

DELAWARE
EMERGENCY MEDICAL SERVICES
OVERSIGHT COUNCIL

2023 ANNUAL REPORT



DEMSOC



The Honorable John C. Carney, Governor

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DELAWARE EMERGENCY MEDICAL SERVICES OVERSIGHT COUNCIL



To the Citizens of Delaware:

March 21, 2024

On behalf of Governor John Carney, and my colleagues on the Delaware Emergency Medical Services Oversight Council (DEMSOC), I am pleased to present the 2023 DEMSOC Annual Report.

The Delaware Emergency Medical Services Oversight Council (DEMSOC) was formed pursuant to the Delaware Emergency Medical System Improvement Act of 1999 (HB332). DEMSOC is charged with overseeing Delaware's Emergency Medical Services (EMS) system to ensure that all elements of the system are functioning in a coordinated, effective, and efficient manner. Delaware's EMS system's mission is to focus on improving the quality of life for the citizens of and visitors to Delaware by reducing morbidity and mortality rates. The continuous development and improvement of Delaware's EMS System is a high priority for DEMSOC's membership that includes professionals from multiple EMS provider agencies, representatives from agencies that frequently work with and support EMS, agencies and groups that represent hospitals, and private citizens knowledgeable in the delivery of EMS care.

The annual DEMSOC report is designed to inform others about Delaware's Emergency Medical Services (EMS) system and heighten awareness of the issues that most directly affect the delivery of EMS service and the quality of EMS patient care.

The past year continued to present challenges and opportunities. Despite many obstacles, EMS personnel continue to meet the needs of the community and attend to the health and safety of Delaware citizens and visitors.

This report attempts to capture those successes while building the framework to address future concerns and embrace future opportunities.

In May 2023, New Castle County EMS and Sussex County EMS coordinated with the Blood Bank of Delmarva to join the 5% of EMS systems carrying whole blood in the pre-hospital setting improving the survival rate of patients suffering from hemorrhagic shock by 60%. The year also saw Sussex County officials join community partners and first responders to celebrate the expansion of the Sussex County Emergency Operations Complex. All three counties have implemented buprenorphine initiation to patients that have experienced an overdose and resuscitated with naloxone. Across the state, both ALS and BLS agencies implemented a stroke score to identify large vessel occlusion to achieve timely transport to a comprehensive stroke center. While there have been many successes this year, the EMS community continues to strive for solutions to address the any challenges impacting the system including staffing, funding, transportation and overdoses.

As you review this year's annual report, I encourage you to use the information provided to increase your awareness of the important and vital role that Delaware's EMS system has within our great state. We humbly ask for your continued support for the dedicated individuals and group that work hard to ensure that our EMS system remains a leader among its peers.

Respectfully yours,

Nathaniel McQueen Jr., Chair
Cabinet Secretary,
Delaware Department of Safety and Homeland Security

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Introduction

The Delaware Emergency Medical Services Oversight Council (DEMSOC) annual report represents an overview of the available information regarding the progress and state of Delaware'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.

As you read the 2023 Annual Report, we are confident that you too will be proud of the State of Delaware's Emergency Medical Services current capabilities, and marvel at the progress that has been made in the previous years. The DEMSOC members are encouraged by the system's successes, optimistic about the future and are looking forward to continuing enhancements to the EMS services provided to the State in the years to come.

What EMS Does

The goal of Delaware's Emergency Medical Services (EMS) system is to provide the right level of care at the right place at the right time and transport to the appropriate care facility. This is accomplished through a well-coordinated tiered system of response that includes many agencies. Each agency has an integral role in providing the highest level of prehospital medical care to the citizens and visitors of the State.

EMS in Delaware includes:

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

Who We Are:

- 1,335 Certified First Responders
- 1,914 EMT-Basics
- 351 Paramedics
- 107 Dispatchers
- 8 Medical Directors

EMS services provided to the State of Delaware include:

There are 58 Basic Life Support (BLS) ambulance agencies comprised of a combination of paid and volunteer EMS providers. Paramedic Advanced Life Support (ALS) services are provided state-wide by the three counties while the Delaware State Police Aviation Division is the primary provider of 911 air services with one private air medical service providing backup response. Additionally, the state is serviced by 11 BLS inter-facility medical transport services, five ALS inter-facility medical transport services and two specialty hospital transport services. The units that respond to 911 calls for service receive their directions from certified dispatch centers located throughout the state.

- 168 BLS ambulances providing 911 services
- 99 BLS ambulances providing non-emergency services
- 23 Full Time & 3 Part Time ALS units providing 911 services
- 7 ALS Supervisor units
- 4 Air Medical helicopters providing 911 services
- 5 ALS agencies providing non-emergency services
- 2 Specialty hospital transport services

The majority of 911, emergency patient transportation is provided by the volunteer/career BLS fire-based ambulance services and the Delaware State Aviation Division. ALS services are provided through a system of chase or intercept paramedic units operated by the three counties. These ALS units respond in conjunction with the BLS transport units. In 2023, the EMS system in Delaware responded to the following incidents: *(information based on EMS patient care reports)*

- 258,859 Statewide Total Run Reports
- 158,514 Non-trauma incidents
- 37,920 Trauma Incidents
- 176,282 Basic Life Support Incidents
- 82,577 Paramedic Incidents
- 10,304 Pediatric Incidents (0-17yrs)
- 3,205 ALS Cardiovascular Incidents
- 486 Air Medical Transports

Emergency Medical Services - Whole Blood

Emergency Medical Services - Whole Blood 10

Emergency Medical Services - Whole Blood

Seconds are critical in a life-or-death situation on the street. Whole blood transfusion is proven to prevent tissue death because of its oxygen-carrying capabilities. Having the ability to provide this at the pre-hospital level can save a life before arriving at the hospital. The Journal of the American College of Surgeons found that whole blood transfusions improve the 30-day survival rate of patients suffering from hemorrhagic shock by 60 percent.

In May of 2023, in coordination with the Blood Bank of Delmarva, New Castle County EMS and Sussex County EMS became part of only 5% of EMS systems that carry whole blood in the pre-hospital setting.

New Castle County has initiated a pre-hospital whole blood program to bring the delivery of whole blood to the prehospital environment. The initial planning and basic framework for this project began in late 2022 and continued through early 2023. In May of 2023, New Castle County EMS began a pilot project with the support of the Blood Bank of Delmarva, Office of EMS, the State of Delaware EMS Medical Director, New Castle County Medical Directors, New Castle County Executive's Office, and the Board of Medical licensure and Discipline. Continuing education for all paramedics took place in the Spring of 2023 and additional funding and equipment initiatives continue to be investigated. Over fifty (50) patients received pre-hospital whole blood throughout 2023 with over 92% having a positive outcome. The first incident in which pre-hospital whole was used in Delaware occurred only two days after the pilot was initiated in New Castle County. The patient was involved in a serious motor vehicle collision in the Middletown area of New Castle County. Due to the remote location of the incident and the distance to the trauma center, whole blood administration proved to be vital to the positive patient outcome. Corporal James Haddix of the Aberdeen Police Department was involved in a serious motor vehicle collision in May of 2023 and received pre-hospital whole blood while still trapped in his vehicle. Corporal Haddix surprised the paramedics who treated him in September of 2023 and credits whole blood administration for saving his life and positive outcome.

Sussex County EMS proudly launched its prehospital low titer whole blood program. Since its implementation, more than 30 patients in Sussex County have received blood, with some requiring multiple units of blood products. Continuously striving for improvement, they are actively refining their strategies and best practices for the deployment and administration of this life-saving intervention. Working collectively with the Delaware Office of EMS and the Blood Bank of Delmarva, they have leveraged collaborative efforts to enhance their program's effectiveness. In addition to their partnership, they have taken the initiative by hosting their own blood drives, further supporting their community's blood supply, and reinforcing their commitment to saving lives through proactive measures.

Lives are truly being saved in the State of Delaware due to whole blood administration.

Delaware EMS System Oversight

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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 to reduce morbidity and mortality rates for the citizens of Delaware. It is also charged with ensuring the quality of EMS services in Delaware.

DEMSOC consists of 22 members appointed by the Governor. The Secretary of The Department of Safety and Homeland Security, also serving on the council is the Secretary of Delaware Health and Social Services. DEMSOC includes representatives from the following agencies: the Governor’s Office, each county government, the Delaware State Fire Prevention Commission, The Delaware Volunteer Fireman’s Association and its Ambulance Committee, The Delaware Healthcare Association, The Delaware Association of Chiefs of Police, The Delaware Chapter of the American College of Emergency Physicians, The State Trauma System Committee, The State Stroke System Committee, The Medical Society of Delaware, The Delaware State Police Aviation Section, The EMSC Advisory Committee and the State EMS Medical Director. There is a representative for practicing field paramedics and three at large appointments for interested citizens, one from each county. 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 paramedic system and provides medical oversight to the state’s EMS system.



Nathaniel McQueen



Romain Alexander



AJ Schall



Mark Logemann



Ted Stipa



Robert Murray



Kevin Sipple



Robert Rosenbaum



Dana Bowerson



Megan McNamara Williams



Sean Elwell



Derrick Harvey



Maria Carmen G. Diaz



Bruce Nisbet



Ron O'Neal



Oliver Kocher



Michael S. Bundek

Not Pictured: Josette Manning, William Kelly, Kate Groner, Usman Shehzad, Jav Mevers, Member-at-large/Sussex: Vacant

Delaware EMS System Oversight

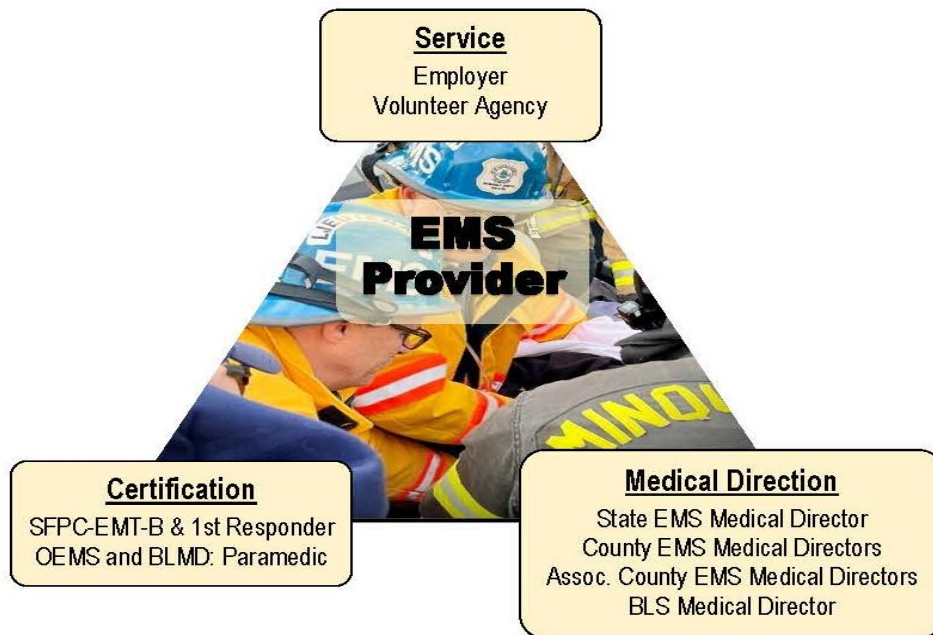
Delaware is a frontline leader in prehospital emergency care through comprehensive coordination, development, and evaluation of the statewide emergency medical services system. The Delaware EMS system is a two-tiered EMS delivery system with shared oversight of Basic Life Support services and personnel by the State Fire Prevention Commission and Advanced Life Support services and personnel by the Office of EMS within the Emergency Medical Services and Preparedness Section of the Division of Public Health within the Department of Health and Social Services.

The Office of Emergency Medical Services (OEMS) ensures the quality of emergency care services, including trauma and prehospital advanced life support capabilities, through the coordination and evaluation of the emergency medical services system. The Office of Emergency Medical Services is part of the Emergency Medical Services and Preparedness Section.

