items. This program rewards employees who maintain a high level of competence in responding to emergency calls, which in turn enables the Sussex County Emergency Operations Center to maintain its certified status. The Fiscal 2011 Budget again includes funding for shift differential pay for Emergency Communications Specialists who work the night shift. This supplemental fee of 75¢ per hour is comparable to what the State of Delaware offers their dispatchers, as well as that of other counties.”

Regional Training Facility: The Sussex County Emergency operations Center continues to maintain our status as a regional training facility for the National Academy of Emergency Dispatch, offering the Emergency Tele-communicator Course (ETC), Emergency Medical Dispatch (EMD), and other training for the entire region.

Continuing Education: Sussex continues to provide a variety of continuing education classes to assist the dispatchers with their jobs. The courses are taught by our staff as well as various agency representatives, physicians, medics, and others that interact with our agency. To assist the dispatchers with continuing education and pertinent information, we have launched an internal website which lists current assignments, protocol information, health and fitness information, as well as many other subjects relative to the dispatcher or their position.



Rehoboth Beach:

Submitted by Rehoboth Beach Dispatch

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 eight (8) Full Time Telecommunicators. The center has a minimum staffing of one, but there are two Certified Dispatchers on duty for the majority of shifts. While the Center is much busier during the summer months due to our area being a resort, the number of Fire/EMS calls during the winter months continues to increase as the area's year round population increases.

The Center was Re-Accredited by the National Academy of Emergency Medical Dispatch on August 12, 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 2010, we processed 7,309 9-1-1 calls and 31,057 administrative phone line calls. The center dispatched or processed 4,195 police/city incidents; 2,744 traffic stops; 680 fire incidents; and 2,510 EMS incidents (Alpha = 630, Bravo = 462, Charlie = 485, Delta = 580, Echo = 25, Omega = 34, and 294 Fire Responses).

In 2010, we achieved a third full year at full staff with no resignations and all personnel out of training. This allowed us to achieve EMD Quality Assurance Score Levels for the year of 96.67% on Case Entry Processing; 97.27% for Key Question Processing; 98.47% for Pre-Arrival Instructions; 94.26% for Post Dispatch Instructions; 96.55% for Chief Complaint, 95.52% for Final Coding; and an overall average score of 96.44%.

In 2010, the Center continued to focus on Continuing Training for our Staff. Two Dispatchers attended the EMD Navigator Conference, four Dispatchers attended the APCO Communications Supervisor Training Course, four Dispatchers attended the Positron Technology Summit, seven Dispatchers attended the APCO Chapter Fall Training Conference, six Dispatchers recertified as Emergency Medical Dispatchers, our EMD-Q personnel were recertified by the National Academy, and our Communications Supervisor recertified as an EMD and ETC Instructor.

Dispatcher Gerard Cassese was awarded a Life Saving Commendation for CPR Instructions that resulted in a "Save". We continued our 9-1-1 Education Program with visits to area pre-schools, elementary schools, and Public Safety events.

City of Seaford Police Department:
Submitted by Seaford Police Department Dispatch

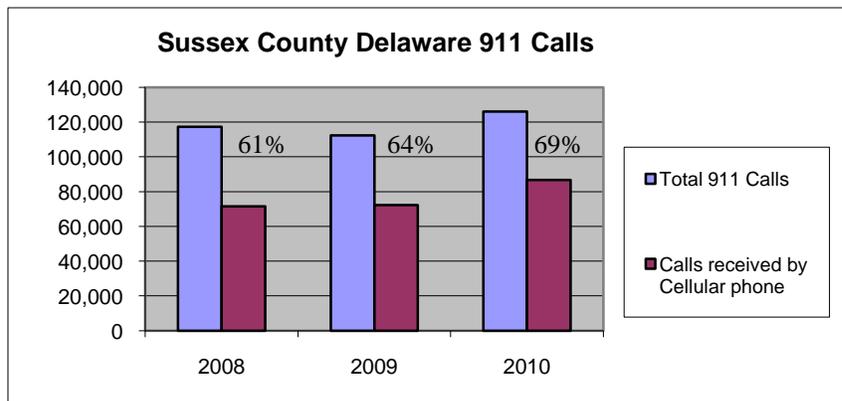
The Seaford 911 Center operates 24 hours a day on a year-round basis. It provides communication service to the City of Seaford to include the police department of 27 full time officers along with the Seaford Fire Department handling fire and EMS calls for service. The Seaford 911 Center continues to be staffed with 9 full time communications specialists which includes 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 911 Center. We were again re-accredited in December of 2008. Early re-accreditation was accomplished due to a major renovation to the Seaford Police Department and 911 center; re-accreditation is now scheduled for December 2011. These renovations of approximately one million dollars will more than double the size of the Seaford 911 Center along with the addition of a new Motorola radio system and the latest Verizon Viper 911 system. With the new addition to the communications facility there will be all new consoles for four positions. Seaford 911 Center is fully operational and is preparing for re-accreditation later in 2011.

Seaford 911 Center receives all 911 calls from landlines in the 629/628 exchange and calls from several cellular towers in the area. In the year of 2010, the Seaford 911 Center received approximately 12,000 911 calls for service and approximately 5,957 cellular calls along with 50,000 administrative calls. The Seaford 911 Center dispatched approximately 9,037 police calls for service, 2,650 EMS calls and approximately 617 fire calls.



Photo submitted by Sussex 911



Data submitted by E911 Board

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Aviation

Delaware Air Medical
Service 133

Delaware State Police 136

LifeNet 151

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Delaware 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 served quickly and safely with a high standard of care. Subsequent revisions in 2001 and 2002 described the air medical service application and state certification process and resulted in the emergence of a well-developed system of air medical transportation in the 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 one-way transport to or from Delaware only.

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, in addition to one way transport to or from 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. These services may also apply for full certification to provide point to point transport service within the State of Delaware and one way transport to or from Delaware.

The initial certification period is three years. Recertification is required every three years.

Scene response – The Delaware State Police (DSP) Aviation Section has responsibility for primary scene response throughout Delaware and is certified for interfacility transport as a secondary mission when needed. Additionally, the following private air medical service is 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*

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 have full state certification to perform point-to-point Delaware interfacility transports:

- *Christiana Care LifeNet, Newark and Georgetown Delaware*
- *JeffSTAT LifeNet, Philadelphia Pennsylvania*
- *PHI for Maryland ExpressCare, Baltimore Maryland*
- *STAT MedEvac, Baltimore Maryland, providing air transport for the Alfred I. duPont Hospital for Children transport team*

The following private air medical services have limited state certification to perform flights bringing patients either into or out of Delaware:

- *Christiana Care LifeNet, Newark and Georgetown Delaware*
- *STAT Med Evac, Baltimore Maryland, providing air transport for the Alfred I. duPont Hospital for Children transport team*
- *MedSTAR, Maryland and Washington DC*
- *PHI for Maryland ExpressCare, Baltimore Maryland*
- *JeffSTAT LifeNet, Philadelphia Pennsylvania*
- *MidAtlantic MedEvac, Pottstown/Doylestown Pennsylvania*
- *PennSTAR, Philadelphia Pennsylvania*
- *Sky FlightCare, Coatesville Pennsylvania*

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

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

ACCOMPLISHMENTS and CHALLENGES

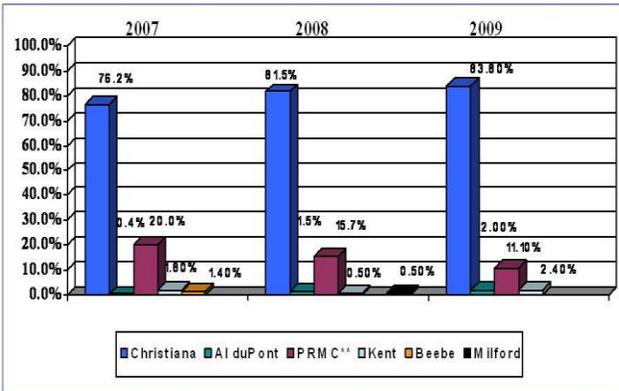
Delaware's air medical system has matured to include nine air medical services providing 24/7 emergency transportation for patients in need of specialty medical care either initially after becoming injured or ill, or initial assessment at a medical facility. The system has evolved from one part-time service to the current full complement of nine services with the levels of state certification described above.

Hallmarks of the development of this system include

- **2001** - Christiana Care LifeNet Air Medical Program began.
- **2004** – Delaware State Police Aviation Program expanded coverage to 24 hours a day, 7 days a week, 365 days a year.
- **2006** - Christiana Care LifeNet added a second site and aircraft in Georgetown, Sussex County.
- **2008** - DSP increased its capacity through purchase of a Bell 412 aircraft, which can carry more patients and is useful in case of the need for evacuations. It is also used with the Helicopter Emergency Action Team (HEAT).

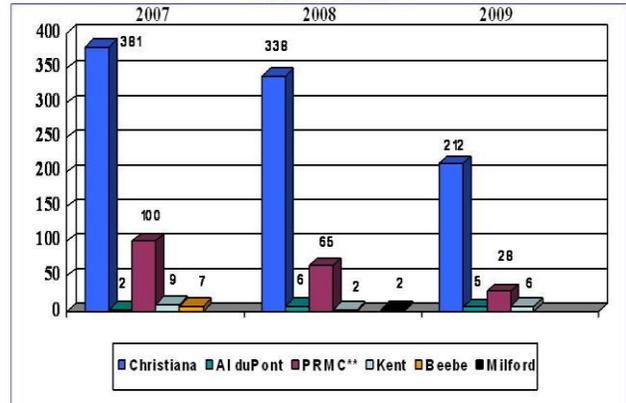
Below, annual trauma scene air transports to tertiary care hospitals Christiana, duPont, or Peninsula Regional by percentage of flights (left) and by number of flights (right).

**Delaware Trauma System Registry
Total Scene Air Transports, All of Delaware
2007 - 2009***



*All scene patients transported by air.
 *Single flights: 2007: MMH; 2008: BMC; NMH; 2009: BMC; MMH.
 *Excludes isolated femoral neck fracture, over 55 years, fall on same level or from bed/chair.
 ** Peninsula Regional Medical Center data provided by PRMC.

**Delaware Trauma System Registry
Total Scene Air Transports, All of Delaware
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 *Excludes isolated femoral neck fracture, over 55 years, fall on same level or from bed/chair.
 ** Peninsula Regional Medical Center data provided by PRMC.

The Trauma System Quality Committee is 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 or Level 2 Pediatric Trauma Centers from the scene, while triaging less seriously injured patients to the Community Level 3 Trauma Centers. The goal is optimal utilization of the resources of all level facilities so as to avoid overcrowding of our tertiary care centers and underutilization of the resources available close to the patients' homes in the Community Trauma Centers.

Safety issues are a continuing priority of the air medical service providers and of the Office of EMS. All certified air medical services provide updated safety equipment and safety program and procedures information as part of their recertification process. Regular helicopter safety in-services for both scene providers and hospital staff are encouraged.



JOHN J RANDOLPH © 2010 LINE OF DUTY IMAGES

*Delaware State Police Aviation Section
2010 DEMSOC Report*



MISSION STATEMENT

To Enhance the Quality of life for all Delaware Citizens and visitors by providing professional, competent and compassionate law enforcement

CORE VALUES



HONOR



INTEGRITY



COURAGE



LOYALTY



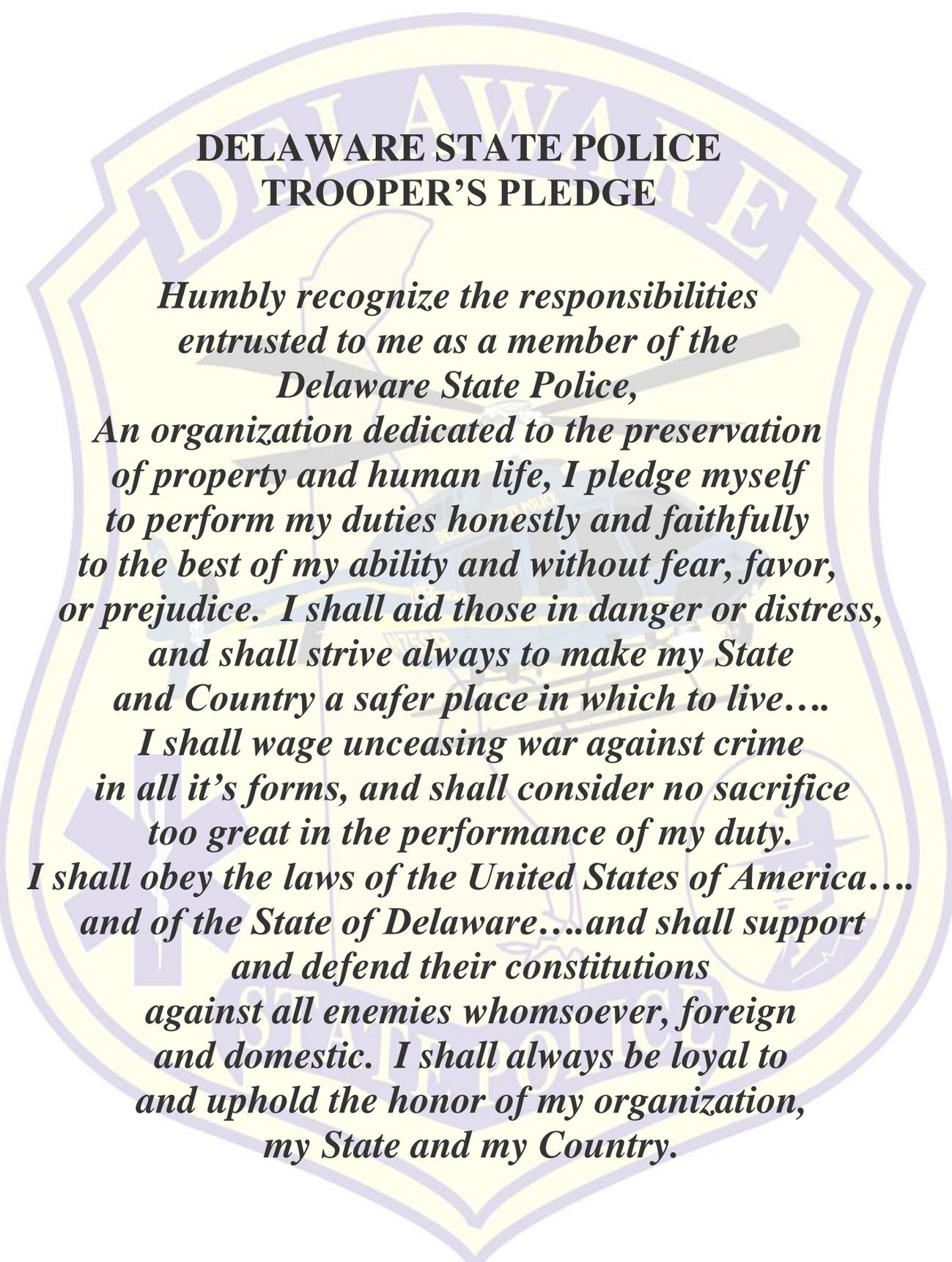
ATTITUDE



DISCIPLINE



SERVICE



**DELAWARE STATE POLICE
TROOPER'S PLEDGE**

*Humbly recognize the responsibilities
entrusted to me as a member of the
Delaware State Police,*

*An organization dedicated to the preservation
of property and human life, I pledge myself
to perform my duties honestly and faithfully
to the best of my ability and without fear, favor,
or prejudice. I shall aid those in danger or distress,
and shall strive always to make my State
and Country a safer place in which to live....*

*I shall wage unceasing war against crime
in all it's forms, and shall consider no sacrifice
too great in the performance of my duty.*

*I shall obey the laws of the United States of America....
and of the State of Delaware....and shall support
and defend their constitutions
against all enemies whomsoever, foreign
and domestic. I shall always be loyal to
and uphold the honor of my organization,
my State and my Country.*

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 involving the Homeland Security front, members have been able to incorporate new technologies, add new equipment, undertake and excel in new responsibilities such as the search and rescue mission and maintain the 24/7 expanded hours of operation.