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.

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

Delaware EMS Oversight Triangle



Office of Emergency Medical Services

The mission of the Office of Emergency Medical Services (OEMS) is to assure a comprehensive, effective, and efficient statewide emergency medical care delivery system to reduce morbidity and mortality. The OEMS will accomplish this by:

- *Building partnerships with pre-hospital providers and healthcare systems,*
- *Utilizing evidence-based treatments*
- *Evaluating the emergency medical services system through comprehensive data review on the effectiveness of patient care and system performance.*

Delaware Code Title 16 Chapter 97 states: “The Office shall be responsible for ensuring the effective coordination and evaluation of the emergency medical services system in Delaware which includes providing assistance and advice for activities related toward the planning, development, improvement and expansion of emergency medical services.”

OEMS Programs and Activities

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

Prehospital Patient Care Reports: Delaware Emergency Medical Reporting System (DEMRS) is a comprehensive web-based EMS data collection and reporting system that provides convenient access to field providers and to the receiving facilities.

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.

EMS Training: OEMS monitors EMS training levels to provide information on the availability of training programs for all levels of EMS personnel. In addition, the EMS Office ensures that EMS training agencies in Delaware are aware of regional and national standards.

EMS Transportation: In conjunction with appropriate EMS providers in Delaware, OEMS monitors and evaluates emergency medical transportation services in Delaware to ensure that patients in the EMS system have access to effective and efficient transportation to appropriate treatment facilities. OEMS monitors and evaluates activities of all EMS organizations to ensure that no person is denied emergency treatment or transportation services.

Statewide Trauma System: The role of the trauma system is to organize resources and assure their immediate availability to the injured and in all geographic areas of the system.

Stroke System of Care: This program assists in oversight of the inclusive statewide stroke care system and is responsible for coordination of hospitals and provider agencies to ensure optimal care for stroke patients.

Overdose System of Care (OSOC): The Overdose System of Care is focused on reducing overdose deaths as well as the negative impacts of substance use disorder (SUD) by connecting people with treatment, providing support for those affected by SUD, and implementing prevention strategies.

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

First State, First Shock Early Defibrillation Program: This program provides automatic external defibrillators (AED) to organizations within the state. This program is responsible for providing data collection, training, and prevention activities in support of initiatives to reduce cardiac arrest deaths.

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 and to pass infections to patients. Preventative and proactive measures offer the best protection for individuals and organizations that may be at an elevated risk of exposure to these infectious diseases.

Delaware Drug Monitoring Initiative (DMI) Report: The DMI report is a collaborative effort between the Delaware Information and Analysis Center (DIAC), Division of Forensic Sciences (DFS), EMS/SPS, and the Division of Substance Abuse and Mental Health (DSAMH). The purpose of the report is to share consistent, actionable information to address issues related to the drug epidemic affecting Delaware. The data are designed to aid agencies across the state to identify the needs of those affected by or at risk for addiction within the state.

DIAC contributes statewide law enforcement data for drug incidents with the purpose of analysis of the threat of legal and illegal drugs. DFS contributes aggregate data associated with fatal overdoses. EMS contributes aggregate data regarding suspected non-fatal overdose incidents. DSAMH contributes aggregate data with regards to those individuals who have entered treatment. The mission of the DMI Report is “To address the addiction epidemic in Delaware by establishing a sustainable infrastructure to coordinate interdisciplinary data collection, sharing and analysis in real-time within the state and region to target strategies and accelerate action”.

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 the legislation of 1996. Subsequent revisions were enacted in 1999, 2001 and 2013. 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. These regulations intend to ensure that patients are quickly and safely served with a high standard of care and in a cost-effective manner. These regulations were first promulgated in 1993 and were revised in 2001 and 2002.

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 defining their scope of practice and medical oversight.

Organ and Tissue Donor Awareness Board (OTDAB): OEMS provides staff support and represents Delaware Health and Social Services on 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 and tissue 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 and tissue donation and encouraging them to become designated organ and tissue donors through the Delaware organ and tissue donation registry.

Delaware Medical Orders for Scope of Treatment (DMOST) Act: The purpose of House Bill 64: This Act authorizes the use of Medical Orders for Scope of Treatment in Delaware. This document, a “DMOST form,” will allow Delawareans to plan for health-care decisions, express their wishes in writing, and both enable and obligate health care professionals to act in accordance with a patient’s expressed preferences. The statute authorizes a medical order which is transportable, standardized, and implements a patient's end-of-life care preferences.

In addition to the roles listed in the Delaware Code OEMS is responsible for the Hospital Preparedness Grant funded through the Assistant Secretary for Preparedness and Response (ASPR) Activities under this grant program include:

Alternate Care Site (ACS)

OEMS is continuing the development of the Alternate Care Site (ACS) Plan. It is a component of Delaware’s Medical Surge Framework which comprises all aspects of the healthcare delivery system. The purpose of the ACS is to remove/reduce the burden on the healthcare system, add surge capacity and capability by moving resources to delay the need for an ACS, cohort patients, planning for a triage/treatment and/or testing site, and provide the framework for an ACS that serves as an outlet for hospital patients.

Crisis Standards of Care

OEMS is continuing the development of the Crisis Standards of Care Guidelines for Healthcare Facilities to establish a framework for responding to a public health emergency. This requires adapted standards of care and allocation of scarce resources to provide effective care to the greatest number of people.

Emerging Infectious Diseases

OEMS manages the Hospital Preparedness Program (HPP) and HPP Ebola Preparedness and Response Activities grant efforts. These efforts play an integral part in the planning and response for a potential Ebola patient should they present in Delaware. OEMS is the lead Delaware agency for the Region III Ebola and Emerging Infectious Disease planning efforts. This has expanded to include planning for other High Consequence Infectious Disease. OEMS role is predominately to ensure the safety and health of the emergency responders. Through the Healthcare Preparedness Coalition OEMS has worked with the acute care hospitals, EMS agencies, U.S Department of Homeland Security, U.S. Department of Defense (National Guard and Dover Airforce Base), and regional partners to ensure the most appropriate response, and care for the patient and ensuring the safety of the providers.

EMSPS staff and partners finalized the High Consequence Infectious Disease Surveillance and Response Plan and distributed it to the Delaware Healthcare Preparedness Coalition (DHPC), Delaware Healthcare-Associated Infections Advisory Committee (HAIAC) and Association for Professionals in Infection Control and Epidemiology (APIC). The HCID Communication Flow Chart was distributed to any personnel responsible for screening patients within the hospital.

High Consequence Infectious Disease Surveillance and Response Annex

OEMS completed the High Consequence Infectious Disease Surveillance and Response Annex which provides guidance for containing a disease outbreak caused by a high consequence infectious organism, biological toxin, or other infectious disease emergency. DPH developed the Annex to minimize serious illness or death, limit societal disruption, and economic losses, and facilitate effective coordination with responses at the local, state, regional, national, and global levels. Other purposes are to outline roles and responsibilities for DPH and support partners, and to identify specific containment measures and make recommendations for various high consequence infectious diseases (HCIDs) with respect to modes of transmission, clinical signs and other characteristics.

Infectious Disease Response for First Responders

The Infectious Disease Preparedness for First Responders a toolbox that increases the knowledge and capability of first responders for protection from infectious disease exposures.

Medical Response and Surge Exercise

OEMS manages the Hospital Preparedness Program (HPP) and oversees the Medical Response and Surge Exercise (MRSE), which plays an integral part in the planning and response for a sudden healthcare crisis in Delaware. MRSE uses a scenario to help healthcare coalitions and other stakeholders assess how well their members can work together. The exercise is designed to test a coalition's functional surge capacity and to identify gaps in surge planning. This helps the planning for the Medical Surge Plan (including Pediatric Surge, Burn Surge, and Interfacility Transport) to ensure that all representatives from trauma, emergency departments and paramedic agencies are working toward the same goals. The plan helps guide and coordinate statewide efforts

for the care of ill or injured patients during a natural or human-caused disaster incident or public health emergency that exceeds the normal medical capabilities with the state of Delaware.

Stop the Bleed

Beginning in October 2017, OEMS implemented the "***Stop the Bleed***" program education initiative as part of a national campaign through the Department of Safety and Homeland Security. OEMS staff trained 70 RespondDE volunteers and DEMA personnel to provide training in the community and health care system. Trainees used Trauma Trainer Legs, Training Tourniquets, and QuikClot® Combat Gauze Moulage. OEMS has partnered with RespondDE, DEMA, hospital staff, school nurses, Health Occupations Students of America (HOSA), Parent Teacher Organization (PTO), first responders, and as of December 2023 OEMS has trained 8,822 people (5,870 adults and 2,952 youth from the age of 18). OEMS plans to continue coordinating training for the "***Stop the Bleed***" program with its community partners.

Strategic Planning

In collaboration with the Delaware State Fire Prevention Commission (DSFPC), Paramedic Services, and representatives from the BLS community, OEMS met with representatives from the National Association of State EMS Officials to begin working on a strategic plan for the Delaware EMS System. The group identified a variety of issues for OEMS and the DSFPC to address to improve the EMS system and working environments for EMS providers.

Office of Preparedness

The mission of the Office of Preparedness is to develop, implement and maintain a comprehensive program to prepare for, mitigate against, respond to, and recover from public health threats and emergencies.

The State Health Operations Center (SHOC) remained activated to continue support public health initiatives related to the COVID-19 pandemic after the declared Public Health Emergency officially ended on May 11, 2023. Also, during this reporting period, SHOC continued to support mitigation efforts related to community spread of Mpox and was briefly active at the situational awareness level due to air quality alerts resulting from Canadian wildfires during this reporting period.

Response Activity

Tornado Response

A tornado impacted Sussex County on Saturday, April 1, 2023. To assist in response and recovery, DPH's Emergency Medical Services and Preparedness Section requested EmPOWER data from the U.S. Department of Health and Human Services (HHS) on April 2, 2023. The federal EmPOWER Program provides federal data, mapping, artificial intelligence tools, training, and resources to help communities nationwide protect the health of at-risk Medicare beneficiaries. This population includes 4.3 million individuals in the United States who live independently and rely on electricity-dependent durable medical and assistive equipment and devices, and/or essential health care services. This identified dataset allows for a one-time outreach to support response and recovery activity. In partnership with the Delaware Emergency Management Agency (DEMA) and Sussex County Emergency Operations, the EMS/SPS Office of Preparedness sent a letter to 4,712 Sussex County residents with resources and information to prepare for future extreme weather events. This EMS/SPS direct mailer included guidance on how to register for emergency notification systems. Recipients also received a copy of the Preparedness Buddy brochure developed by the Delaware Office of Preparedness about how to create a personal emergency plan designed for all persons, including those with access and functional needs. Preparedness Buddy provides a step-by-step template to complete an emergency plan using a personal support network or buddy system.

Tropical Cyclone Response

On September 23, 2023, DHSS Disaster Coordination staffed a Reception Center at the Millsboro Fire Company in response to forecasted possible coastal flooding resulting from Tropical Cyclone 16.

Exercises, Training and Planning

Exercises

In April 2023, EMSPS led a day full-day Family Assistance Center Tabletop Exercise with approximately 50 attendees representing over 20 agencies across the state. A Family Assistance Center is a multi-agency coordination center where families and friends of victims can receive information and support services in response to mass casualty incident and assist in locating missing persons. The purpose of the exercise was to bring together the agencies to review the draft Delaware Family Assistance Center Plan, the draft Missing Persons Call Center Standard Operations Guideline, and talk through the processes needed to finalize the documents. The exercise locations included the Delaware State Fire School, the Division of Social Services (DSS) call center, Christiana Care Health Systems, Beebe Healthcare, and Bayhealth Medical Center. New technology added as part of the exercise included the DSS Call Center and DE-Trac (patient tracking system). Feedback was provided during the exercise and an After-Action Meeting was scheduled for June. A full-scale exercise is planned for April 2024.

Training

EMSPS Education and Evaluation Branch team thoroughly processed, reviewed, and revised all online training. Many new trainings were developed due to pandemic and social distancing guidelines. EMSPS uses DE TRAIN, a learning management system with connections to national affiliates such as Center for Disease Control (CDC) and other states in partnership with the Public Health Foundation.

An in-person SHOC 101 training was held on June 21, 2023, for EMSPS staff only. In 2024, the following in-person trainings are scheduled: January 26, April 3, July 17, and October 11, 2024. The SHOC 101 course covers four topics: 1) DPH's Roles and Responsibilities for Emergency Preparedness and Response; 2) An Introduction and Overview of SHOC; 3) The Role of the SHOC Employee; and 4) Emergency Preparedness Awareness. While most SHOC 101 content is unchanged, leadership videos will be updated and staff added more examples of COVID, Mpox, and other incidents from Delaware's real-world emergencies.

Family Emergency Preparedness is currently online in a two-part segmented series for employees and partners. Course registration is available in DE TRAIN. During 2023 the education and evaluation team has been very busy developing over 26 online trainings as listed below.

1. Shelter Manager 101
2. Shelter Manager 102
3. Family Emergency Preparedness
4. Delaware Emergency Shelter Training for Medical Professionals – 2023
5. RespondDE Orientation Training
6. RespondDE Code of Conduct
7. RespondDE Photo Release Waiver
8. RespondDE Hospital Training
9. FAST Training Overview
10. FAST Assessment Training
11. FAST Kit Training
12. AT Kit Training (FAST)
13. Disaster Preparedness Assisting People with Disabilities (4 modules)

14. DHSS Disaster Preparedness for Employees Video Segments (5 segments)
15. Approved Sample/Tester Refresher course (Public Health Lab)
16. DPH – HIPAA Overview (For contractors and non-state employees)
17. The Rabies Virus Education for Healthcare Personnel (OIDE and Lab)
18. Fight Antimicrobial Resistance with Infection Prevention (OIDE)

In the first half of 2024, the team expects to upload the following trainings to DE-TRAIN:

1. 800 MHz Radio Training (Updated)
2. New Onboarding Training – EMS/SPS Employee Orientation Training
3. New Onboarding Training – EMS/SPS Office of Emergency Medical Services Orientation Training
4. New Onboarding Training – EMS/SPS Office of Preparedness Overview Orientation Training
5. SHOC 101 online version (videotaping of DPH Leadership)
6. Mental Health Support Following a Disaster
7. DPH – Shelter Overview
8. DPH SHOC Turnover Online Training

The Education and Evaluation Branch team also completed outreach events to prepare communities. Trainer/Educators also worked with Kent County and DEMA to plan the September 16, 2022, Family Emergency Preparedness Day at Brecknock Park in Camden-Wyoming, Delaware, but it was canceled due to inclement weather. Outreach requests to the training section have increased due to COVID relief as more events and venues were offered.



Office of Preparedness Training Outreach at Nemours Children's Hospital Community Safety Day, September 9, 2023

Training section also carries the responsibility of planning exercises by utilizing Homeland Security Exercise and Evaluation Program (HSEEP) – CDC guidelines. The Office of Preparedness's Multi-Year Training and Exercise Plan (MYTEP) title will change to Integrated Preparedness Plan (IPP) for 2024 that will be completed annually. The training administrator and DEMA partners attended the 2023 Integrated Preparedness Planning Workshop (IPPW) that was attended by training administrator on December 6, 2023. This living document provides guidance

on upcoming exercises and training per CDC guidelines within the DPH's Public Health Emergency Preparedness (PHEP) grant. This year's PHEP document dated March 1, 2024, covers planning for three years: 2024, 2025, and 2026.

Plan Maintenance and Development

EMSPS, Office of Preparedness, continues to review and update preparedness plans and assist partner organizations in their preparedness efforts. In 2023, the Natural Disaster Standard Operating Guidelines (SOG) document was finalized. Ongoing plan rewrites based on COVID-19 After Action Report Observations and changes to federal partner organizations include the Emergency Operations Coordination Plan, Pandemic Influenza Plan and Strategic National Stockpile Plans. Workgroups in 2023 addressed additional plans under review to include the Family Assistance Center, Functional Access Service Teams (FAST), Reunification, DPH Continuity of Operations (COOP), Mass Care and Reception Centers.

Radiological and Hazardous Materials (HAZMAT)

EMSPS sponsored a Hazardous Incident Response Annex Workshop (HMIRA) on February 8. The event was attended by 21 individuals from six organizations who have roles in hazardous materials (HAZMAT) incidents in Delaware. Participating agencies include DPH's Health Systems Protection Section and Delaware Public Health Laboratory, DNREC Division of Waste and Hazardous Substances, DEMA, Delaware State Fire School, and the CDC Agency for Toxic Substances and Disease Registry (ATSDR). The plan is designed to outline the DPH roles and responsibilities when responding to HAZMAT incidents in support of the Delaware Department of Natural Resources and Environmental Control (DNREC). The workshop included an overview of relevant plans, a review of partner agency capabilities and capacity a discussion-based exercise. The workshop was held to test the HMIRA through a tabletop exercise (TTX) and to share organizational capacity and capabilities among HAZMAT incident response agencies. Gaps within the HMIRA were to be identified so the plan can reflect the most current information, as well as the current procedures that DPH will take during a HAZMAT incident response.

On March 8, May 10, August 17, and December 20, 2023, EMSPS, Office of Preparedness participated in quarterly Salem - Hope Creek Nuclear Generating Station (SHCNGS) emergency drills at the DEMA, Emergency Operation Center (EOC). The drill scenario resulted in SHCNGS declaring a General Emergency which could result in the release of radioactive matter outside of the plant, potentially affecting Delaware. EMSPS supported the DEMA Technical Assessment Center (TAC) by assessing the projected radiation dose to the population living in the Delaware Emergency Planning Zone (EPZ) and providing protective action recommendations.

The following staff participated in the October 20, DEMA radiation drill with the Delaware National Guard (DNG): EMSPS and the Office of Animal Welfare from DPH; DHSS Division of Social Services; and DHSS Division of Substance Abuse and Mental Health. The event was held at the DNG's Smyrna Readiness Center to review the activation process and procedures should a radiation release happen at the Salem Hope Creek Nuclear facility in New Jersey that would require evacuation and radiation screening of the public. A vendor for DEMA will provide the

After-Action Report for updates and changes that need to be addressed for updating the Delaware Radiation Plan and Annexes.

Volunteers

RespondDE, (formerly Delaware Medical Reserve Corp) continued to provide volunteer support by participating in local events that promote community preparedness, healthy living, and other educational programs. Following are activities and events that RespondDE has participated in during this reporting period to include, Food Bank of Delaware in Georgetown – Emergency Medical Support, Food Bank of Delaware in Dover–Emergency Medical Support, Food Bank of Delaware in Stanton – Emergency Medical Support, Wilmington Police Department’s Monthly Community Resource Fairs – Community Outreach, The Annual Diabetes Expo – Event Support, 10th Annual Public Health Emergency Preparedness Symposium – Community Outreach, Disaster Preparedness night at the Delaware Blue Rocks – Community Outreach, University of Delaware’s Dispose RX – Community Outreach, Rehoboth Health Fair – Community Outreach.

State Agency Coordination and Collaboration

On March 20, EMSPS met with the Division of Forensic Sciences (DFS) Division Deputy Director and Medical Examiner Unit regarding early alerting of thermal (heat/cold) related deaths. The purpose of this early alerting is to conduct preparedness actions prior to an emergency and to implement mitigation actions during an emergency. The Office of Preparedness' Epidemiologist will work with DPH’s Office of Vital Statistics, Epidemiology, Health, Data and Informatics Section; and the Privacy Board to draft and implement a data sharing agreement between DFS and DPH.

EMSPS staff participated in the first time, full day Emergency Services Coordinator (ESC) Workshop on May 17, 2023. DEMA hosted the event at the Clayton Fire Hall and the Delaware Emergency Operations Center (EOC). Each agency ESC provided updates and presentations of their Delaware Emergency Operations Plan (DEOP) responsibilities. Leaders from EMSPS provided presentations on the responsibilities assigned to DHSS and the DHSS Disaster Coordinator role which includes pandemic response include Points of Dispensing (PODs), maintaining the Strategic National Stockpile (SNS) for Delaware, managing shelter activation and inspection, maintaining the RespondDE volunteer recruitment and training program, disaster assessment teams, mental health support, medication replacement requests during events, case management, recruitment of DHSS staff for shelter managers and staffing, Family Assistance Center staff, radiation reception center planning and response, migrant response planning, training response personnel, and maintaining the DHSS response staff contact information. EMSPS has worked with DHSS leadership and partner agencies to update and provide new plans, standard operation guides, and policies throughout the past year. The workshop was attended by approximately 50 people from across the state by both public and private agencies. The goal of the in-person gathering was to validate response roles, review ESC expectations, socialize agency response capabilities, and identify opportunities to enhance ESCs activation at the EOC. DEMA also provided a briefing on the newly refurbished EOC with new monitors, audio-visual equipment capabilities, and the ability to log into the WebEOC software used when ESCs are activated.

The DHSS Disaster Committee held quarterly meetings during this reporting period. Topics include impacts hurricane season, recruitment of DHSS staff for disaster response, COOP updates and approvals, and the end of the Public Health Emergency/SHOC activation on May 11 at 11:30 am after three long years. DPH provided a report on medical team response bags, a recent HazMat workshop, the Family Assistance Center tabletop / functional exercise and plan updates, the Shelter Inspection Policy implementation, and the new DHSS Emergency Services Support Guide for when Federal Emergency Management Agency (FEMA) Individual Assistance is not available.

The EMPS Director of Preparedness and DHSS Disaster coordinator, in partnership with the DEMA Director presented a joint presentation to the Nemours Children's Hospital Grand Rounds series on August 23, 2023. The focus of the presentation was children in disasters and on-going projects relating to this topic.

Public Engagement

On January 6, 2023, at Wilmington University in New Castle, Delaware, epidemiological and planning staff from DPH's Office of Preparedness presented to 30 students involved in the Delaware Health Occupations Students of American (HOSA) program from three high schools in the state. Presenters provided insight into the DPH, what roles are involved outside of strictly medical care, and how these roles impact the prevention, protection, mitigation, response, and recovery for Delaware residents.

Vulnerable Populations/Access and Functional Needs

By participating in 12 community and partner outreach events this reporting period, the Vulnerable Populations team provided preparedness information and resources to more than 1,400 Delaware citizens.

The Office of Preparedness was selected to present at the National Preparedness Summit conference held in Atlanta Georgia on April 24-27, 2024. Delaware's session was titled, *Opportunity in the Community: Effectively Engaging Community-Based Organizations in Emergency Plan Development*. It provided an overview of a project that engaged Delaware nonprofit community-based organizations in a process to develop new or enhanced all-hazard emergency operations plans specific to their agency. The project was initiated in the 2022 reporting period and concluded shortly prior to the conference.



Delaware’s Public Health Resources to Mitigate Spread of Communicable Diseases in Congregate Settings” was published in the June edition of the Delaware Journal of Public Health. The June 2023 issue of the journal is content- focused on public health issues related to homelessness. The article outlines Center for Disease Control grant-funded activities and outcomes undertaken by EMSPS in collaboration with the Office of Infectious Disease Epidemiology to mitigate spread of COVID-19 and other communicable diseases common to homeless shelters and encampments in Delaware via partnership, education, testing and reporting, provision of resources and sharing of best practices.

In a learning opportunity offered on October 5 to all State of Delaware employees and hosted by the Department of Human Resources (DHR), the Vulnerable Population Planner presented “Supporting Coworkers with Disabilities and Functional Needs During Emergencies.” More than 300 participants attended the presentation, which covered active threats, climate-driven disasters, emergencies, and workplace-related stress incidents that are on the rise. It emphasized that while workplace safety is paramount for all employees, unique considerations should engage coworkers with disabilities or functional needs to ensure equity in emergency planning. The presentation was based on best practices outlined by the Society of Human Resources Management (SHRM®) and grounded in the Americans with Disabilities Act (ADA). It was part of a series of webinars focused on celebrations in October (National Disability Employment Awareness Month) and was the lead-in activity to DHR’s Diversity, Equity, and Inclusion Summit on October 18. When presentation materials are finalized, DHR is to make the recording available.