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 and other important persons. Our section 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. The 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 provide patient transport from hospital to hospital in order to facilitate the highest and most appropriate level of care.





2010 marks the 40th Anniversary for the Delaware State Police Aviation Section and the 25th Anniversary of the Trooper-Medic program.

On October 16, 2010, the Delaware State Police Aviation Section celebrated its 40th year in Aviation and 25 years of the paramedic program. The ceremony was conducted at our newly renovated hanger at the Georgetown Airport. There was a tremendous turnout; neighboring aviation counterparts from MSP, NJSP and our close partners and friends from Lifenet all were present. Past and present section members, politicians and the public were also present to show their support and gratitude. Our keynote speakers included Homeland Security Secretary Schiliro, retired Lt. Charles Nabb, who is credited with being the founder of DSP aviation, and a heartfelt speech from Ted Newhouse, a survivor that DSP Aviation recently flew. During Mr. Newhouse's speech, the survivor credited the DSP Aviation Section; ground ALS, BLS and first responders who treated him with saving his life.



Delaware State Police Aviation Unit marks 40th anniversary

By Pete Hartsock
Special to the Cape Gazette

The Delaware State Police Aviation Unit celebrated its 40th anniversary with an open house Oct. 16, at the Georgetown Trooper 2 facility. Members of the community were able to see a number of aircraft, and the states of Maryland and New Jersey sent one helicopter each to participate in the celebration. As well as inspecting the aircraft, the public toured the newly expanded, state-of-the-art Trooper 2 facilities. Formal presentations were made by Safety and Homeland Security Secretary Lewis D.Schiliro; Delaware State Police (DSP) Superintendent Col. Robert M. Coupe; DSP Aviation Unit Cmdr. Capt. Ronald W. Hagan; retired original Aviation Unit Cmdr. Lt. Charles Nabb; and Ted Newhouse, survivor of a motorcycle accident this past year, whose life was saved by members of the Aviation Unit. Also on hand were many current and former unit members. One of the current members is Cpl. Carol Parton, the first female pilot in the unit, who is currently undergoing her flight training. Nabb, who will soon be 80 years old, made many poignant comments about what flying and the unit have meant to him. He also worked to initiate the Unit Flight Medic program, which has been responsible for saving many lives over the years. People speak of the “golden hour” when the chances for saving lives of badly injured or severely ill persons are supposedly the greatest. Speed is of the essence, and no lifesaving vehicle is faster than an aircraft. Nabb made clear his conviction that it’s not just good enough to get to victims and evacuate them quickly. It is absolutely critical that as many lifesaving procedures as possible be started as soon as possible, before the aircraft arrives, when the aircraft reaches the victim and all the way to the hospital. This means that the flight medics receive the very highest quality medical training. Likewise with flight training for the pilots, who have to fly and land in conditions that would often ground civilian and private sector aircraft.

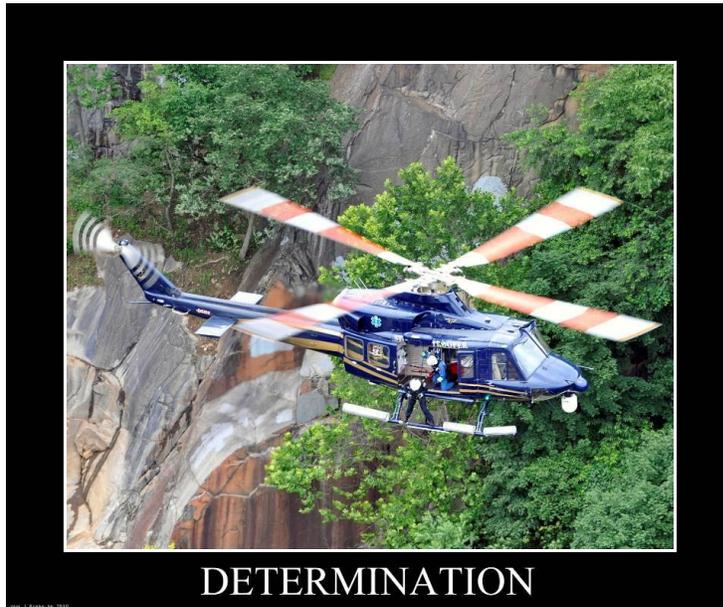
Pete Hartsock is a captain in the U.S. Public Health Service who works with the Delaware State Police Aviation Unit on open-water rescue training.



CELEBRATING THE 40TH ANNIVERSARY of the Delaware State Police Aviation Unit are (l-r) Delaware State Police Lt. Col. James Paige; Aviation Unit Cmdr. Capt. Ronald W. Hagan; Cpl. Carol Parton, the first female pilot in Delaware State Police history; former Aviation Unit Cmdr. Lt. Dave Clark; Delaware State Police Superintendent Col. Robert M. Coupe; and U.S. Public Health Service Capt. Pete Hartsock



Original Aviation Unit Cmdr. Lt. Charles Nabb, left, now retired, listens to Ted Newhouse Speaking about his life being saved by the Delaware State Police Aviation Unit



Delaware Air Rescue Team

Article Submitted by
Retired Trooper Robert McMahon

The Delaware Air Rescue Team is a partnership. Its members include The Delaware State Police, The Wilmington Police Department, The Wilmington Fire Department, The Delaware Volunteer Fire Service, The Delaware Department of Natural Resources and Summit Aviation. It was developed using the Maryland State Police HEAT team as a model. Members of Delaware's Team combine first responders from throughout the state. They train together as a team to work together when special rescue techniques are required to save a life. It has adopted DART as its mission title.

Dart is in its organizational stage. Members have been trained to operate on and with Delaware State Police Helicopters by professional rescuers that have retired from the Military and The United States Coast Guard. The most recent class the members took was funded through the Fire Service's Training and Education Committee. Members were taught how to egress from a sinking helicopter. The training promotes teamwork and prepares the members to deal with Emergency Procedures in the event of an aircraft emergency.

Dart members have worked with Trooper Four and Trooper Two on several successful rescues. Two of the rescues occurred at the location where the team was trained along the Brandywine River. Both rescues were dramatic headline rescues that were performed by the Wilmington Fire Department "Rescue One" along the Brandywine River. In one rescue three young adults were plucked from the Alapocos Falls by members of the DART team performing their duties as Wilmington Firemen. The helicopter was rigged for a rope rescue and hovered over the firemen as they performed the fast water rescue using their rigid inflatable boat. The technical rescue went off as planned with the helicopter standing guard. Not long after this rescue the technical rescue team from Newcastle County requested the assistance of Rescue One from the Wilmington Fire Department. A disturbed young man attempted suicide by jumping off the rock wall at Alapocos falls. Dart Members responded in their roles as firemen and policemen. Trooper four responded and utilized the landing zone that was developed at prior training. The rescue was accomplished by the technical teams and the victim was airlifted to Christiana Hospital with a Wilmington Police Medic assisting the Delaware State Police Trooper Medic.

Dart has been utilized in the Delaware Bay for the rescue of an over board boater. It was recently called out and used in an oil spill incident in the Anchorage. On a hot summer rescue in the Bridgeville area, Dart members rescued two lost Kayakers utilizing fire rescue personnel and night vision goggle equipped aircrew members.

The Delaware Department of Homeland Security recently endorsed the work of DART. They stated their commitment to the program by endorsing the purchase of a new multi-engine rescue helicopter. The new helicopter is intended to increase the capability of the Delaware State Police Aviation Section to support all its partner organizations through the use of a more technically designed aircraft. The new aircraft will assist the section with its multi mission flights.

Dart members have trained with the US Park Police in the Blue Ridge Mountains, and The Maryland State Police Aviation Command at annual training at Middletown's Summit Airport. The Philadelphia Police Aviation Section took part in Dart's recent Water Egress Training. Dart is a regional team that promotes inter agency training. On one occasion Dart training was interrupted when the hoist cable broke on Trooper Four. The New Jersey State Police supplied The Delaware State Police with a new cable and the training continued. Dart promotes team work with regional rescue assets. It is part of Delaware's contribution on a regional level to Homeland Security. The citizens of Delaware enjoy not only the services of Delaware's team but can also rely on partnerships that Delaware has developed with neighboring agencies.

The Delaware Air Rescue Team stresses cross training to deal with life saving incidents that will occur in our state and region. It has been and will continue to be a valuable state and regional asset.



In the winter of 2010, Captain Ronald Hagan, Sgt. Dave Valeski and Cpl/3 Timothy Lintz took the world renowned Bell 412 helicopter to the Helicopter Association International exposition which was held in Houston, Texas. This was the second time the Delaware State Police Bell 412 was being highlighted by Bell Helicopter as a high-tech workhorse for law enforcement, EMS and search and rescue missions. As a result of this show, the Delaware State Police once again received worldwide attention.



The Delaware State Police Aviation Section is pleased to announce that they welcomed six new members to our Section this year. Cpl/2 Nicole Parton, and Cpl/1 Shawn Wright were transferred into the section as Trooper/Pilots and are currently undergoing their flight training. Cpl/2 Nicole Parton is the first female pilot in the history of the Delaware State Police Aviation Section. On March 9, 2011, Cpl/3 Edward Sebastianelli, Cpl/2 Sean McDerby, Cpl/1 Stephen Fausey and Cpl Jennifer Potocki will officially be transferred into the section as Trooper/Paramedics and will begin an intense 18-month training program at Delaware Technical Community College to become certified as nationally registered paramedics. We wish them good luck and look forward to them joining our active ranks soon.





Honoring Those Who Serve

The Delaware State Police Aviation Section would like to thank and honor the service and safe return of Delaware State Police Trooper/Pilots, Cpl/2 William White and Cpl/1 Shawn Wright, both of whom served approximately 10 months in Afghanistan. This was Cpl/2 White's second tour of duty.

Cape Gazette NEWS FRIDAY, DECEMBER 31, 2010 - MONDAY, JANUARY 3, 2011



Pilots with the Delaware Army National Guard's 238th Aviation Regiment deployed to Bagram Airfield in Afghanistan for 10 months.

Sussex aviators fly top brass in Afghanistan

Pilots home after 10-month tours
By Rob Kung
rkung@capgazette.com

Major Billy White didn't think he'd be driving the boss. Going to Afghanistan was surprising enough; the 38-year-old National Guard pilot, a Delaware State Police corporal in his civilian life, was training to return to Iraq when he was ordered to deploy to a different war zone. Once there, he learned he would be responsible for transporting the commander of the entire American military mission. "Yeah, no pressure there," said White, cracking a grin. The Lewes resident comes off as an modest, even shy, for a man entrusted with shuttling America's top commanders across a landscape bristling with threats: assault rifles, rocket-propelled grenades and, worst of all, in-clement weather. As a state police pilot, White, a Laurel native, flies the Bell 407, a versatile helicopter used for everything from searches to medical evacuations. The UH-60 Black Hawk he flew in Afghanistan is a bigger aircraft, like a pickup truck to the Bell's. Because the generals kept busy schedules, air crews from Delaware National Guard's 238th Aviation Regiment, were ready to fly 24 hours a day. Chief Warrant Officer Shawn Wright of Lewes, a corporal and a pilot in the Delaware State Police Aviation Unit, was one of those pilots. He said he wasn't shocked the 238th received orders for Afghanistan; only

months earlier President Barack Obama announced a surge of American forces in the country. Wright anticipated the shift. He was ready. "I felt the fight was more needed in Afghanistan, and that's where I felt I needed to go — for my honor, so to speak," he said. Lewes resident Chief Warrant Officer Craig Falter also deployed with the 238th, but he declined to be interviewed for this article.

Top generals on board
Their deployment was split between two generals: Stanley McChrystal, the command general famed for his ascetic lifestyle, and David Petraeus, McChrystal's mentor in the state of counterinsurgency. In June, White said, he took off from Bagram Air Force Base and flew 25 miles to Kabul, where he picked up McChrystal's baggage and equipment. The general was being recalled to Washington, D.C., after sharply criticizing Obama and his administration in Rolling Stone magazine. McChrystal was due for recharging with his commander in chief.

It would be the general's last time on the Bagram tarmac. After a brief meeting with Obama, McChrystal resigned the Afghan command. Petraeus took his seat in White's Black Hawk. "It's eye-opening," he said with a small laugh, he leaves it at that. While Petraeus' pack an explosive warhead, they're ungilded and often inaccurate at 1,500 feet, White said, pilots were pretty white.

More often than not, White said, small-arm fire was the least of his concerns.

Continued on page 18



Ma. Billy White was training for a second tour in Iraq when he received orders for a 10-month tour in Afghanistan.



Chief Warrant Officer Shawn Wright, standing by his Black Hawk at Bagram, said he was ready and willing to serve in Afghanistan.

18 FRIDAY, DECEMBER 31, 2010 - MONDAY, JANUARY 3, 2011



Gen. David Petraeus, commander of U.S. forces in Afghanistan, addresses members of Billy White's company of Black Hawk pilots.

Pilots

Continued from page 3

Think it's challenge

"The weather was by far scarier than the Taliban threat was," he said. In Iraq, the terrain was mostly flat and the weather more or less predictable. In Afghanistan, clear skies can gray over in hours, and pleasant conditions can swiftly turn foul. Black Hawk pilots launching from Bagram faced a handicap the moment they took off: At 5,000 feet above sea level, the air at Bagram is thin, meaning choppers use more fuel getting off the ground. Wright agreed: Taking small-arm fire was no sweat next to the anxiety of slamming into a mountainside. Night-vision goggles require ambient light — however little — to be effective, he said. On moonless nights, they stuck to their preprogrammed waypoints and prayed for open air in front of their cockpit.