On October 17, 2023, the Vulnerable Populations Coordinator, was invited to present as part of a webinar series facilitated by the Brain Injury Association of Delaware (BIADE). The series provides useful information for survivors, family members, caregivers, and members of the brain injury community. Each webinar provides tangible takeaways to understand the causes, treatment options, and resources related to brain injuries. The EMSPS presentation shared the Preparedness Buddy and the new Travel Buddy resources to aid people with access and functional needs in creating emergency and travel plans with their support networks. Following the webinar, BIADE published a write up in their organizational digital newsletter for members, partners and networks entitled, “Brain Buzz”. Links to the webinar recording and DHSS website to download Preparedness and Travel Buddy documents were highlighted in that issue.

Children in Disasters

The Children in Disasters Committee, facilitated by EMS/Office of Preparedness continued quarterly meetings with planned activities based on goals established in a facilitated 2020 multidisciplinary workshop. Priority areas included reunification of children in disaster an ongoing activity, inclusion of local expertise regarding children in disasters and technical support for the development of employee family readiness plans in case of deployment or assignment as essential employees during disaster. Planned continuation of 2024 work outputs focus on the development of an informational tool for essential employee family readiness plans.

Division of Public Health Emergency Medical Services and Preparedness Section 10th Anniversary Public Health Emergency Preparedness (PHEP) Symposium



Delaware Lieutenant Governor Bethany Hall-Long visits the Office of Preparedness' informational table at 10th Anniversary PHEP Symposium held on October 31, 2023

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<https://www.facebook.com/photo?fbid=882781849872334&set=pcb.882781916538994>.

On Tuesday, October 31, 2023, DPH hosted the 10th Anniversary Celebration of the Public Health Emergency (PHEP) Symposium at Bally's Conference Center in Dover. "Back to Basics" was the theme of the 2023 symposium, organized by EMS/Office of Preparedness. The event annually celebrates the partnerships active during emergency response. One hundred forty-six attendees received a virtual welcome from Governor John Carney. Lieutenant Governor Bethany Hall-Long attended to give remarks on Nursing Preparedness and Resiliency. DHSS Cabinet Secretary Josette D. Manning, who commented on DHSS Preparedness and Response. The DEMA Director provided an overview of Delaware's changing and emerging hazards and threats. DPH leadership outlined strategic initiatives. Keynote Speaker Danielle Swallow, Coastal Hazards Specialist with Delaware Sea Grant, provided a professional perspective on the intersection of climate change, public health, and disaster preparedness.

EMS/Office of Preparedness leadership provided program updates including past, present, and future projects. The Chief Psychiatrist for the DHSS Division of Substance Abuse and Mental Health (DSAMH) addressed excessive traumatic stress and management strategies and the DSAMH Deputy Director provided an overview of DSAMH programming. The afternoon's breakout sessions included the panel discussion, "What DHSS can provide during and after disasters", "Cybersecurity Threats to

Healthcare”, Mental Health Crisis Response”, and Strategic National Stockpile Response”. Informational tables allowed attendees to learn more about EMSPS response partners.

Plans

EMSPS Office of Preparedness, continues to review and update preparedness plans and assist partner organizations in their preparedness efforts. In 2023, the Natural Disaster Standard Operating Guide was finalized. Ongoing plan rewrites based on the COVID-19 After Action Report Observations and changes to federal partner organizations include the Emergency Operations Coordination Plan, Pandemic Influenza Plan and Strategic National Stockpile Plans. Workgroups in 2023 addressed additional plans under review to include the Family Assistance Center, Functional Access Service Teams (FAST), Reunification, DPH Continuity of Operations (COOP), Mass Care and Reception Centers.

Delaware State Fire Prevention Commission (SFPC)

Submitted by the Delaware State Fire Commission



The State Fire Prevention Commission is charged with the protection of life and property from fire for the people of Delaware and to oversee the operation of the Delaware State Fire Marshal's Office and the Delaware State Fire School. The Commission has always been truly dedicated to the health and well-being of every man, woman, and child in Delaware. And have done so, since 1955, with no compensation except for the knowledge that we have played a small part in making Delaware a safe and wonderful place to live.

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 their Executive Director, 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.
- Investigate injuries to firefighters incurred in the line of duty, to issue subpoenas in furtherance of such investigations, and to issue reports of its findings and conclusions with respect to such investigations.
- The Commission is empowered to enforce its orders in the Court of Chancery.

Volunteer Ambulance Company Fund

The 147th General Assembly amended Title 11 section 4101; this amended Title established the Volunteer Ambulance Company Fund. Furthermore, the "State Fire Prevention Commission" (SFPC) was tasked with providing these funds to Volunteer ambulance companies on a proportionate basis across the state and this number being based on approved dispatched ambulance runs.

The SFPC developed the methodology and disbursement plan. Reports are pulled to show the ambulance runs per agency and statewide from the Delaware Emergency Medical Reporting System (DEMRS).

The DEMRS data shows all run types to include BLS Transport, Cancellation, Patient Refusal, Public Service, Standby Only, Agency/Assist, DOPA/DOA, Unable to Locate patients/scene, Termination of Resuscitation and Transfer of Care. In order to assure the validity of the information a Quality Assurance/Quality Improvement validation score of 85 percent is used as the minimum validity accepted as accurate reports. The reports mentioned above are entered by the providers who operate within the BLS system.

The SFPC distributed \$7,398,364.00 for the period of January 1, 2023, until December 31, 2023. The funds are distributed on a bi-annual basis.

-Ronald Marvel, Chairman Delaware State Fire Prevention Commission

2023 Investigator II/Compliance Officer Statistics

Complaints Received.....	165
Investigations on Existing Cases.....	26
New Ambulances.....	44
Ambulance Inspections.....	234
Ambulance Inspection Deficiency Notices.....	181
Credential Checks.....	268

2023 EMT Certification and Ambulance Licensing Statistics

Fire Company Audit Received.....	63
Civil Penalty.....	\$0
EMT (Initial) Certification.....	195
EMT Recertification.....	821
EMT Reciprocity.....	99
EMT Background Checks.....	210
Ambulance Licensing/Renewals.....	84

Delaware State Fire School (DSFS)



Introduction

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.



The agency EMS objectives established to achieve the EMS goal are:

- To certify basic life support personnel as Nationally Registered (NREMT) and State of Delaware Emergency Medical Technicians (EMT).
- To provide BLS training to the first responders and citizens of Delaware.

2023 Accomplishments

Agency conducted EMS training in 2023:

- Emergency Medical Technician – 10 classes – 234 students
- Emergency Medical Technician Refresher – 16 classes – 427 students
- Delaware Emergency Medical Technician Reciprocity – 12 classes – 89 students
- Emergency Medical Responder (EMR) – 6 classes – 80 students
- Emergency Medical Responder Refresher – 2 classes – 22 students
- Conducted training for Active Shooter training reaching over 500 students
- Conducted 144 American Heart Association classes reaching 1979 students

2024 Goals

- To improve our EMT courses and increase our pass rate.
- Conduct training for the 1,568 Delaware EMTs and 1,280 EMRs.
- Provide students with an FTO certification program.
- Enhance & promote psychomotor skills practice in all EMS Courses.
- Enhance our partnerships with outside agencies for coordinated training opportunities.

Summary

To continue the Delaware State Fire School's vision for the EMS programs by providing quality education to willing individuals, creating partnerships among the various agencies and to always offer the most progressive EMS training available.



John W. Rudd - Delaware State Fire Marshal

The Delaware Office of the State Fire Marshal provides investigation, enforcement and technical service support to the citizens and visitors of Delaware. The agency operates three divisional offices located in New Castle, Dover, and Georgetown. The agency employed 50 fulltime State employees in 2023.

In 2024, the agency will move forward with our Mission statement *to provide a fire safe environment for our citizens and visitors* by conducting thorough fire investigations and completing rigid Life Safety inspections of commercial, educational, and residential structures throughout the State of Delaware. Last year, staff inspected 1091 Places of Assembly, 163 Educational facilities, and several other types of occupancy totaling 1694 inspections.

The Technical Services staff reviews and approves new or renovated structures to ensure compliance with the current State Fire Prevention Regulations and national fire codes. In fiscal year 2023, staff conducted 2,139 final inspections, 257 progress inspections, 75 health care inspections, and 442 day care inspections.

Deputy fire marshals investigated 62 casualties involving a nonfatal, fire related injuries in 2023. 25 injuries were the result of smoke inhalation. 27 injuries were burns. There were 10 other fire related injuries. 14 people died because of fires in 2023.

The Delaware State Fire Marshal and staff will continue to provide a fire safe environment for all citizens and visitors of Delaware by providing expertise in investigations, code enforcement, and technical services.

Join us at www.statefiremarshal.delaware.gov or email us at Fire.Marshal@delaware.gov

EMS Medical Direction

EMS Medical Direction worked with providers to advance multiple exciting innovations during 2023. The most recent protocol updates, which went into effect in November 2022 included:

- management of penetrating trauma
- allowing the use of whole blood
- assisting patients with opioid use disorder by offering buprenorphine
- improving stroke evaluation and adapting transport decisions
- cardiac arrest and post resuscitative care
- pain management including more non-opioid options.

The use of these protocols and their impacts have been closely monitored to assess utilization and effectiveness. The full implementation and effects of these new standing orders have greatly benefited patient care.

Whole Blood

EMS agencies in Sussex and New Castle counties began a pilot project allowing paramedic administration of whole blood to patients with a major hemorrhage leading to shock. The pilot protocol for patients with traumatic injuries began in May and the first units of blood were administered within 48 hours of the start. The value of whole blood is being demonstrated by the survival of critically injured patients who would have previously had lower expectations of survival. As the two agencies utilizing blood in the pilot project have gained experience, valuable lessons are being learned on equipment and utilization that will be applied in 2024, with the hope that whole blood will be utilized by all ALS agencies in the state. Further expansion in 2024 is planned to allow blood administration to pediatric patients and to add some non-traumatic causes of hemorrhage which could also benefit from whole blood administration. This will add further opportunities for blood administration and patient benefit.

Paramedic agencies have worked in partnership with the Blood Bank of Delmarva for blood supply and to have continuous quality monitoring of blood handling and utilization. The safety record has been outstanding with zero blood units having issues related to temperature non-compliance or use errors. Since blood has a finite “shelf life,” agencies have developed strategies to minimize the number of units which cannot be used before expiration. Further work to avoid any expiration of blood units, with a goal to move toward zero, is already in progress and will assist with progressing toward statewide expansion.

Buprenorphine

To address the public health crisis of Opioid Use Disorder (OUD), Delaware became the first state to offer Buprenorphine treatment from paramedics on a statewide basis. The protocol became operational in April 2023 and advanced Delaware EMS nationally to the forefront of delivery of pre-hospital care. Paramedics can offer Buprenorphine to patients who required resuscitation with Naloxone after an opioid overdose. Cooperative work with multiple partners in Public Health and outpatient treatment facilities statewide allows patients to receive initial care; paramedics offer patients a path to enter ongoing treatment for OUD. Following extensive training on the approach, all County EMS systems are utilizing the protocol to patients with OUD and the initiation of buprenorphine treatment. Paramedic initiated discussions with patients continue to increase and EMS providers are receiving updated guidance to better answer questions or address concerns

raised by patients. Patients are also engaging in these discussions at an increasing rate decreasing their risk for future overdose and adding to the likelihood that more will enter OUD treatment.