Rather than attempting to fly over the dangerous peaks of the Hindu Kush, White said, pilots opted to fly around the mountains, settling into grooves and established paths. After a while, Wright said, he got used to the routes. "You know when you're riding down the road, you drive for 15 minutes and then you kind of wake up out of it," he said. "It's the same feeling. After a while, you know the

Pilots discover country's beauty

It took Wright a while to find the beauty in Afghanistan. At first, he said, it was as if all color had been drained from the world at Bagram Airfield. The dirt was brown, the mountains were brown, and the sky was brown with dust. A mission in the Bamian Valley gave Wright a welcome splash of color: he saw a lake of the bluest blue he could possibly imagine.

"Not blue-green like we have here, but a bright blue," he said. "That stuck in my mind."

Much of Afghanistan is still unspoiled, Wright said: raw, unsettled, and in its own way, brutally beautiful. "You can envision a future," he said. "I hate to say we're Westernized them — but you see the potential."

White, who deployed with Wright, used his downtime to blow off steam with a 3- or 4-mile run. The 238th aviators enjoyed two days off a month, during which they could avail themselves of Bagram's recreational center, gym or movie theater.

Wright spent time at the gym and even caught a few flicks, but

NEWS Cape Gazette



When they weren't shutting generals across Afghanistan, Maj. Billy White and Chief Warrant Officer Shawn Wright flew a myriad of support missions. Shown is a soldier practicing airborne signing from the deck of White's Black Hawk.

most of all, he said, he enjoyed calling home using Skype, an internet phone service.

Transporting soldiers, civilians

Even on days off, Wright said, aviators would get caught up in the 24-hour beats of Bagram. "If we weren't flying Gen. David Petraeus, there was always given minutes, transports would be unloading cargo, medics would be hustling the wounded to the hospital, and fighter jets would streak to the tarmac to refuel and return. Instead of resting his feet, White found himself transporting squads of soldiers in assault missions, running resupply missions or flying support on medical evacuations.

"We took care of coalition troops, but we also took care of Afghans who were injured," he said. Because many Afghans light their homes with lamps, White frequently found himself rushing burn victims back to Bagram for treatment. Car accidents were also common. "We had a lot of people in the way of motor vehicle laws over here," White said.

Last February, White took part in a massive rescue mission after a plane crashed and stranded hundreds of soldiers in a remote area along Salang Pass, north of Kabul. White said he was surprised by the relatively easy coalition of the Afghans as they were loaded, slithering, onto the coalition transports.

White would sometimes host crew chiefs from the Afghan National Army Air Force. Sitting with their translators, the chiefs would watch White interact with the Black Hawk's crew. When the country's air force is still developing, White said, and consists mainly of logistics and support aircraft and a small squadron of Mi-5 Hind attack choppers. While Afghanistan's armed forces are struggling to get on their feet, the national police, in particular, grapple with desertion and drug addiction.

White said he was impressed by Afghanistan's aviators. "They're competent," he said.

"Am they the U.S. Air Force or Army aviators? No. But they're heading in the right direction, definitely."

In Bagram, White got a chance to visit Pfc. DuRango, a Marine soldier wounded when an RPG all but blew off his right arm. When Wright left Milibono to learn how to fly the Black Hawk, his son was 5, now he's 7. Between training and deployments, Wright said, he hasn't spent any quality time with his son for three years. "Yeah, it's a long time," Wright said. They're making up for it, he said, spending as much time together as possible.

Pilot believes in Obama

As officials in the Obama administration discuss exit strategies, White said he's confident the American mission in Afghanistan is a good, worthy one.

"We went after the people who were after us," he said, "and we're helping rebuild, which is a good thing. You can let it turn into the power vacuum that was created when the Soviets left. We're building roads, building bridges and getting the country back on its feet."

The New York Times recently reported the war in Afghanistan constituted only 4 percent of the nation's 2010. Wright said he believes it.

The gush of patriotism that followed Sept. 11, 2001, slowly faded, and the majority of Americans returned to life as usual. This isn't a bad thing, Wright pointed out: People should live without fear.

"That there's not much thought in everyday lives as to what we're doing over there," he said. "That's a bit depressing."

The Welcome Home banner greeting him in New Castle helped. So did Wawa caregivers who wouldn't charge him for a cup of coffee. And the kid who scribbled "Thank You" on a piece of paper and pressed it to the windshield as his car passed. Wright's — that helped too. "Yeah," Wright said, a smile in his voice. "That was cool."

Delaware Criminal Justice Council
FY 2009 Byrne Justice Assistance Grant Concept Paper



During the fiscal year 2009, the Delaware State Police Aviation section applied for the Delaware Criminal Justice Council Byrne Justice Assistance Grant and was awarded \$65,000 for the purchase of two Physio-Control Lifepak-15 monitors / defibrillators (pictured above). This grant was needed for the Delaware State Police Aviation unit to help assist in the need of acquiring multi-parameter capable medical equipment that is used daily for emergency medical response. The specific project was to obtain two new 12-lead cardiac monitor/defibrillators to replace old, obsolete equipment to ensure quality patient care.



Tactical EMS Missions 2010

Special Operation Response Team (SORT)
Explosive Ordnance Disposal (EOD)

DSP Trooper/Paramedics, along with the Wilmington Police Department (WPD) Police Officer/Paramedic (Sgt. Adam Ringle), provided Advance Life Support (ALS) coverage for DSP and WPD SORT/EOD operations on 135 missions. Our collaborative efforts with WPD proved to be a successful partnership again this year as the tactical medic callout statistics remained practically

identical to last year, therefore validating the programs existence. The total number differs from the total response number on the attached 2010 SORT Data Report due to the fact that the total number includes training exercises, physical training applicant testing and call-outs that required activation of multiple ALS tactical medics to support the mission. Also in 2010, the tactical medic program saw a new team leader, as the coordination of call-outs was taken over by Cpl/3 Matthew Pragg. The Tactical Medic program met its goal of providing ALS coverage on every SORT Mission and on all Explosive Ordinance Disposal (EOD) call-outs when requested by the EOD Officer in Charge.

DSP Tactical Medic Response Statistics

2010 Medic Response Record

| | 229 | 635 | 779 | 835 | 907 | 149 | 293 | 429 | 449 | 032 | 1102 | Ringle | Total |
|------------------------|----------|----------|----------|-----------|----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|------------|
| January | 0 | 1 | 0 | 1 | 1 | 6 | 0 | 2 | 1 | 4 | 1 | 4 | 21 |
| February | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 2 | 2 | 8 | 15 |
| March | 0 | 1 | 0 | 3 | 2 | 3 | 2 | 2 | 0 | 0 | 2 | 6 | 21 |
| April | 0 | 0 | 0 | 2 | 2 | 3 | 1 | 0 | 0 | 3 | 0 | 8 | 19 |
| May | 2 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 4 | 11 |
| June | 4 | 1 | 0 | 3 | 0 | 2 | 2 | 1 | 2 | 6 | 5 | 10 | 36 |
| July | 2 | 2 | 0 | 1 | 0 | 3 | 0 | 1 | 1 | 5 | 2 | 5 | 22 |
| August | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 1 | 1 | 6 |
| September | 0 | 1 | 0 | 1 | 1 | 2 | 3 | 0 | 0 | 3 | 4 | 8 | 23 |
| October | 0 | 0 | 0 | 2 | 1 | 3 | 2 | 1 | 0 | 3 | 0 | 4 | 16 |
| November | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 7 |
| December | 0 | 0 | 0 | 3 | 0 | 10 | 1 | 4 | 0 | 7 | 4 | 1 | 29 |
| Total Responses | 8 | 6 | 0 | 17 | 8 | 40 | 14 | 11 | 5 | 34 | 23 | 61 | 226 |

2010 Mission Types

| Medic | High Risk Warrant | Hostage Baricade | Dignitary Protection | Civil Disturb. | Training / Exercise | Other | EOD |
|--------------|-------------------|------------------|----------------------|----------------|---------------------|-----------|----------|
| 1102 | 18 | 0 | 0 | 0 | 1 | 2 | 2 |
| 229 | 3 | 1 | 0 | 0 | 0 | 4 | 0 |
| 635 | 5 | 1 | 0 | 0 | 0 | 0 | 0 |
| 835 | 16 | 1 | 0 | 0 | 0 | 0 | 0 |
| 907 | 7 | 0 | 0 | 0 | 0 | 1 | 0 |
| 149 | 18 | 0 | 1 | 0 | 12 | 4 | 5 |
| 293 | 11 | 1 | 0 | 0 | 0 | 2 | 0 |
| 429 | 8 | 1 | 1 | 0 | 0 | 1 | 0 |
| 449 | 4 | 0 | 0 | 0 | 1 | 0 | 0 |
| 779 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 032 | 30 | 1 | 0 | 0 | 0 | 3 | 0 |
| TOTAL | 120 | 6 | 2 | 0 | 14 | 17 | 7 |

**Submitted by
Wilmington Police Sergeant / Paramedic
Adam Ringle**



The following are statistics from the Wilmington Police Department (WPD) Tactical Paramedic Memorandum of Understanding (MOU) program for the 2010 calendar year highlighting the success of the Paramedic (MOU) between the Delaware State Police and the Wilmington Police Department and how the collaboration of resources is not only beneficial to the individual agencies but to the citizens we serve as well.

The summaries of actions for the WPD tactical medic program are listed below:

| | | |
|---|---|------------------------------|
| TOTAL ACTIVATIONS (including cancels) | = | 192.0 |
| MEAN ACTIVATION | = | 1 CALL EVERY 1.9 DAYS |
| WPD SWAT (including cancels) | = | 100 |
| DSP SORT RINGLE | = | 12 |
| DSP EOD RINGLE | = | 8 |
| WPD EOD RINGLE | = | 7 |
| AVIATION SAR RINGLE | = | 2 |
| CALLS RINGLE MUTUAL AIDED TO DSP MEDIC | = | 33 |
| DSP CALLS MUTAL AIDED TO RINGLE | = | 20 |
| CALLS WHERE NO MEDIC AT ALL AVAIL | = | 9 |
| ALS MEDIC STAND-BY'S | = | 16 |

CRITICAL INCIDENTS

| | | | |
|----------|--|---------|---|
| 3/26/10- | <u>507 N. Dupont Road, Wilmington</u> Barricaded subject Cancelled enroute | 6/2/10- | <u>3 Mill Road, Wilmington</u> Hazardous materials SWAT entry for theft suspects who possibly barricaded themselves inside the large industrial structure |
| 3/28/10- | <u>C & D canal, boat in water, Middletown</u> 4 persons in water, south jetty Aviation SAR activation, Ringle cancelled upon arrival subjects rescued prior to helicopter liftoff | 9/4/10- | <u>Alapocas Run State Park, Wilmington</u> Aviation SAR mission for severely injured subject on the cliff face Trooper 4 responded and Ringle assisted and transported with crew to Christiana Hospital |
| 4/22/10- | <u>1050 South College Ave, Newark Boston Market</u> Suspicious electronic device placed near gas main no injuries; device was not explosive in nature | 9/9/10- | <u>224 West 23rd Street, Wilmington</u> Possible hostage situation in progress No injuries |

The data outlines the significant need for specialized tactical/EOD Paramedic services for both the Wilmington Police Department and the Delaware State Police alike. Furthermore, this program has been proven successful and continues to protect our responding personnel and citizens alike during major and critical incidents. In 2009, this program was activated once every 1.8 days and in 2010, this program was activated once every 1.9 days.

2010 DSP Helicopter Missions

| | KENT | NEW CASTLE | OTHER | SUSSEX | TOTAL |
|--------------------|------------|------------|-----------|------------|-------------|
| Medical | 472 | 195 | 21 | 299 | 987 |
| Scene | 56 | 81 | 16 | 130 | 283 |
| Negative Transport | 415 | 114 | 5 | 169 | 703 |
| Inter-Hospital | 1 | | | | 1 |
| Medic Assist | | | | | 0 |
| Traffic | 8 | 17 | | 25 | 50 |
| Search & Rescue | 24 | 54 | | 70 | 148 |
| Reconnaissance | 4 | 14 | | 16 | 34 |
| Criminal Search | 42 | 171 | 3 | 85 | 301 |
| Surveillance | 13 | 140 | 1 | 37 | 191 |
| Maint & Testing | 2 | 59 | | 50 | 111 |
| Training | 7 | 131 | 1 | 68 | 207 |
| Demonstrations | 16 | 26 | 1 | 15 | 58 |
| Law Enforcement | | | 12 | 1 | 13 |
| Fire Fighting | | 4 | | 5 | 9 |
| Other | 22 | 61 | | 7 | 90 |
| TOTAL | 610 | 872 | 39 | 678 | 2199 |

2010 DSP Flight Hours

| | KENT | NEW CASTLE | OTHER | SUSSEX | TOTAL |
|--------------------|--------------|--------------|-------------|--------------|---------------|
| Medical | 104.5 | 56.3 | 13.7 | 187.1 | 361.6 |
| Scene | 44.7 | 39.2 | 12.4 | 149.2 | 245.5 |
| Negative Transport | 58.7 | 17.1 | 1.3 | 37.9 | 115 |
| Inter-Hospital | 1.1 | | | | 1.1 |
| Medic Assist | | | | | 0 |
| Traffic | 14.1 | 9.7 | | 14.4 | 38.2 |
| Search & Rescue | 12.3 | 18.9 | 0.7 | 37.4 | 69.3 |
| Reconnaissance | 2.6 | 12.5 | | 9.3 | 24.4 |
| Criminal Search | 19 | 70.4 | 3.9 | 48.5 | 141.8 |
| Surveillance | 7.3 | 70.3 | | 21.2 | 98.8 |
| Maint & Testing | 0.6 | 35.6 | | 30 | 66.2 |
| Training | 3.6 | 160.2 | | 51.4 | 215.2 |
| Demonstrations | 12.1 | 13.3 | | 9.1 | 34.5 |
| Law Enforcement | | | | 1 | 1 |
| Fire Fighting | | 1 | | 3.5 | 4.5 |
| Other | 15 | 39 | 30.1 | | 84.1 |
| TOTAL | 191.1 | 487.2 | 48.4 | 412.9 | 1139.6 |

2010 AED Deployments

Delaware State Police (DSP) Troopers deployed their Automated External Defibrillator (AED) on 14 occasions, which met the criteria for download (pads-on-patient). The following is a summary of the utilizations:

12 utilizations where the AED analyzed followed by a “No Shock Advised” prompt. The patient was subsequently pronounced deceased.

1 utilization where the trooper administered 2 shocks followed by the patient having a spontaneous return of circulation (ROC). The patient arrived at the hospital alive.

1 utilization where the trooper administered 1 shock followed by the patient having a spontaneous return of circulation (ROC). The patient arrived at the hospital alive.

Infectious Disease Exposures

For the 2010 calendar year the Delaware State Police had a total of 15 confirmed infectious disease exposures. In addition, there were a total of 7 cases that did not meet the exposure criteria; however, these incidences were documented and placed in a file.