Stroke Care

Stroke care throughout Delaware is advancing with OEMS and EMS agencies working closely with the Stroke System of Care to look for additional improvement opportunities. One identified area was the potential to directly transport more stroke patients with severe stroke symptoms directly to a Comprehensive Stroke Center. Patients with these suspected Large Vessel Occlusions (LVO) can be treated with interventional care to directly remove clots in brain blood vessels that may be causing these severe deficits. The 2022 standing order updates included guidance on use of the VAN scale, a rapidly applied tool for pre-hospital providers with good predictive value for identifying LVO strokes. Collaboration with hospitals throughout Delaware led to recommendations endorsed by Primary Stroke Centers and Delaware's Comprehensive Stroke Center to identify patients who would likely benefit from flight so they could receive interventional therapy more quickly. This direct flight from the scene eliminates the need for later transfer if the patient went to a local hospital where LVO stroke was identified. Treatment of LVO stroke with direct intervention and more timely intervention are both shown to improve outcomes and significantly lessen remaining deficits from the stroke.

Prior to the initiation of this protocol, Delaware State Police averaged one flight per month in 2022 for patients with stroke symptoms. After education and utilization of the new protocol in the fall of 2022, these numbers began increasing and continued to rise with current averages now over 12 flights monthly.

The utilization of DSP helicopter for suspected LVO stroke has been closely monitored by OEMS and the Stroke System of Care. Findings include:

- Higher than predicted patients with confirmed stroke
- Higher than predicted intervention rates for LVO stroke
- No missed opportunity for thrombolytic (“clot buster”) therapy if stroke was not from LVO

The increased number of flights occurred with appropriate application of the VAN scale, resulting in more patients being seen sooner and diagnosed with LVO stroke for rapid intervention. Even when the stroke is from a smaller blocked vessel and the patient is not a candidate for intervention, they are still being seen in an early enough time frame to receive thrombolytic medications. Time for flight out of their local area has not prevented any patient from receiving this therapy. This approach and its outcomes may serve as a model for other agencies across the country.

Cardiac Arrest Care

Delaware continues to be a leader in critical care provided after resuscitation of patients following cardiac arrest. This care after restoring a heartbeat and circulation lessens the very high risk for neurologic injury due to poor blood flow and oxygen delivery to the brain. Patients are at risk for not only brain injury but other organ damage, repeat cardiac arrest or death despite initial resuscitation. Statewide adoption of a systematic approach with the mnemonic “SAVE A LIFE” provides a checklist approach to stabilize patients, closely monitor for any negative changes, and provide multiple medications in a controlled setting prior to rushing patients to a hospital. This approach has validated individual components and showed initial benefit when first implemented in New Castle County in 2019. Statewide results have similarly led to more survivors of out of hospital cardiac arrest being discharged with intact neurologic function with no deficits. Patients who are resuscitated after witnessed, shockable rhythm have the highest rate of survival at nearly

38% and those who survive have a good neurologic outcome over 92% of the time. This is far higher than most EMS systems. Further, when all cardiac arrest survivors including those who have delays in care because their arrest was not witnessed are evaluated, the good neurologic outcome measure is still much higher than expected at 83%. The initial resuscitation efforts of all EMS providers and first responders are providing more patients with the opportunity to survive cardiac arrest. The addition of advance critical care management by paramedics is increasing the number of those survivors who leave the hospital with little to no deficits and the ability to return to their normal lives.

EMS Fellowship

The Delaware Office of EMS received approval from the American College of Graduate Medical Education (ACGME) for an EMS Fellowship in August of 2023. An EMS Fellowship is a training program for physicians who have completed a residency in Emergency Medicine. The program is a one-year training program with specific ACGME requirements providing education on EMS, management, quality improvement and provision of care in the pre-hospital environment. When not run directly by an emergency medicine residency program, the Fellowship must have an academic sponsoring institution. Christiana Care and the Emergency Medicine Residency at Christiana have worked jointly with EMSPS/DPH to gain accreditation for Delaware's EMS Fellowship.

Summary and Next Steps

Ongoing enhancements in EMS, with updates to Delaware's Standing orders in 2024, are expected to add to the already excellent pre-hospital care delivered by our ALS and BLS providers throughout the state. EMS Medical Directors and the Data Team at OEMS will continue tracking the impact of additions and changes in practice. The data from the use and effectiveness of these changes will allow continuing improvement and identification of new opportunities to expand further. Moving into 2024 and beyond, expected enhancements include more detailed statewide Telecommunicator-CPR metrics and process improvement, connecting the 9-1-1 and 9-8-8 systems for patients with mental health crises, enhancing the links for patients with OUD into treatment, and beginning development of Mobile Integrated Health processes. The EMS Medical Directors are committed to working with Delaware EMS providers at all levels to offer the highest level of care in the pre-hospital environment.

EMS Safety

Creating a Culture of Safety in the EMS Workforce

No situation is so critical that safety practices should be neglected. If we become incapacitated on the response, we fail to help the patient. Safety must be a part of every response, every training, every decision. When one thinks of the word culture, it usually relates to how we do things in our organization. Developing a culture of safety means that our organization values safety by making it a part of every function. Safety must be embraced by all levels. Leadership provides the support through funding and developing policies. But beyond this, the safety effort must be led from the top. It is fruitless for leaders to promote safety programs if they do not follow those same practices. The Emergency Medical Services and Preparedness Section, Office of Emergency Medical Services (OEMS) focuses on safety through its mission to provide training and resources necessary to ensure the safety of EMS providers. Safety efforts are led nationally by organizations like the National EMS Advisory Council for the National Highway Transportation and Safety Administration (NHTSA) (<https://www.ems.gov/safety.html>).

According to the National Institute of Occupational Safety and Health (NIOSH), in 2023 strains, sprains, and overexertion injuries resulted in the most common sources of injuries to EMS workers (<https://www.cdc.gov/niosh/topics/ems/data.html>). While these hazards aren't glamorous, it is the day-to-day risks that hold potential of ending our EMS careers. Many services have taken proactive approaches and installed lift-assist stretchers. Know how to use your model but more importantly, know how to troubleshoot it to lift patients safely when it fails.

Of all the high-risk procedures performed in EMS, driving presents hazards to our providers and the public we serve. Roads are becoming more congested as the population of our state continues to rise. Drivers who are distracted or impaired also put EMS at risk. Our chances of getting into a crash increase exponentially while using lights and sirens. For a long time, the fire service has followed the mantra of everyone goes home. If we continue to allow our responders to use lights and sirens on every transport, we are not practicing what we preach.

Fatigue continues to be a concern in statewide EMS. Staffing shortages force our already stretched providers to work more hours to cover vacant shifts. Many EMS responders work for multiple agencies leading to little time off for rest.

Finally, EMS work can place a great strain on our well-being. Long hours, increasing threats to our safety, and the hard work to stay proficient contributes to this stress. Hours on the job mean less time with family and friends. Don't neglect yourself both physically and mentally. It's o.k. to not be o.k. Reach out to local CISM, peer support programs, and programs like the Code Green Campaign (<https://codegreencampaign.org/resources/>) or contact Safe Call Now (1-206-459-3020) – a 24/7 helpline for emergency responders and their families. Most of all, watch out for each other. If you see your partner struggling, point them to help. You are valuable as a person, and as a provider. Stay safe!

EMS System Evaluation

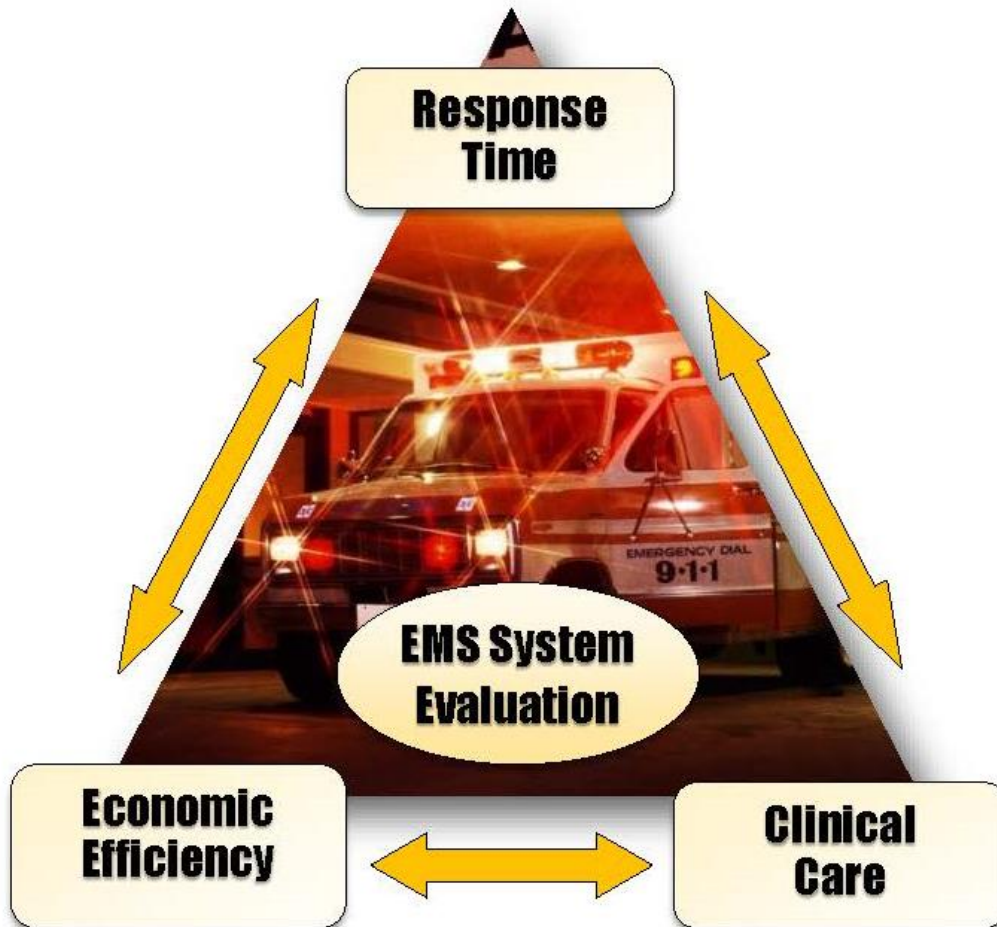
EMS System Evaluation	39
EMS Patient Care Report	40
Clinical Performance	41-45
Response Time Performance	46-49
EMS System Cost	50-52

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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 care, response time and economic efficiency. These variables are interdependent for overall system success. Focusing many 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 care and response time. Also, if a system places all its efforts on response time, there will be a significant increase in costs as well as a decrease in clinical care.



Prehospital Patient Care Report

In Delaware, data from the Delaware Emergency Medical Reporting System (DEMRS) is a comprehensive electronic patient care report (ePCR) producing data system which provides convenient access to the field providers for input of pertinent patient data in a timely fashion while concurrently standardizing EMS service provider data into a statewide data collection and reporting system. DEMRS provides services to all private/public/volunteer EMS/ALS/BLS services including but not limited to ALS providers, BLS providers, first responders, Trooper medics, A.I. duPont Hospital for Children, Wilmington Hospital, St Francis Hospital, Christiana Hospital, Beebe Healthcare, TidalHealth Hospital, Milford Hospital, Kent General, billing companies and inter-facility transport services. This allows DEMSOC a continued review of operational and clinical data for the ALS and BLS providers during emergency and non-emergency transports.

The current requirements for patient care report completion are that every attempt shall be made to complete the ePCR prior to leaving the receiving facility. In the absence of extraordinary circumstances, an ePCR should be submitted to the receiving facility within four (4) hours of patient disposition. EMS providers must complete and submit an ePCR to the receiving facility prior to going off duty.

Enhancements to our system:

The Delaware Emergency Medical Reporting System (DEMRS) transitioned to an updated operating system called Elite in January 2018. This upgrade to Elite made us NEMSIS 3.4 compliant and offers enhancements for the patient care providers while entering patient care reports.



We updated to NEMSIS 3.5 in January 2024.