New Aircraft Acquisition Committee

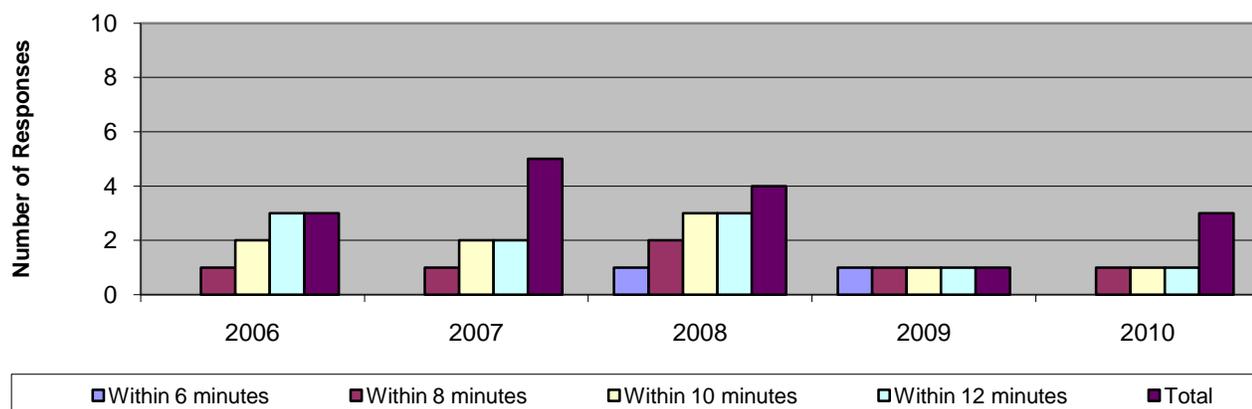
Captain Ronald Hagan has formed a new aircraft acquisition committee to research aircraft which will replace the Division’s aging fleet. The committee’s research and recommendations will be presented to Safety and Homeland Security Secretary Lewis D.Schiliro, Colonel Robert Coupe and the rest of the Executive Staff. Recommendations will be based on the safest most capable aircraft to perform the sections expanding, multi-mission profile. The Committee has researched and received demonstrations on the Bell 412, Augusta Westland 139 and the Eurocopter EC 145, all of which are multi-engine rescue helicopters.

Final Thought

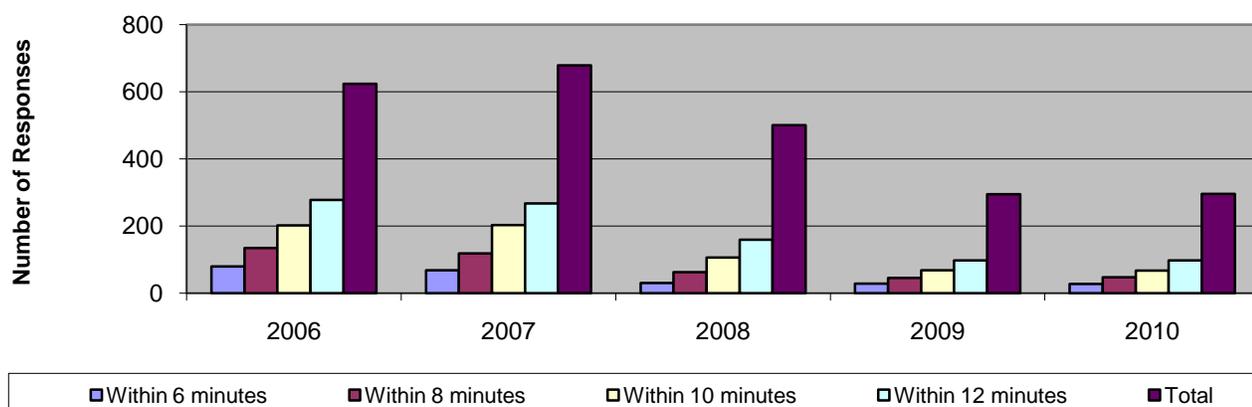
Thanks to Captain Hagan, Sgt David Valeski, Sgt. Thomas McKeown, Sgt. Chris Dooner, Sgt Keith Mark and the entire rank and file of the Delaware State Police Aviation Section for what will arguably be known as the year that projected the Delaware State Police Aviation Section into the next decade.



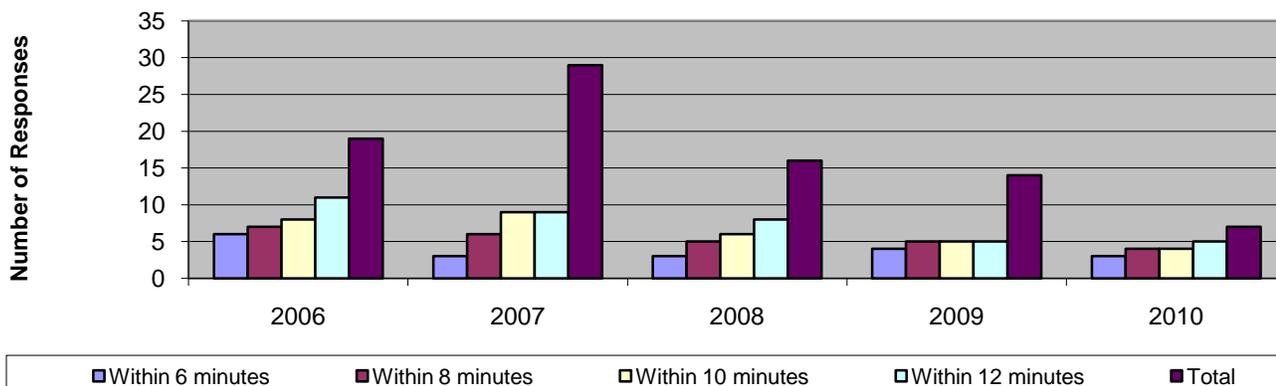
Echo Level Response, DSP



Delta Level Response, DSP



Charlie Level Response, DSP EMS





Christiana Care Lifenet 2010 Flight Activity Report

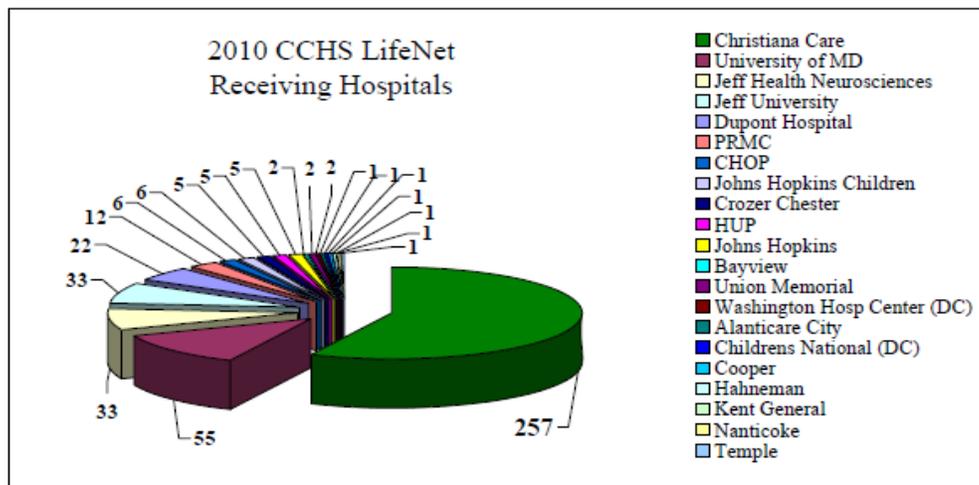
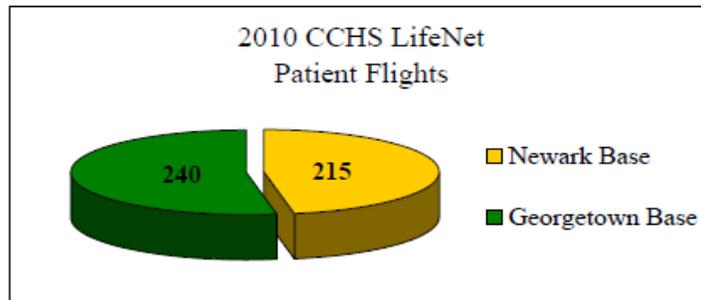
Submitted by Carol Faedtke



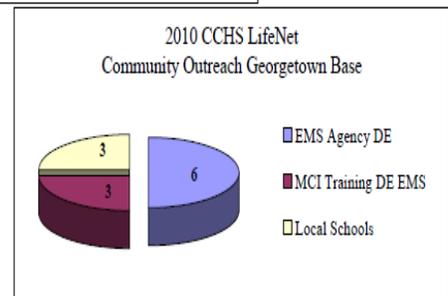
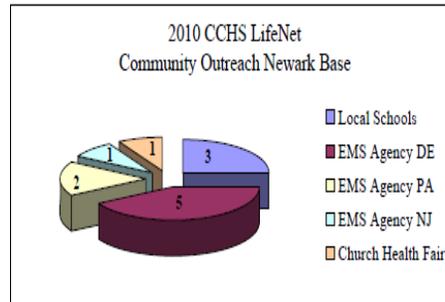
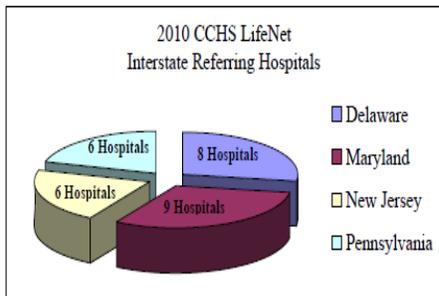
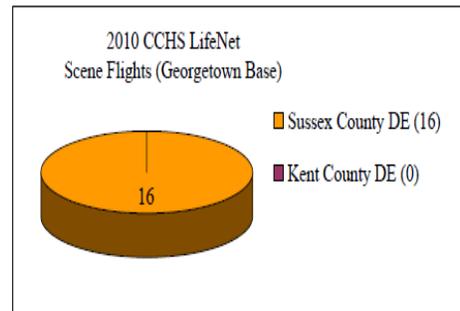
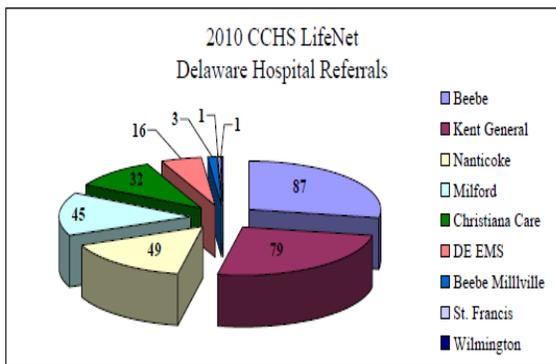
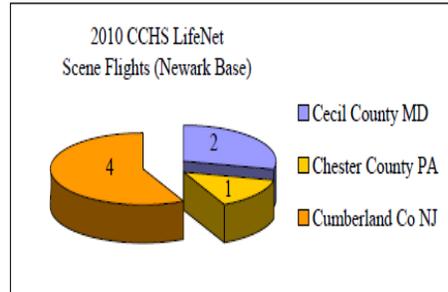
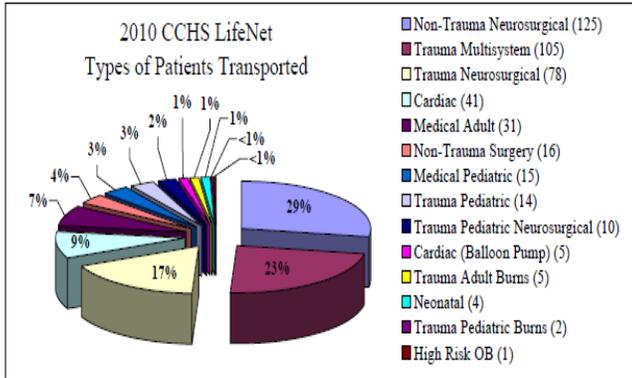
Christiana Care LifeNet will celebrate 10 years of service to the State of Delaware and our surrounding neighbors this spring. Our nurse/paramedic/EMS pilot crews are specifically trained to transport and care for critically ill and injured patients who range from the neonate through the adult life span. Our capabilities include invasive cardiac care IE; Intra-aortic balloon pump and Ventricular Access Devices, all means of invasive monitoring, mechanical ventilation, and medication administration. In 2010, the team transported 455 patients to definitive care.

Our bases in Newark and Georgetown transport to over twenty-one hospitals in five boarding states and provide emergency medical services support to the Delaware State Police Aviation Unit and our state's ALS and BLS providers. LifeNet also actively participates in statewide EMS education programs and county specific disaster drills

Known throughout the state as LifeNet 6-1 and 6-4, this program is the only CAMTS (The Commission on Accreditation of Medical Transport Services) accredited critical care transport unit in Delaware.



2010 CCHS LifeNet



Prevention

Injury Prevention 155

Burn Camp 166

Safe Kids 167

Special Needs Alert Program 168

First State, First Shock! 170

Crash Outcome Data Evaluation
System 172

Infectious Control 175

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Delaware Coalition for Injury Prevention

The following eight pages were submitted by the teams of the Injury Prevention Coalition

Injury prevention includes prevention awareness and public education. This is the role of the injury prevention component of the Delaware Trauma System. The goal of the Trauma System is to decrease death and disability from injury. **In Delaware in 2009, 104 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 seatbelts or decreasing speed. Only by teaching people to make safer choices and to 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. Despite the fact that many unintentional injuries and acts of violence are preventable, they continue to be the leading killer of Americans in the first four decades of life. *Unintentional injuries and homicide* were the first and second leading causes of death for *children and youth ages 1-19* and accounted for 57 percent of all deaths to children and adolescents in 2004-2008 (*Delaware Health Statistics Center. Delaware Vital Statistics Annual Report, 2007, Delaware Department of Health and Social Services, Division of Public Health: 2010*).

The Delaware Trauma System estimates that in a 12-month period, over 89,000 people seek treatment at Delaware hospital Emergency Departments for injuries. This is an average of nearly 250 people every day. Injury and violence in a single year will ultimately cost the nation \$406 billion - \$80.2 billion in medical costs (6% of total health expenditures) and \$326 billion in lost productivity (Safe States Alliance). Throughout the lifespan, Americans are at risk for disability or death due to injury. No age is a "safe" age when it comes to injury and violence. Injuries have associated risk factors which can be predicted and modified. Therefore, **injuries must not be viewed as random accidents, but as preventable occurrences in need of organized efforts to save lives.**

May 18, 2010: The New Castle County Paramedics responded with rescue personnel for a reported motor vehicle collision with a vehicle into the structure at the Exxon station. County Paramedics transported one patient to the Christiana Hospital. None of the occupants of the Exxon store were injured.



April 29, 2010: Several New Castle County Paramedics responded to a serious motor vehicle collision with reported subjects trapped. County Paramedics arrived to find two adult patients, one of which was pregnant, in addition to one infant patient at the scene. All patients were transported to the hospital.

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 data analysis, training and technical advice, developing community partnerships, encouraging interventions at multiple levels, and determining the effectiveness of interventions through evaluation.

In order to give direction to this collaboration, the Coalition developed a five-year *Strategic Plan for Injury Prevention* in 2005. 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. The Coalition teams have completed their 2011 work plans and are ready to begin another year of injury prevention activities. The Coalition's goal is that through this strategic plan, its vision of safe communities in Delaware will be realized, as measured by fewer 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 teach Delawareans that injuries are preventable so they will choose to reduce their injury-related risks.

INJURY PREVENTION ACCOMPLISHMENTS:

2004 NHTSA Review, Public Information, Education, and Prevention Recommendations and Progress to Date-

- Continue to expand prevention efforts with increased reporting of surveillance activities, release of news worthy stories about injury prevention successes, and marketing for EMS, trauma, injury prevention and emergency preparedness.
Progress- Coalition activities have increased, but media reporting has not been a priority.
- Pursue the use of Homeland Security funds to develop a media advocacy program for EMS, trauma, injury prevention and emergency preparedness statewide.
Progress- Not implemented.

2010 NHTSA Review, Public Information, Education, and Prevention Recommendations and Strategies for Implementation-

- OEMS should develop fact sheets from available data for placement on their website to further educate the public about injuries and injury prevention in Delaware.
Strategy- Fact sheets have been created and will be added to the OEMS website in the next month.
- OEMS should consider utilization of internet social networking applications, such as Facebook, to inform the public of its role in the EMS system and the components and capabilities of a state emergency healthcare system.
Strategy- To be considered by Coalition.
- **DHSS should provide OEMS with funding for a senior information analyst to support future data management and analysis efforts to direct injury prevention programs and education.**
Strategy- Application has been made by the Division of Public Health to the Centers for Disease Control for an injury prevention grant with spending to include an injury epidemiologist.
- OEMS should consider implementation of a statewide bystander care program for the public.
Strategy- OEMS offers CPR/AED training statewide for the public.

- **DEMSOC should establish a system to gather ED data to ensure the comprehensive assessment of injuries within the state.** Strategy-see below:

Strategy-OEMS should seek 402 Highway Safety funding to support future injury preventions efforts.

Strategy- OEMS applied for and received 402 Highway Safety funding for two injury prevention data projects in 2010. The first task involves a CODES data linkage pilot project and epidemiologic analysis using Trauma System Registry data and crash data. The second task involves a pilot analysis of Emergency Department (ED) highway crash injury data by a contracted injury epidemiologist. It is hoped that all Delaware hospitals will continue to provide ED injury data to the Trauma System Registry in the future.

2011 CHALLENGES

The first and most obvious challenge to injury prevention efforts is to be successful, meaning---to get the message to the public in such a way that injuries and injury-related deaths actually decrease. Use of data is critical. Data should be scientifically analyzed and then used to identify at-risk populations. Injury prevention interventions should be evaluated to determine the effectiveness of the programs utilized. And baseline data should be monitored to determine trends over time. Dedicated expert analysts and injury epidemiologists are needed to guide and evaluate prevention efforts through data analysis and interpretation. Funding is needed in order to obtain this support. The Coalition for Injury Prevention aims to facilitate networking among agencies interested in working on the same projects or with the same populations. Networking decreases costly duplication of effort and stretches scarce resources. Although prevention has been proven to save not only lives, but healthcare dollars, it is low in the political hierarchy and there is little monetary support available. This is despite research showing that a \$31. child booster seat on average saves society \$2,200. in healthcare and other related costs. A midnight driving curfew combined with provisional licensing for teens yields an estimated cost savings of \$600. per child at a cost of only \$74. And a zero tolerance law for drivers under age 21 yields a cost savings of \$850. per driver at a cost of just \$34. each (Children's Safety Network/EDARC/PIRE). Injury prevention is important work. The Coalition for Injury Prevention operates on the good will of member agencies and their representatives. So much more could be done with adequate funding. So many more people could be reached, so many more lives saved.



CCHS LifeNet Loading a patient for transport.

Delaware Coalition for Injury Prevention

Violence Injury Prevention: Assault, Firearm, and Homicide Team

Team Leader: Michelle Arford-Granholm

Member Agencies: Beebe Medical Center, Connecting Generations, ContactLifeline, Delaware State Police, Domestic Violence Coordinating Council, Kent and Sussex County Emergency Medical Services, Nanticoke Memorial Hospital, and Wilmington Hospital

Key Accomplishments - Collaboration in the following events:

- ***Bullying workshop*** – at Polly Branch Community Center (Sussex County)
- ***Community partnership*** - with Coverdale Crossroads community (Sussex County) to assess perceptions of their health and safety needs. Residents are currently completing community safety surveys, which will help to identify specific targets for educational opportunities during a Coverdale Community Health Fair being planned for 2011.
- ***Domestic Violence Forum*** – “Domestic Violence in the Latino Community” held November 9 in Wilmington.
- ***Fact sheets*** - regarding violent injuries were developed as an educational tool. These are on-line through the Office of EMS Coalition for Injury Prevention’s web pages.
- ***Firearm safety workshops*** – with Coverdale and Polly Branch Community Centers.
- ***Teen Girls Summit*** – G.I.R.L.S. Keeping It Real – a series of filmed paneled discussions, held at the Wilmington Job Corp Window Café.
- ***Primary Prevention Conferences*** - Intimate / Interpersonal Partner Violence; “A Call to Men: Breaking Out of the Man Box” held May 19 at The Duncan Center in Dover.
- ***Risk assessment questions*** – Delaware State Police (DSP) researched the lethality risk to victims in domestic violence (DV) situations. 11 Lethality Assessment questions to detect DV risk and extent of lethality were piloted. Those DV victims evaluated to be at very high risk of “dying or being seriously injured” by the offender were connected to assistance such as the Hotline resources of life-skill sessions, financial help, support groups, and/or shelter. The pilot’s success led to the statewide implementation of the Lethality Assessment Program in November 2010.
- ***New Strangulation Law*** - Two DSP DV detectives, educated about strangulation by several nationally known speakers, looked at the strangulation cases in Delaware and found that many were being prosecuted as misdemeanors without a law which specifically addresses strangulation. They brought this to the attention of our Department of Justice and local senators/representatives; and the new strangulation law was passed in Spring 2010. Under this law, strangulation crimes are now considered felonies.
- ***Gun pledges*** - statewide, 87 pledges were signed for Students Against Gun Violence.



Delaware Coalition for Injury Prevention

Poisoning Control Team



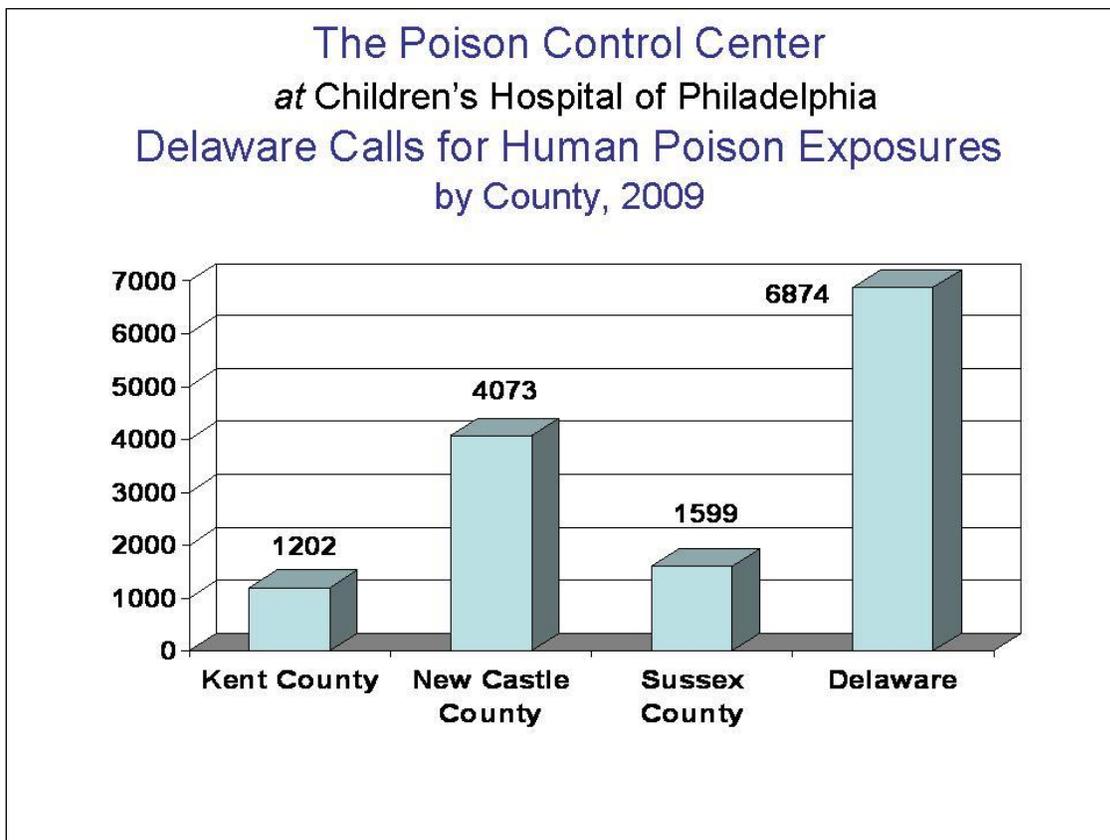
The Poison Control Center

Team Leaders: Dr. Kevin Osterhoudt, Medical Director; Dr. Allison Muller, Clinical Managing Director

Member Agencies: The Poison Control Center partnered with SafeKids-Delaware, Risk Watch-Delaware, and the Delaware Division of Public Health.

Key Accomplishments 2010:

- Provided poisoning prevention, triage, and management expertise in 7,000 Delaware human poison exposure cases called to The Poison Control Center toll free hotline.
- Participated in real-time Delaware epidemic surveillance activities using The Poison Control Center hotline database.



Numbers of calls received from Delaware in 2009 by county and state as a whole.

Delaware Coalition for Injury Prevention

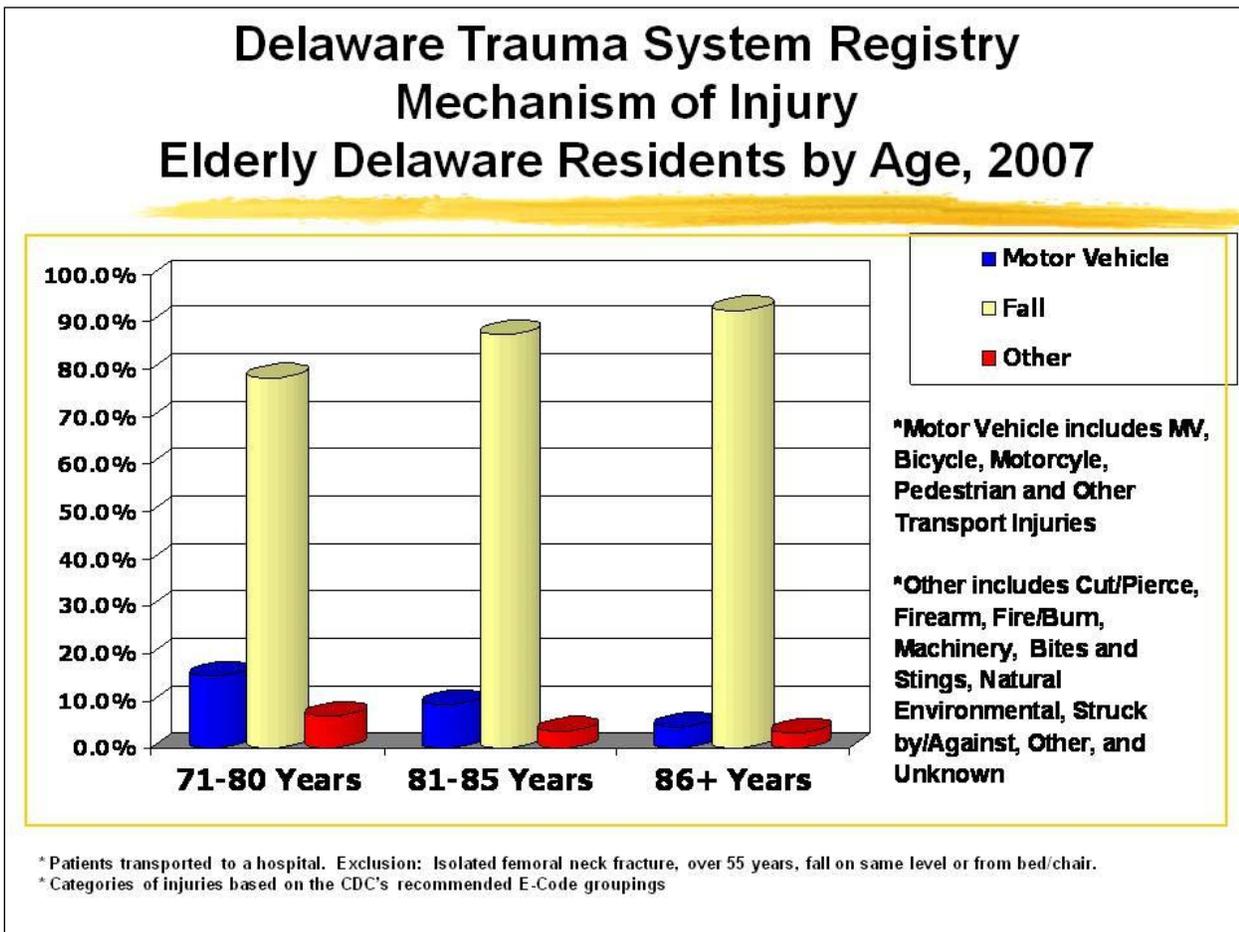
Fall Prevention Team

Team Leaders: Diana Curtis, MSN, RN and Peggy Mack, Ph.D.

Member Agencies: American Red Cross of Delmarva Peninsula; American Red Cross, Southern Jurisdiction; Bayhealth Medical Center; Compassionate Care Hospice; Christiana Care Health Services; Delaware Technical Community College (Terry Campus); Ingleside Homes, Inc; Milford Parks and Recreation; Milford State Service Center, Department of Social Services, Division of Services to the Aging and Adults with Physical Disabilities.

Key Accomplishments 2010:

- Collaborated with other organizations to provide education on fall prevention.
- Developed fact sheets for prevention of falls among children and adults.
- For older adult falls, the team is continuing to spread the message through such means as presentations at senior centers. One example of the team’s baseline statistics is shared below.