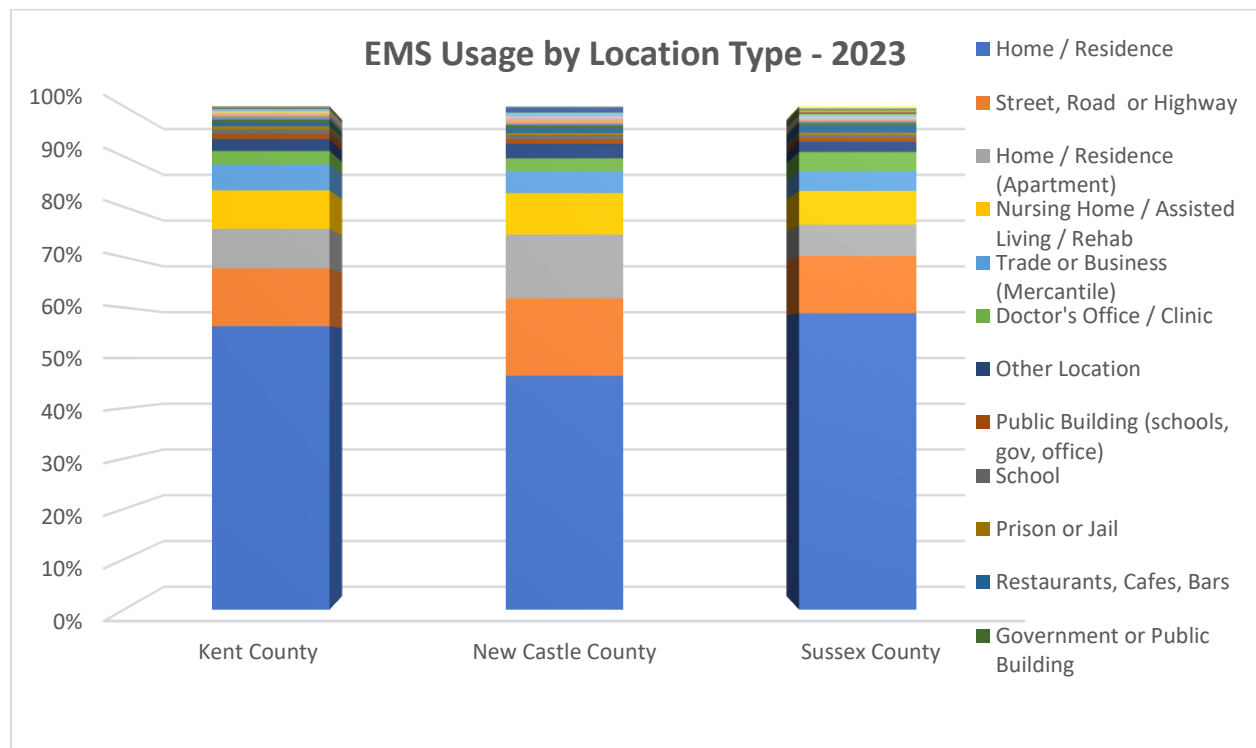


Clinical Performance

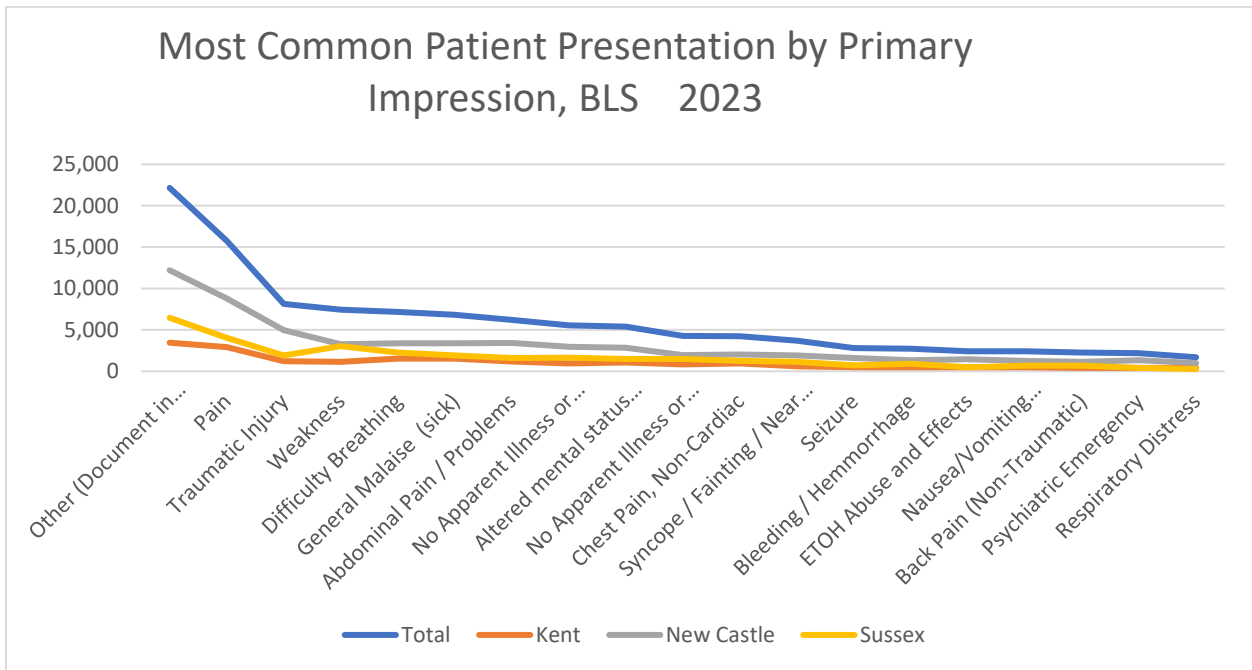
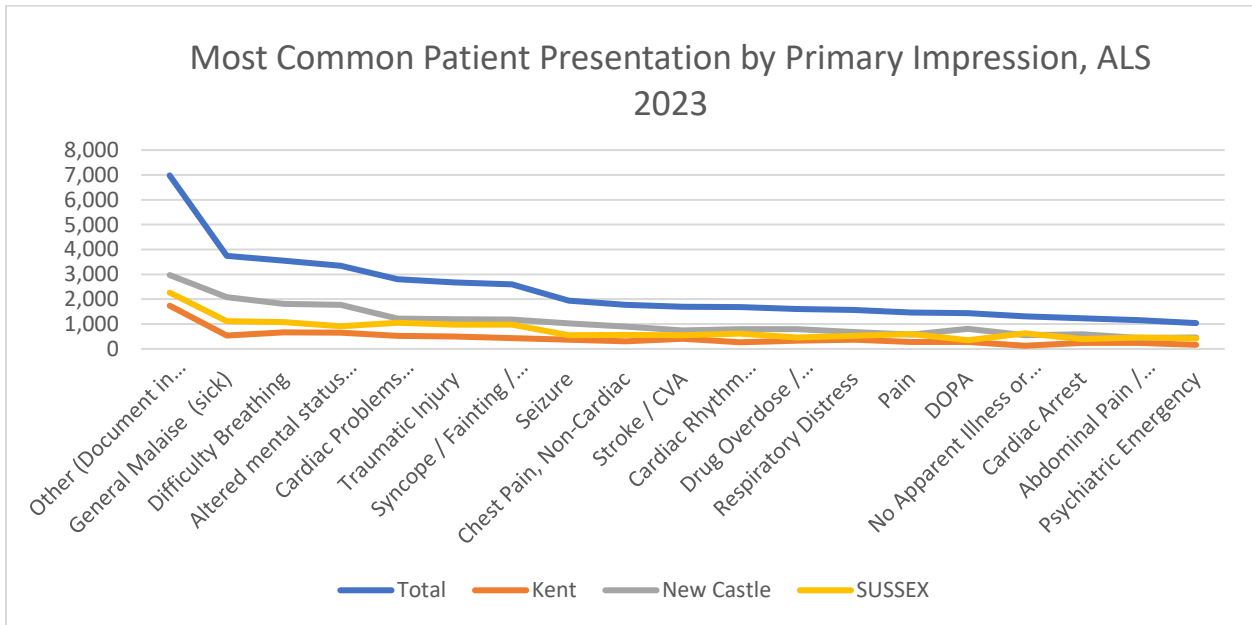
EMS systems were originally developed to reduce fatalities from traumatic injuries, especially from motor vehicle crashes. It was noticed during military conflicts that patients had better outcomes when injuries were quickly stabilized in the field and the patient was then transported to a care center. The original EMS system mimicked this with most of the emphases placed on traumatic injuries. As the science and practices of prehospital care progressed over the years, so did the scope of the EMS provider. The evolution of evidence-based practices with cutting edge technologies work in tandem to improve the clinical outcome for all types of patients. The EMS system is inclusive of many different disciplines; trauma, cardiac care, medical care, pediatric care, medical transportation, public health, and domestic preparedness just to highlight a few.

EMS provides care for 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).

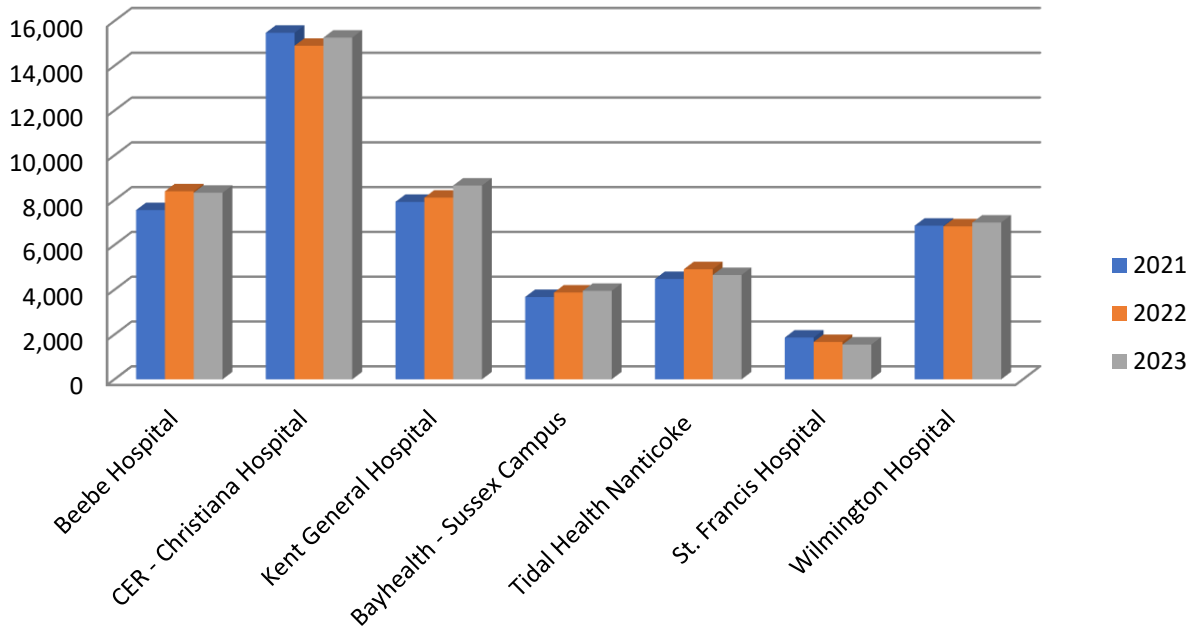
(All data used for this section and throughout the report were, unless noted otherwise, extrapolated from the Delaware Emergency Medical Reporting System (DEMRS). Please note for this report, Advanced Life Support (ALS) and BLS data are reported separately. While reading this report please do not combine the ALS and BLS data. Doing so would lead to inaccurate totals.)