Falls surpass other causes of injury in older Delawareans

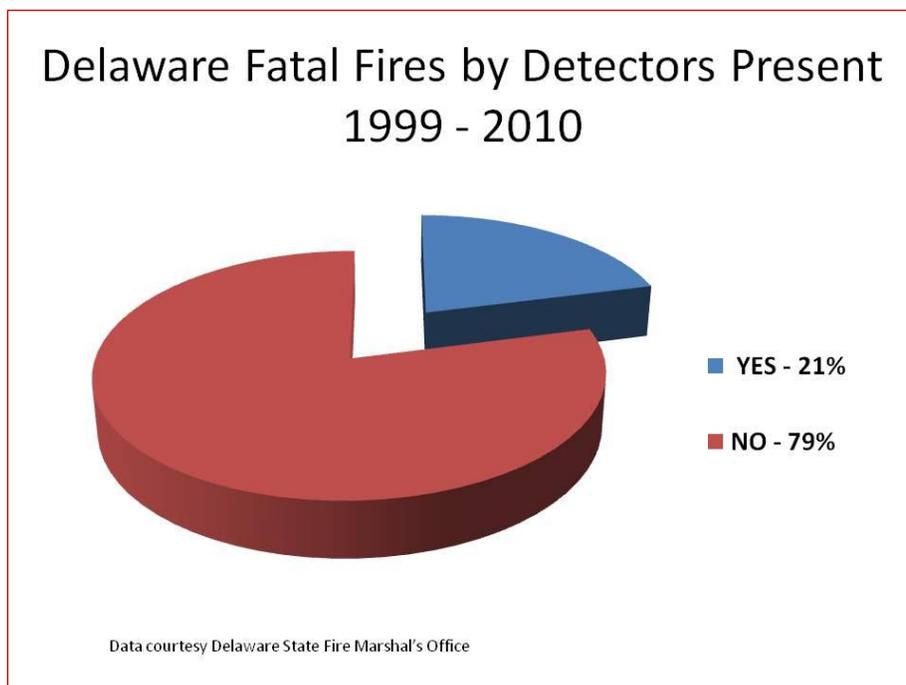
Delaware Coalition for Injury Prevention *Fires, Burns, and Smoke Alarms Team*

Team Leaders: Richard R. Ward, John F. Lattomus, Susan K. Givens

Member Agencies: State Fire Marshal's Office; Delaware State Fire School; A.I. duPont_Hospital for Children

Key Accomplishments 2010 - Collaboration in the following events:

- **Juvenile Intervention Program** - The State Fire Marshal's office educates juveniles about the dangers of fire. The Juvenile Intervention Program Managers assessed 141 juveniles in 2010. The program promoted juvenile fire setting awareness to approximately 10,000 Delaware children through education exhibits and displays.
- **Education Outreach** - 2010 statistics reveal that of the 15 fire deaths that occurred in residential occupancies, only two of those occupancies were equipped with a working smoke alarm. The Delaware State Fire Marshal Office remains focused in their efforts to increase early detection and warning of fires through public displays, open houses, presentations on the proper use and maintenance of smoke alarms, and work with the Delaware Volunteer Firefighter's Association on their planned smoke alarm give-away programs that are organized by the local fire departments throughout the state.
- **Fact Sheets** - regarding fires, burns, and smoke alarms were developed as an educational tool. These are on-line through the Office of Emergency Medical Services Coalition for Injury Prevention's web pages.



Delaware Coalition for Injury Prevention

Drowning and Submersion Injuries Prevention Team

Team Leader: Jennifer Whaley, RN, CCRN

Member Agencies: American Red Cross of Delmarva Peninsula, Emergency Medical Services for Children – Office of Emergency Medical Services – Division of Public Health, Delaware State Fire School, City of Milford Parks and Recreation, Kent County Department of Parks and Recreation Administration, Beebe Medical Center, Sussex County Emergency Medical Services

Key Accomplishments 2010:

Drowning prevention efforts over the past year included public education activities by team member agencies:

Beebe Medical Center surf injury research update:

- Data on more than 400 surf injuries was collected over the summer and is being compiled

April 17th, 2010: YMCA Rehoboth Beach “Healthy Kid Fair” Water Safety Table

- ~ 50 children attended and parents were offered the “Designated Child Watcher” tags from Safe Kids

April 24th, 2010: Lewes Fire Department/Delaware State Police Aviation: Water rescue demonstration

- ~ 100 attendees

May 6th, 2010: Local School Project Water Safety Education

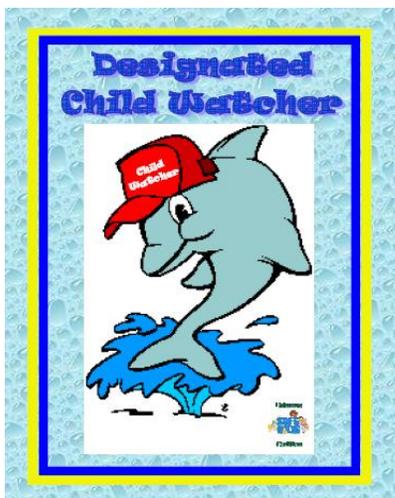
- Kindergarten - 3rd grade - 404 children participated in water safety relay
- 2nd- 5th grade - 675 children participated in water safety relay

July 2010: Summer Playground Day Camp “Safety Day”

- 1st -6th grade - 80 children participated

Milford Parks and Recreation Annual Summary:

- ~ 100 children attended the “Learn to Swim” program
- ~ 30 children were given the “Designated Child Watcher” tags from Safe Kids
- 8 children attended the Life Guard Training certification course
- Participated in Kent County Parks and Recreation’s “Safe Summer Day”, June 2010



Pools and Spas Unlimited & Dover Pools:

Distributed “Designated Child Watcher” tags from Safe Kids

Delaware Coalition for Injury Prevention

Motor Vehicle Injury Prevention Team

Team Leaders: Virginia R. Corrigan, MSN, RN and Andrea Summers

Member Agencies: A.I. duPont Hospital for Children, Bayhealth Medical Center, Beebe Medical Center, Christiana Care Health System, Division of Public Health, Maternal Child Health and Rural Health programs, Department of Safety and Homeland Security, Office of Highway Safety, Nanticoke Memorial Hospital, Safe Kids Delaware

Key Accomplishments 2010:

- **Legislation** - July 6, 2010, passage of Cell Phone Law banning texting and use of hand held cell phones. The new law became effective on January 2, 2011.
- **Evaluation of State's Graduated Driver License (GDL) Law** – The GDL law was implemented in July 1999 and evaluated in 2010 by the University of Delaware. Data sources were: Department of Motor Vehicle (DMV), Delaware State Police (DSP) and Delaware Justice Information System (DELJIS). Since the passing of the GDL Law in 1999, there has been a 30.8% decrease in crash rate, a 30.1% decrease in injury rate and a 59.1% decrease in late night crash rate (10:00PM to 6:00 AM) among 16 year old drivers.
- **Education on Graduated Driver License Parent Orientation Program** – This free program is offered in partnership with the DMV, ThinkFirst Delaware, DSP, and State Farm Insurance. Twelve programs were presented in seven high schools. Approximately 5,000 parents and students were educated about roles and responsibilities regarding the GDL.
- **Education and Enforcement on Seat Belt and Child Safety Seat Use** – Interventions included the campaigns, Click It or Ticket and Child Passenger Safety Awareness Week. There has been an increase in the observed statewide seat belt use rate from 88% in 2009 to 91% in 2010.
- **Education and Enforcement on Safe Driving** - Interventions included the Checkpoint Strike force (DUI) and Stop Aggressive Driving campaigns and Mocktail Parties. On the Office of Highway Safety and the Coalition's web pages, fact sheets are available on occupant protection/seatbelts, aggressive driving, and teen driving. The on-line curriculum, TEACH VIP, which offers a global overview of motor vehicle injuries and permits adaptation to include state data, is also on the Coalition web pages. Delaware's adaptations highlight the state's motor vehicle data. TEACH VIP is provided by the World Health Organization and the Centers for Disease Control.



Mocktail Parties are outreach efforts designed to raise awareness of how to host a fun, safe and sober holiday party.

Delaware Coalition for Injury Prevention

Traumatic Brain Injury (TBI) and Spinal Cord Injury (SCI) Prevention Team

Team Leader: Virginia R. Corrigan, MSN, RN

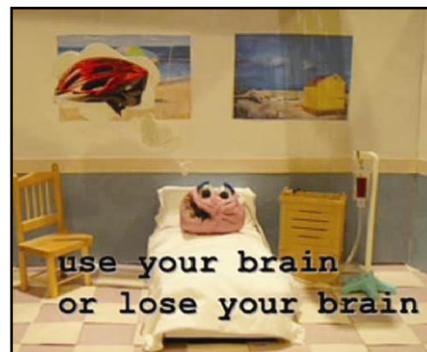
Member Agencies: Christiana Care Health System, University of Delaware College of Health and Nutrition Sciences, Division of Aging and Adults with Physical Disabilities, State Council for Persons with Disabilities Brain Injury Committee, Brain Injury Association of Delaware, Safe Kids Delaware

Key Accomplishments 2010:

- **ThinkFirst Delaware** - These best-practice injury prevention programs have served the Delaware community for 18 years. The mission is to lead injury prevention through education, research and policy. In 2010, over 10,000 teens and young adults were reached in Delaware through 209 presentations. Annual, pre- and post-tests have indicated significant increases in knowledge, changes in attitude and beliefs, and positive changes in behavior.
- **Helmet Distribution and Endorsement** - ThinkFirst Delaware volunteers distributed and properly fitted 750 multi-use helmets for at-risk children and pre-teens in 2010. ThinkFirst volunteers also gave away T-shirts and food coupons, when youngsters were “caught being safe.” This provided positive reinforcement and emphasized the importance of helmet use.
- **ThinkFirst Media Contest** – After Institutional Review Board Approval and a successful 2009 pilot study, the TBI Media Contest / Study was extended in 2010 to every high school throughout the state of Delaware. Four high schools in New Castle County, three high schools in Kent County, and one high school in Sussex County participated in the contest/ research. The purpose of this project was to increase teens’ awareness of their own vulnerability for traumatic brain and spinal cord injury, to empower teens to be proactive in prevention efforts, and to explore the impact of contests on teens’ attitudes and beliefs about permanent injury. Teens were surveyed before viewing the video, after viewing the video, and again after creating Public Service Announcement (PSA) videos. Data from the surveys indicated that teen knowledge increased after viewing the video, but attitude changed significantly after teens produced PSAs. Conclusion: contests may have a positive effect on both knowledge and attitude regarding injury and its prevention. The ThinkFirst Media Contest research poster was recognized with a Merit Research Award at the December 12, 2010 Delaware Health Sciences Alliance conference.

The winning teens’ PSA videos are posted on the Delaware Office of Highway Safety website <http://ohs.delaware.gov/TeenDriving> and Christiana Care’s Face Book page <http://www.facebook.com/christianacare#>

Clip from winning Public Service Announcement, created by Sarah Hope Diban, Abbey Killneffer, Brittany Lynne Fay, and Francesca Reyes from Cab Calloway High School of the Arts.



Delaware Coalition for Injury Prevention

Dog Bite Prevention Team

Team Leaders: Cynthia Martin and Scott Vogel

Member Agencies: Mispillion Kennel Club, Independent Humane Education, and Literacy Education Assistance Pups

Key Accomplishments 2010:

- ***Independent Humane Education*** – Programs were presented to children, youth groups, and adults. These programs focused on the prevention of animal cruelty and safety in terms of Respect For All Living Creatures.
- ***Literacy Education Assistance Pups*** – Combined pet-partner reading programs and pet therapy visits with safety for children and adults around dogs. Weekly sessions were held at 8 locations in the Lewes-Rehoboth Area.
- ***Mispillion Kennel Club*** – Members along with their dogs presented and attended community outreach programs. These programs focused on responsible ownership, positive training, and the appropriate interaction of dogs, children, and adults. Classes were held throughout the year – positive training sessions focused on obedience, socialization, Canine Good Citizenship, and responsible dog ownership.
- ***Training and Safety*** - Information regarding other facilities promoting positive training and safety were identified. There is a variety of programs being offered throughout the State for training, socialization, and safety around dogs.
- ***Pamphlets*** - Information and safety pamphlets were distributed for Safe Kids Programs and pre-schools.



Children are the most frequent victims of dog bites. The main deterrents to bites are adult supervision, education of children on positive interactions with animals, and socialization and training of dogs.

Delaware Burn Camp Corporation

Submitted by the Delaware Burn Camp Corporation



Officers: Joanne Hutchison, R. Jeremy Locklear, Bonnie Cahall, Bonny King

The Delaware Burn Camp Corporation is a non-profit corporation established April 2009 and sponsored by the Delaware State Fire Prevention Commission. The mission of the Delaware Burn Camp is to assist young burn victims (ages 6 to 18) in their adjustment to injury through the provision of a safe, supportive environment and to provide companionship through physical and social activities in a camp setting.

The first Burn Camp week was held August 2009 with six registrants attending a weeklong session at Camp Barnes in Frankford, DE. The second session 2010 was also held at Camp Barnes with twelve registrants. The staff consisted of nurses, firefighters, volunteers, professional and non-professional people who are willing to assist the young burn survivors to have a camp experience that will aid in the development of self-esteem and to help them cope with their burn injury.

Activities included boating, fishing, crabbing, swimming, canoeing, horseback riding, archery, crafts and games. The children were able to bond with each other and relate to several of the counselors who were burn survivors as well.



2010 Campers prepared for a safe boating adventure!

Safe Kids Delaware



Safe Kids Delaware is a non-profit organization established in 1989, comprised of volunteers dedicated to reducing unintentional childhood injury in children from birth to age 14. The Delaware Division of Public Health serves as the lead agency. As an affiliate of the Safe Kids Worldwide Campaign®, we are a state coalition, led by a board of directors, with active chapters in each county. Safe Kids Delaware achieves its mission by partnering with many like-minded agencies - members of our Coalition. We work personally with the Department of Education, Parks and Recreation, various Delaware hospitals, Emergency Services providers, the Consumer Product Safety Commission, the Office of Highway Safety, Delaware State Fire Service and the University of Delaware Cooperative Extension.

Unintentional injury is the leading cause of death and disability to our most precious resource, our children. The mission of Safe Kids is to work 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.

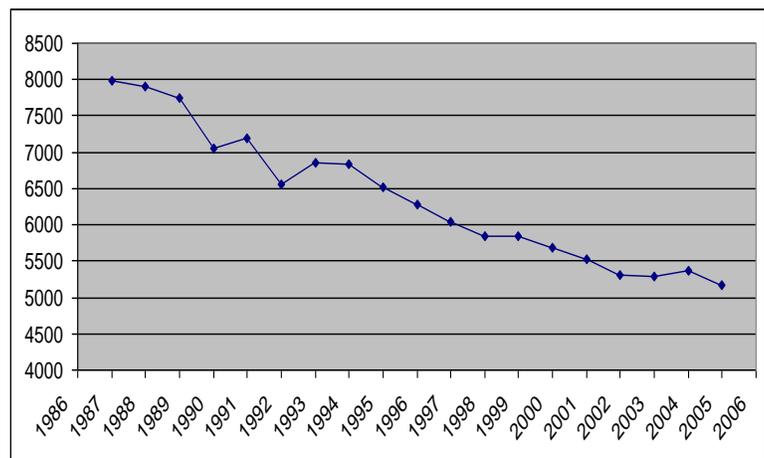
From January 1, 2010 through October 15, 2010 Safe Kids Delaware participated in 215 Health Fairs, safety camps, classes and events in various area schools, businesses and communities reaching approximately 17,539 children and their families; 9 Bike Rodeos, distributing 430 helmets; held several Safe Kids Days throughout the state reaching 2,000 children and their families, and 2,279 children learned to *Walk this Way* Safely to School. Safe Kids and partners checked 2,500 child safety seats and corrected 802 child safety seats. ThinkFirst for Kids reached 2,500 elementary and middle school children, and pre- and post-tests showed a significant increase in knowledge, change in attitude, and increase in safety behaviors. Our Annual Safe Kids - EMSC Conference had 125 attendees who thought the conference was excellent. Safe Kids had a number of Public Service Announcements on the radio, and several news articles. We are making a strong impact on Delaware children and their families. With your support we can continue to protect Delaware's most precious resource, our children. We are making a strong impact on Delaware children and their families.

From 1987 – 2006 there has been a 45 percent decrease in unintentional injury deaths rate.

Safe Kids Worldwide demonstrates in the following graph the significant declines in injury-related death rates since they were founded in 1987.

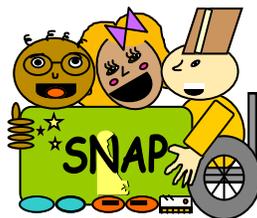
Unintentional Injury-Related Death Rates: In 1987, there were 7,986 unintentional injury deaths among children less than 14 years of age. In 2005, there were 5,162 unintentional injury deaths among children less than 14 years of age.

1987 – 2006 Unintentional Injury Deaths, Ages 0 to 14, United States



Special Needs Alert Program

SNAP



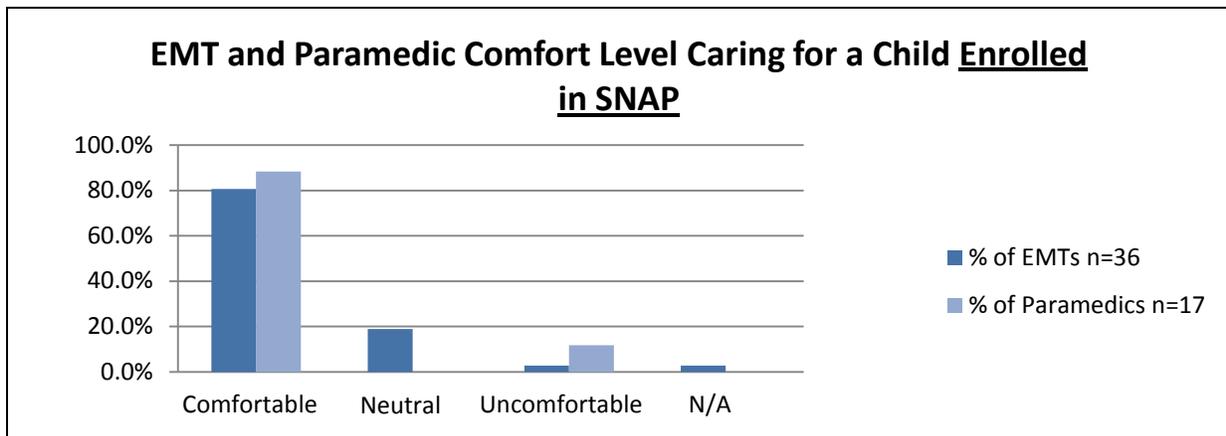
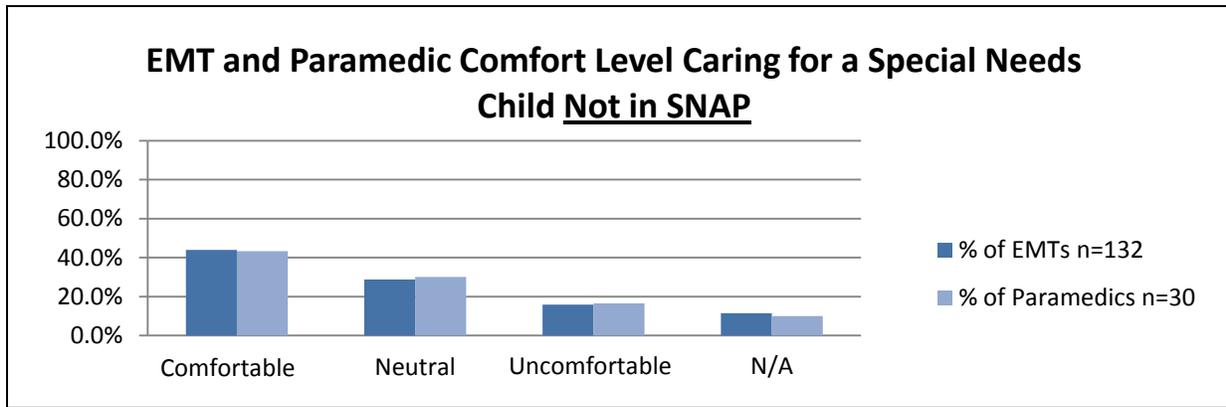
The Special Needs Alert Program (SNAP) recognizes children with special health care needs for Emergency Medical Services (EMS) providers. It is a pre-hospital notification program for any child who has special emergency care needs. To enroll a child in the program a parent or guardian provides medical information and consent to share their child's medical information with the 911 dispatch center, county paramedics, and local Emergency Medical Technicians – Basics, (EMT-Bs) in the fire department. If call conditions permit, the EMT-B and/or paramedic may review the child's unique health information and be alerted prior to arrival at the scene of an emergency. During a 911 incident, SNAP can improve care by facilitating the transfer of medical information from parents to EMS and to the hospital. Information may also be available in the event a parent is not present during an emergency. When a child is enrolled, parents are educated about the EMS system before they have to use it.

SNAP enrollment forms are available through the Office of EMS and on the website. The forms are to be completed by a parent/guardian and/or physician. In 2011, families also will be able to enroll electronically through a new online Delaware Emergency Volunteer Registry.

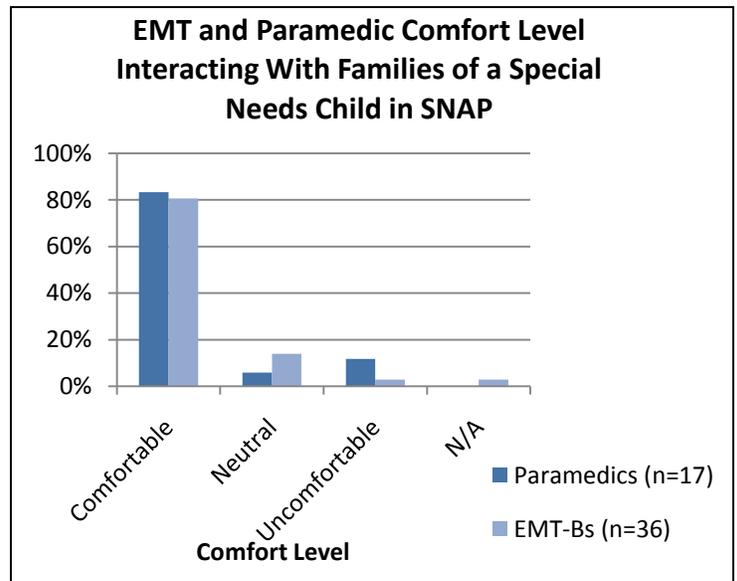
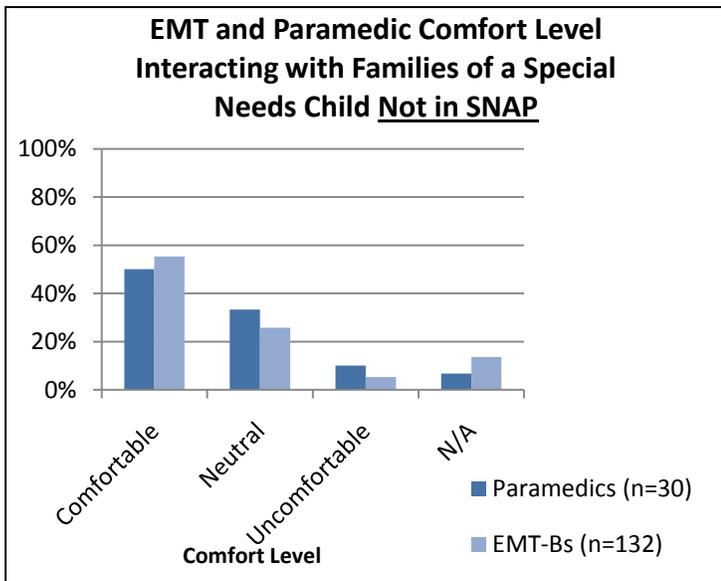
In 2009-2010 an evaluation of SNAP was conducted by the Office of EMS. The purpose was to evaluate the effectiveness of the program for families, EMT-Bs and paramedics. Out of 120 families enrolled in June 2009, 62 families (52%) voluntarily chose to participate in an evaluation survey. Of the 284 paramedics, 33 paramedics (12%) completed the survey. Of the 1,163 Delaware EMT-Bs, 178 EMT-Bs (15%) completed the survey.

The results demonstrated there is a significant difference in family comfort level with emergency medical care before and after enrollment in SNAP. When families were asked about comfort level with emergency medical care **before SNAP enrollment, 35 percent of families reported a middle or high comfort level. After SNAP enrollment, 70 percent reported a middle or high comfort level.** Families reported in a narrative section of the survey how important SNAP is to them, one family stated: "My one experience with a 911 call for my SNAP child was surprisingly great!! The paramedics and first responders were ready to deal with my child before walking in my front door!! They knew his history and previous medical issues. Their efficiency and willingness to listen to me, I believe, assisted in saving my son's life." Another family stated "I highly support this program. The first time we had to call 911 for our child was amazing proof that it works. I would also like this time to thank everyone that made this program possible. Without using names, I will sign this as, Dad of a very special little girl. THANKS!!"

For EMS, 97 percent of paramedics and 75 percent of EMT-Bs reported responding to an emergency for a child with special health care needs. The results of the evaluation demonstrated there is a significant difference with the paramedic and EMT-B comfort level with emergency medical care before and after enrollment in SNAP ($P=0.0023$, McNemar test). The following two graphs show the comfort level of EMS providing to children with special healthcare needs is higher when the child is enrolled in SNAP.



The results demonstrate a significant difference in the paramedics and EMT-Bs comfort level interacting with families before and after enrollment in SNAP ($P=0.0074$, McNemar test). The following graphs show the comfort levels interacting with families when the child is not enrolled in SNAP and when the child is enrolled in SNAP.



Overall the evaluation demonstrated that SNAP is useful to EMS providers and families in increasing comfort level in providing emergency care to children with special healthcare needs. The EMSC program is grateful to all families, paramedics, and EMT-Bs who participated in the SNAP survey. Their comments indicated positive support to continue with development of SNAP in Delaware.

First State, First Shock!

CPR and AED Program



The *First State, First Shock* Public Access Defibrillation (PAD) program was established in 1999 through support and funding from the Health Fund Advisory Committee. Through legislation the Office of Emergency Medical Services is designated the lead agency for the First State, First Shock program.

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*)

Since its inception the *First State, First Shock* program has been committed to the following goals:

- Decreasing death and disability in Delaware by decreasing time to defibrillation in cardiac arrest patients
- Promoting heart health and early detection of the signs and symptoms of heart attack
- Increasing public accessibility to Semi-Automatic Defibrillators throughout the state
- Increasing the number of Delawareans trained in Cardio-Pulmonary Resuscitation and SAED use
- Insuring First Responders and police vehicles are SAED equipped
- Tracking outcome to guide future efforts

The primary goal of the *First State, First Shock* program is to increase survivability of victims of out-of-hospital cardiac arrest. Increasing the availability of Semi-Automatic External Defibrillators by the strategic placement of these devices provides for enhanced accessibility by the general public.

KEY INITIATIVES FOR 2010 WERE: Continue working with manufacturers to insure accountability of all SAED units under FDA directed manufacturer recall. Of the two manufacturers under state contract both had FDA directed recalls. At writing one recall is 100% complete and the second recall has 21 units remaining. Manufacturer recalls place a strain on OEMS assets by requiring diverting the State AED Project Manager’s efforts from accomplishing primary goals to tracking down units, swapping out units and returning them to the appropriate manufacturer.

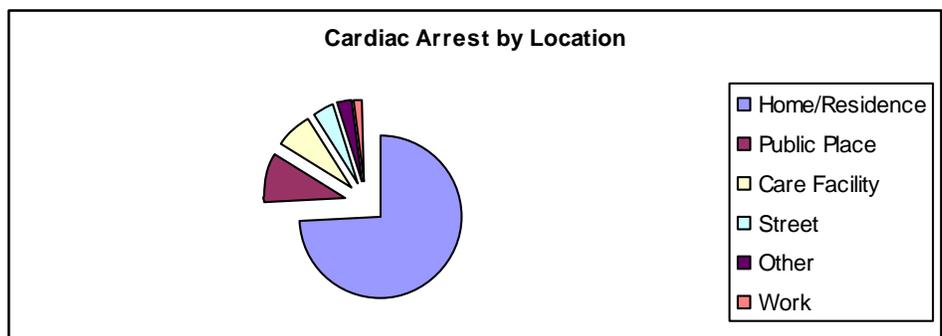
With funding through the Health Fund Advisory Committee and rural grants from the Health Resources Services Administration, the Office of Emergency Medical Services has been able to place over 2800 SAEDs in service for public access, first responders and polices agencies since 1999.

There still remained two major challenges to the *First State, First Shock* program in 2010:

1. Continual increase of over-the-counter sales of SAEDs: SAEDs are FDA class III medical devices requiring a physician’s prescription prior to purchase, however one manufacturer markets a device FDA approved for direct over-the-counter sales, no prescription required. The purchase of these devices by the average consumer for in home use makes it virtually impossible to track devices and insure compliance with current state SAED rules and regulations.

2. The sale of unauthorized AED devices in the state: The rules and regulations for the purchase and use of SAEDs in Delaware are very specific. SAEDs authorized for use in the state are to be of the semi-automatic type which requires the action of an operator to deliver a shock. This was specifically placed in the state SAED rules and regulations to insure the safety of fire and rescue personnel by eliminating the chances of accidental discharge of an AED in a moving ambulance. Major manufacturers of SAEDs are aware of the state’s requirements and have presented no problems, however there are several independent “safety equipment” sales companies doing business in the state who are either unaware of the state’s SAED rules and regulations or simply disregard them.

Cardiac arrest continues to be a primary health issue. Data continues to show 72% of all cardiac arrests occur in the home. Strategic placement of SAEDs and CPR/AED training for the layperson and first responders still remains a primary initiative.