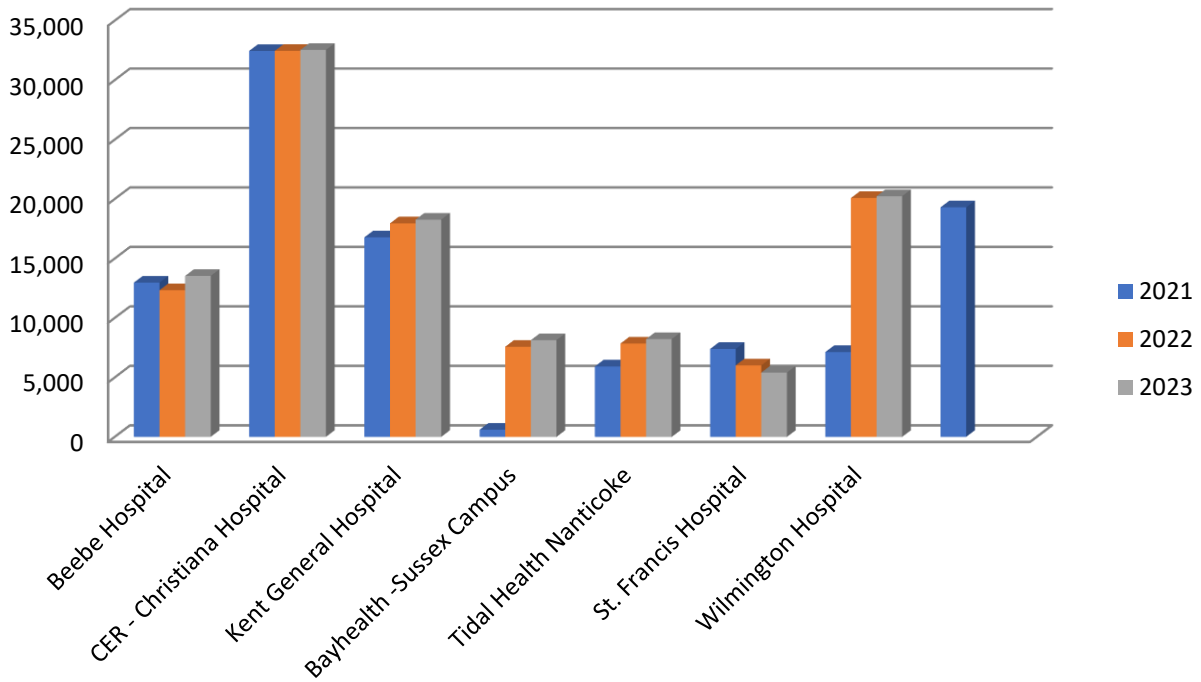
Primary Impression is the EMS provider's evaluation of the patient based on signs, symptoms, patient's chief complaint and other factors. These graphs do not consider the type of patient (medical, trauma). The primary impression of other is defined in the patient narrative and not able to query.



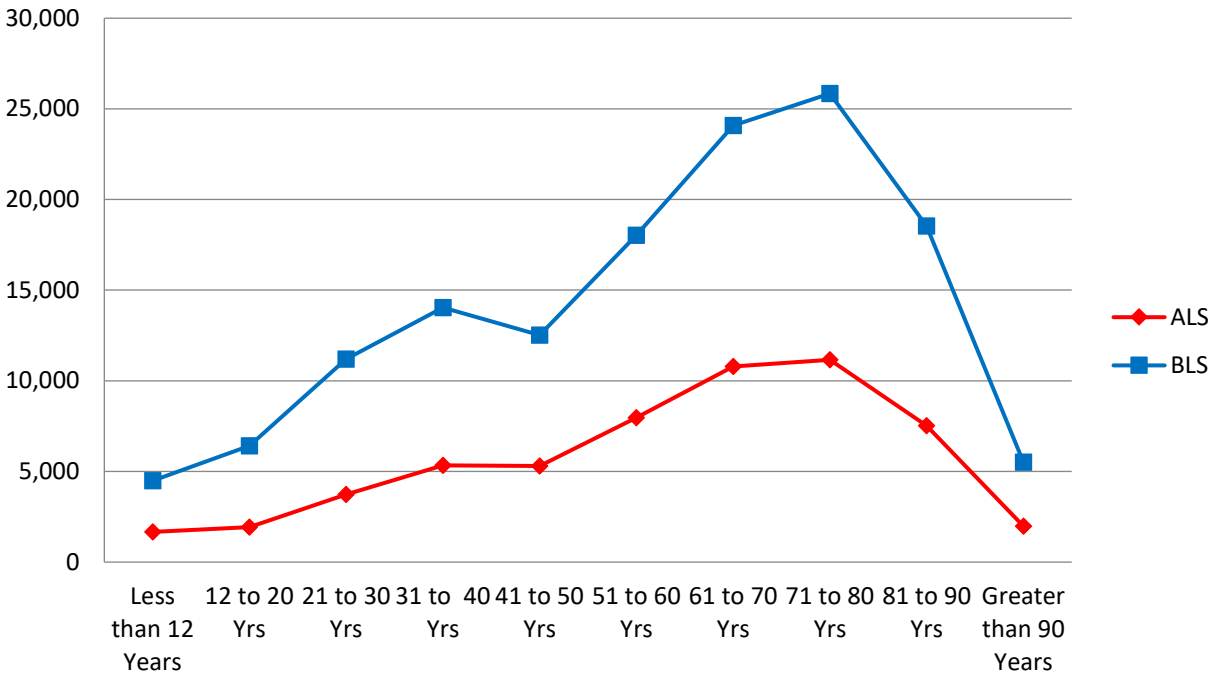
ALS Receiving Hospital Comparisons 2021-2023



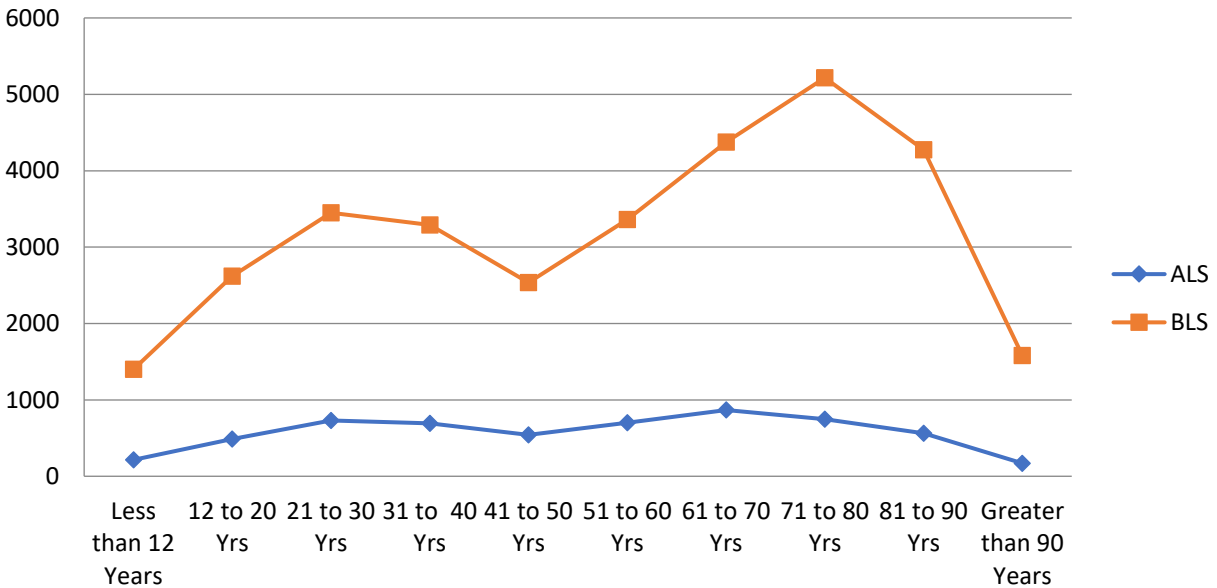
BLS Receiving Hospital Comparisons 2021-2023



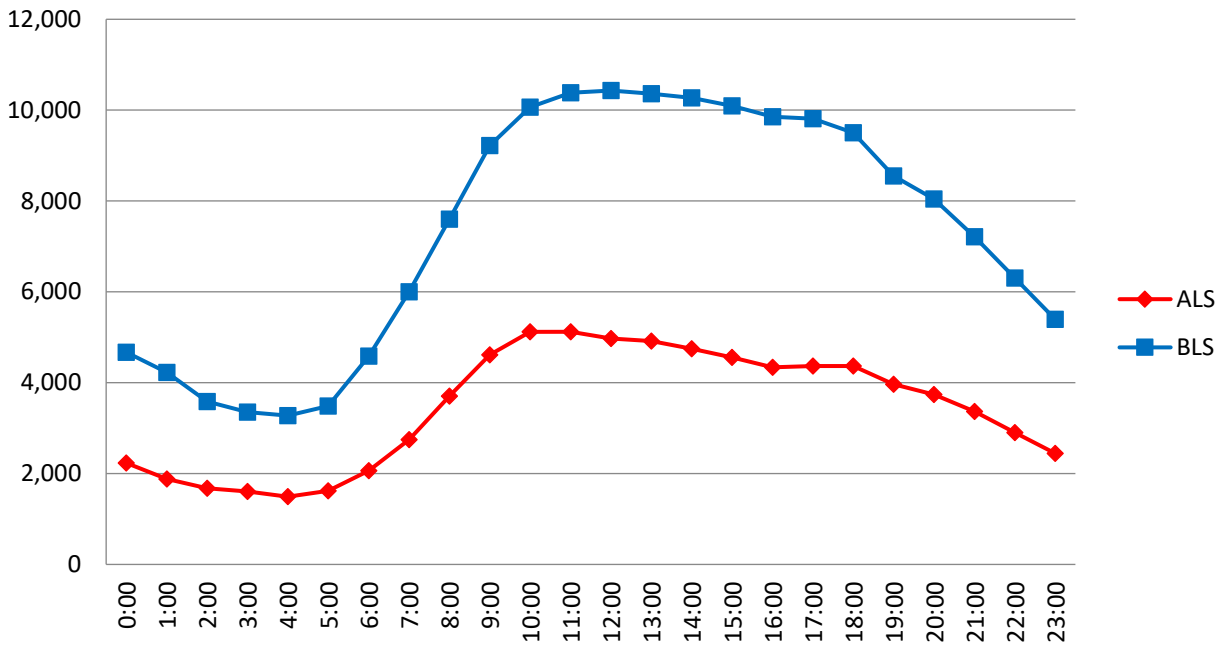
ALS and BLS Patient Age Comparison - 2023



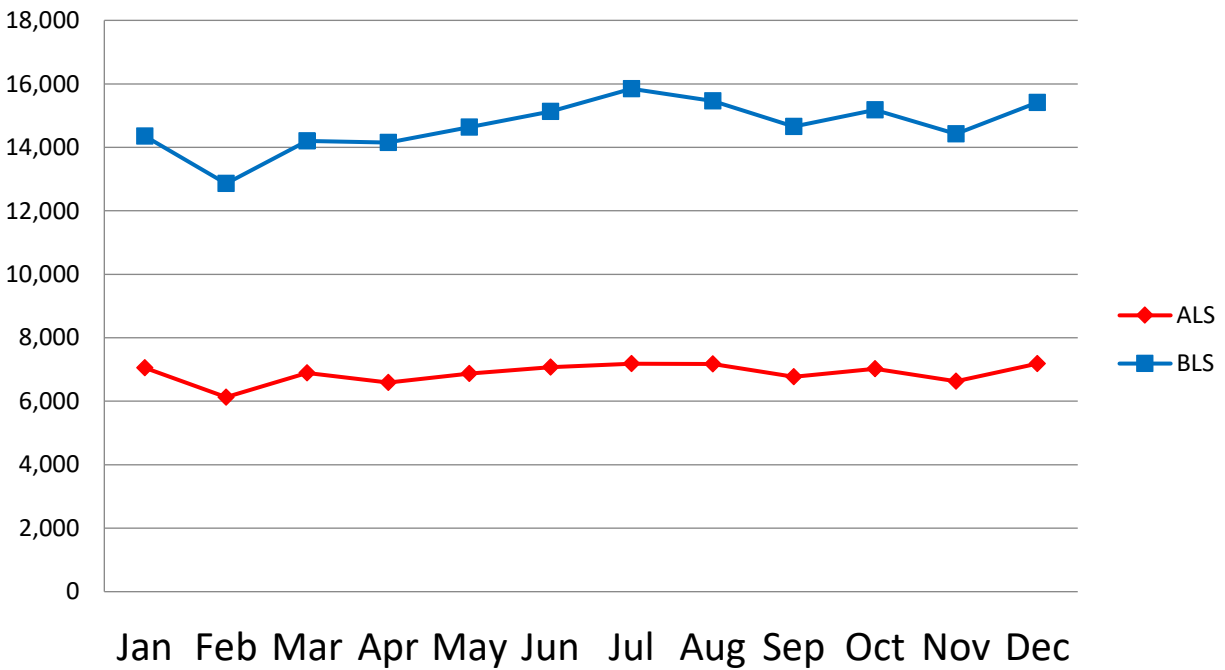
ALS and BLS Patient Age Comparison - 2023 Possible Injury Patients



Time of Day When EMS Incidents Occur - 2023



ALS/BLS Incidents by Month - 2023



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, and 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. Response time performance measure is one of several performance goals and is not a single predictor of the health or success of an EMS system.