Prior to the placement of SAEDs victims of cardiac arrest had a poor prognosis. For victims of cardiac arrest the return of spontaneous circulation rate in Delaware is 35%. The OEMS is certain that the initiatives of continuing to place SAEDs with the general public and first responders and continuing to promote and provide CPR/AED training will continue to show an increase in the cardiac arrest survival rate in the State of Delaware.

| Year | Number of Cardiac Arrests | Patients Pronounced Dead by Paramedics | Patients Transported to Hospital | Patients that Experienced a Return of Spontaneous Circulation |
|------|---------------------------|--|----------------------------------|---|
| 2005 | 752 | 185 | 585 | 170 (29%) |
| 2006 | 756 | 166 | 590 | 190 (32%) |
| 2007 | 756 | 151 | 605 | 215 (36%) |
| 2008 | 745 | 117 | 628 | 222 (35%) |
| 2009 | 773 | 119 | 654 | 261 (40%) |
| 2010 | 850 | 131 | 717 | 252 (35%) |

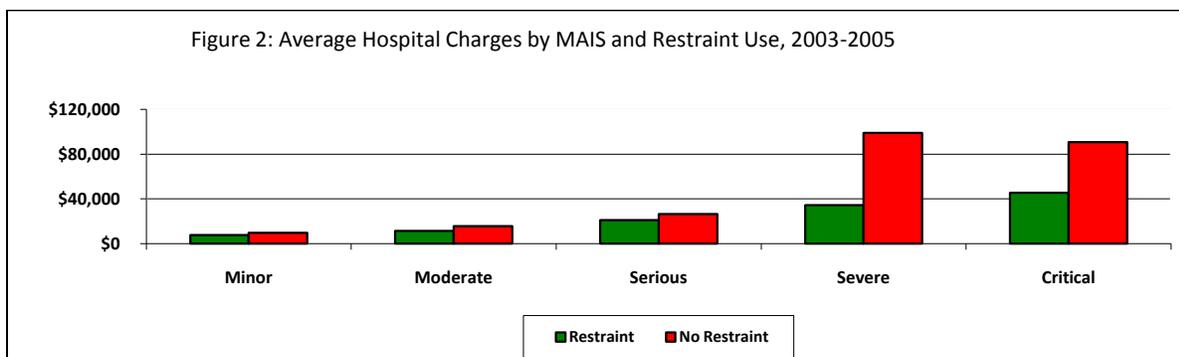
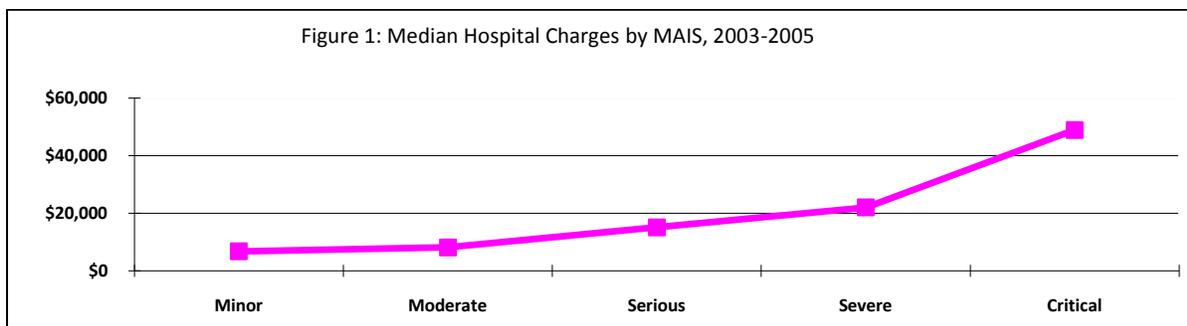
Crash Outcome Data Evaluation System (CODES)

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. In 2010, Delaware CODES collaborated with NHTSA to evaluate the estimated medical costs of the traffic related crashes. Based on the analysis of Crash Outcome Data Evaluation System (CODES) linked data from 2003 to 2005; the report of “Injury Comparisons in Hospitalized Children from Traffic Related Crashes” was presented at 2010 CODES Network Annual Training Meeting. The following is the summary of the report.



Top: New Castle County Paramedics responded to a report of a motor vehicle collision involving a motorcycle. County Paramedics treated the operator of the motorcycle for leg and hand injuries after he apparently collided with an automobile. The patient was subsequently transported to the Christiana Hospital Emergency Department as a “Trauma Alert” patient.

Figure 1 shows the median charges for hospitalized children by Maximum Abbreviated Injury Scale (MAIS). As the severity of the injury increased, both median charge and cost increased. Figure 2 shows the average charges for hospitalized children by injury severity and restraint use. For all of the injury severity level, the average hospital charges without restraint were higher than those wearing restraint.



Delaware Alcohol Impaired Driving Facts

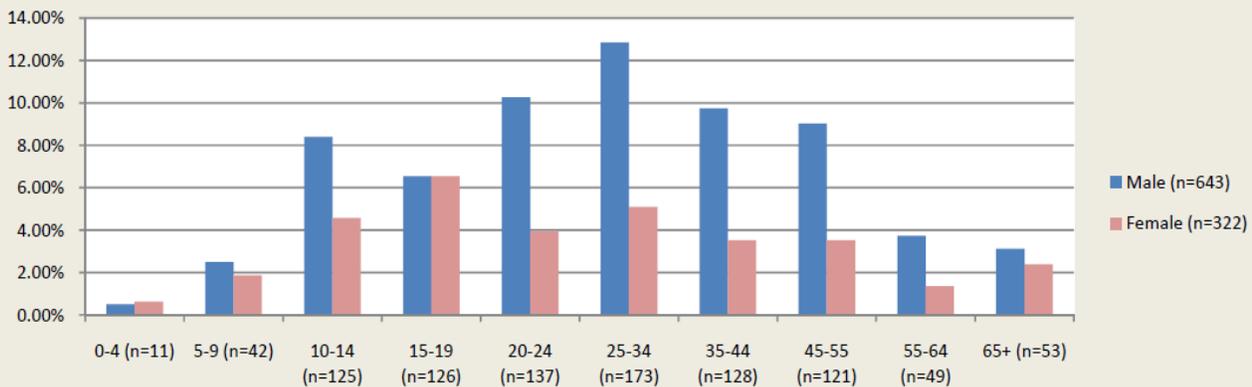
Presented by the Crash Outcome Data Evaluation System (CODES) Project



Crash and Injury Outcomes from Statewide Crash and Hospital Discharge Data, 2007

- An injured person not wearing a restraint¹ was 12 times more likely to die than an injured person wearing a restraint during a crash.
- In 2007, the estimated² total medical cost³ for hospitalized occupants not using restraints were 23.9 million dollars (\$23,988,575). Over 80 million dollars was estimated on the state economic cost⁴ (\$80,080,000) for hospitalized occupants not using restraints.

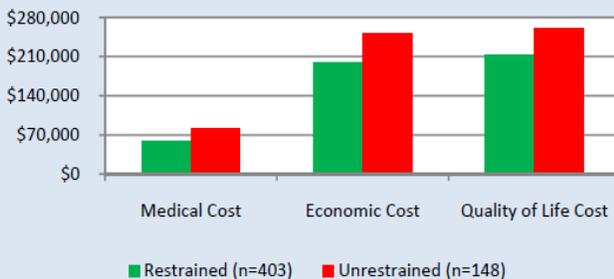
Figure 1. Percent of Injured Occupants Who Were Not Using Restraints



Male injured occupants in the 25-34 age group had the lowest rate of restraint use.

Female injured occupants in the 15-19 age group had the lowest rate of restraint use.

Figure 2. Estimate Average Medical/Economic/Quality of Life Costs⁵



The estimated average medical, economic, and quality of life costs for hospitalized occupants not using restraints were higher than the costs for injured using restraints.

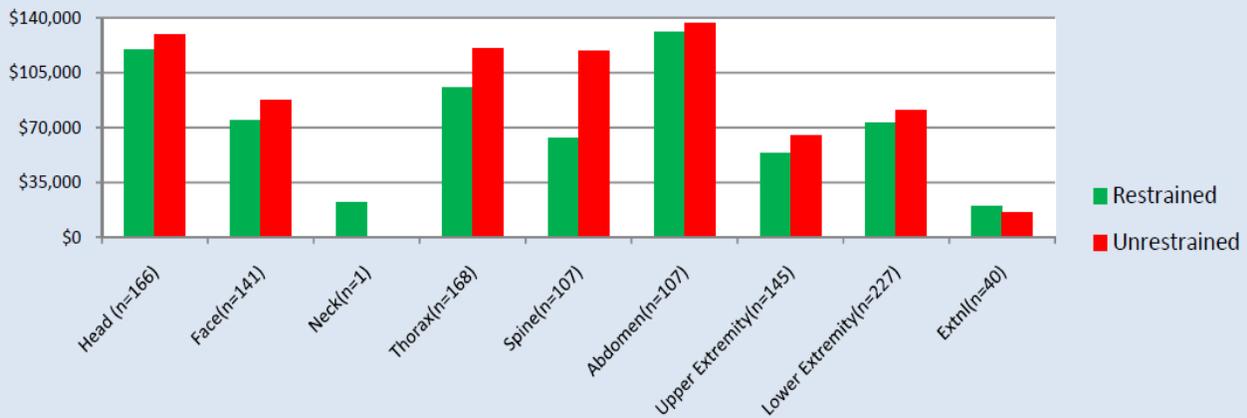
Table 1. Length of Stay (LOS) and Injury Severity Score (ISS)

| | Average LOS | Average ISS |
|--------------|-------------|-------------|
| Restrained | 6 | 10 |
| Unrestrained | 7 | 12 |

Injured occupants who did not wear restraints resulted in longer lengths of stay at hospital and more severe injury than those occupants who did wear restraints.

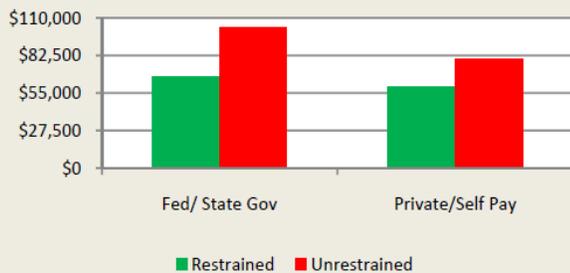
Crash and Injury Outcomes from Statewide Crash and Hospital Discharge Data, 2007

Figure 3. Estimated Average Medical Costs by Body Part Injuries



For all of the body region injuries, the average medical costs for hospitalized occupants not using restraints were higher than the costs for injured using restraints except for the cost of the external injury.

Figure 4. Estimated Average Medical Costs by Payers



The estimated average costs paid out of federal or state revenues for occupants not using restraints were higher than the costs for injured using restraints.

Figure 5. Estimated Average Medical Costs by Alcohol-Related

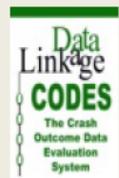
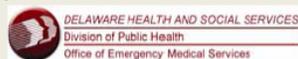


The likelihood of higher average medical costs was considerable when alcohol was involved and when restraints were not used.

1. Restraint use information is available for injured occupants. All types of restrained system included.
2. Blincoe L, Seay A, Zaloshnja E, Miller T, Romano E, Luchter S, et al. The Economic Impact of Motor Vehicle Crashes, 2000. Washington (DC): Dept of Transportation (US), National Highway Traffic Safety Administration (NHTSA); 2002.
3. Medical costs include emergency room and inpatient costs, follow-up visits, physical therapy, rehabilitation, prescriptions, prosthetic devices, and home modifications.
4. State economic costs include medical cost, lost productivity, legal and court costs, emergency service costs, insurance administration costs, travel delay, property damage, and workplace losses.
5. Quality of life is the product of the interplay among social, health, economic and environmental conditions which affect human and social development.



Delaware Crash Outcome Data Evaluation System (CODES) represents a collaborative effort among the Office of Emergency Medical Services, Delaware State Police, Delaware Health Statistics Center, and the Office of Highway Safety. The facts and figures presented here were derived from 2007 CODES linked database. For more information, please call (302) 223-1350.



Infection Disease Control

Infection control refers to policies and procedures used to minimize the risk of spreading infections and reduce the occurrence of infectious diseases. These diseases are usually caused by bacteria or viruses which 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 by such common vehicles as food or water. Hospitals and pre-hospital medical settings require 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 pre-hospital care providers (EMTs, paramedics, and first responders), firefighters, and law enforcement personnel. Any of these individuals may request notification concerning an exposure to an infectious disease. Every emergency medical care agency (volunteer or paid) shall designate a designated infectious control officer (DO) who will handle the infectious control process. Delaware is one of the few states that conduct mandatory source testing.

The need for an effective infection control program has always been an essential and integral part of the pre-hospital practice because there is both the risk of healthcare providers acquiring infections themselves and could result in passing infections on to patients. Preventive and proactive measures offer the best protection for individuals and organizations that may be at an elevated exposure to these infectious diseases. Since 1993, Delaware has reviewed 144 potential exposures forms reported by the pre-hospital setting and in 2010 reviewed 68. The table below represents the type of exposures reported in 2010.

| <i>Type of Exposure for 2010</i> | <i>Reports</i> |
|--|----------------|
| Inhalation: <i>coughing, sneezing, confined proximity</i> | 17 |
| Ingestion: <i>splash/spray, hand-to-mouth contact, mouth-to-mouth contact, ect.</i> | 16 |
| Percutaneous: <i>medical sharp, hollow-bore needle, bite, ect.</i> | 7 |
| Mucocutaneous: <i>medical sharp, hollow-bore needle, bite, ect.</i> | 7 |
| Cutaneous: <i>non-intact skin, intact skin with large fluid volume</i> | 21 |

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.

Protection from the threat of infectious disease is urgent due to constant changes in lifestyles and environment, which result in new diseases to which people are susceptible. 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.

The need for an effective infection control program has always been an essential and integral part of the pre-hospital practice in Delaware to reduce the spread of infectious diseases to patient and family members by pre-hospital providers.

Thank You

The Delaware Emergency Medical Services Oversight Council (DEMSOC) would like to express a sincere thank you to all the agencies that submitted photos, data and text for this year's DEMSOC report.

Office of EMS, SFPC, DSFS, PHPS, Del. Tech. Community College, State Fire Marshall's Office, NCCEMS, KCEMS, SCEMS, DSP, CCHS Lifenet, Healthcare Association, E911 Board, EMSC, De Trauma Committee, NCC dispatch, KC dispatch, Rehoboth dispatch, Seaford dispatch, Dept of Safety and Homeland Security, Injury Prevention Coalition, State Ambulance Association, Burn Camp, St. Francis EMS, TransCare, Millsboro Fire Co., Seaford Fire Co., Rehoboth Beach Fire Co. , Selbyville Fire Co. , Bethany Beach Fire Co., Lewes Fire Co., SC dispatch, Rehoboth dispatch, Laurel Fire Co. Brandywine Hundred Fire Co., Aetna Fire Co., Middletown Fire Co., Port Penn Fire Co., Goodwill Fire Co., Five Points Fire Co., Christiana Fire Co., Elsmere Fire Co., Del. City Fire Co., Camden-Wyoming Fire Co., Carlisle Fire Co., Clayton Fire Co., Dover Fire Co., Felton Fire Co., Hartly Fire Co., Magnolia Fire Co., Harrington Fire Co., Georgetown Fire Co.