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.

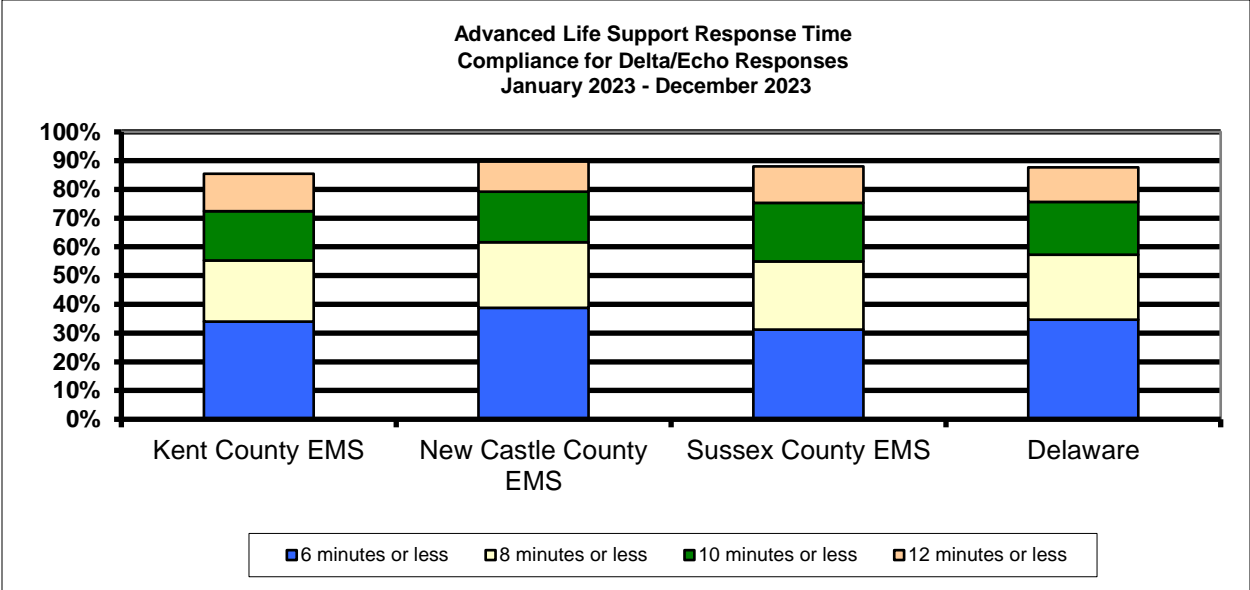
Charlie – Requires ALS and BLS response. Example is burns with difficulty breathing.

Delta – Requires ALS and BLS response. Example is an unconscious burn victim.

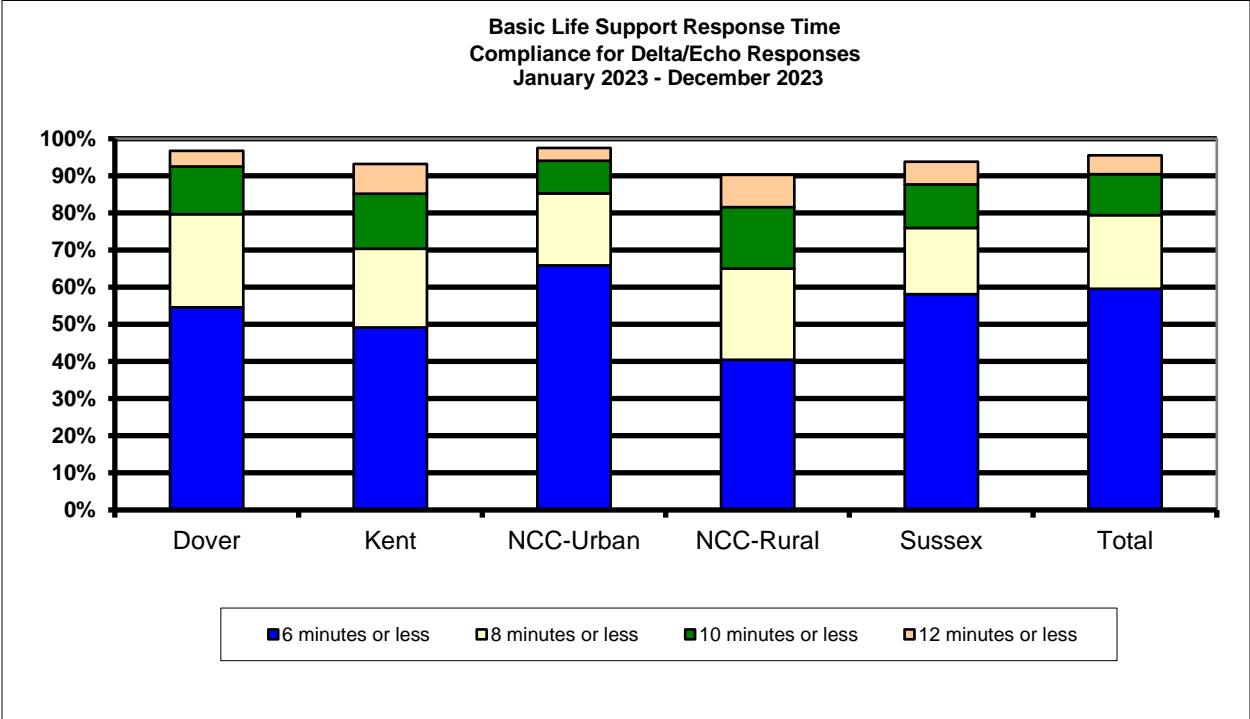
Echo – Response type not addressed in the legislated response time goals, but it requires a maximum response to include available first responders. Example would be a cardiac arrest.

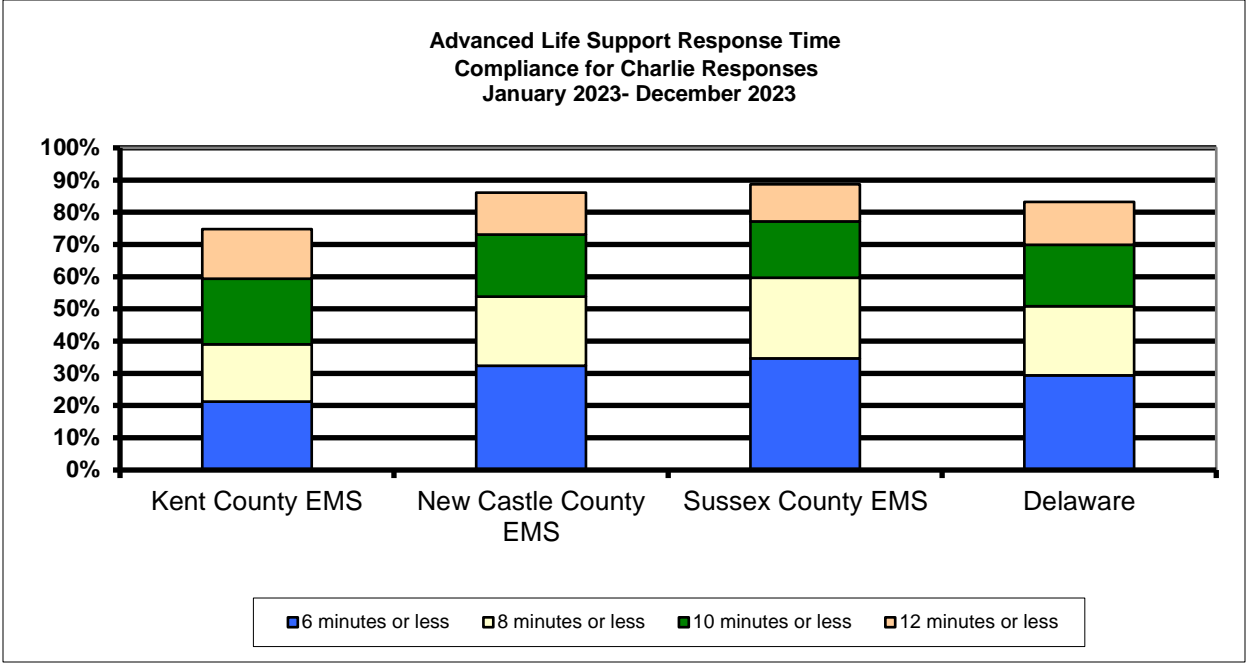
Omega – Response type not addressed in the legislated response time goals. An example of an Omega response is a dispatcher, while remaining online with the caller, connects to a poison control center for instructions.



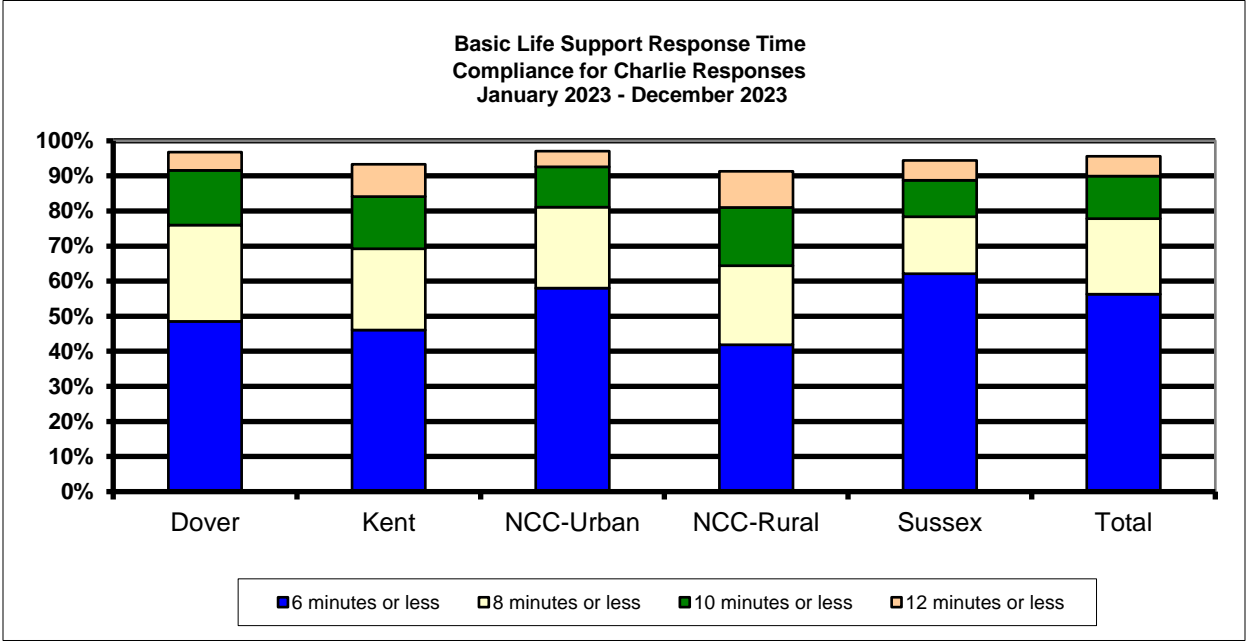


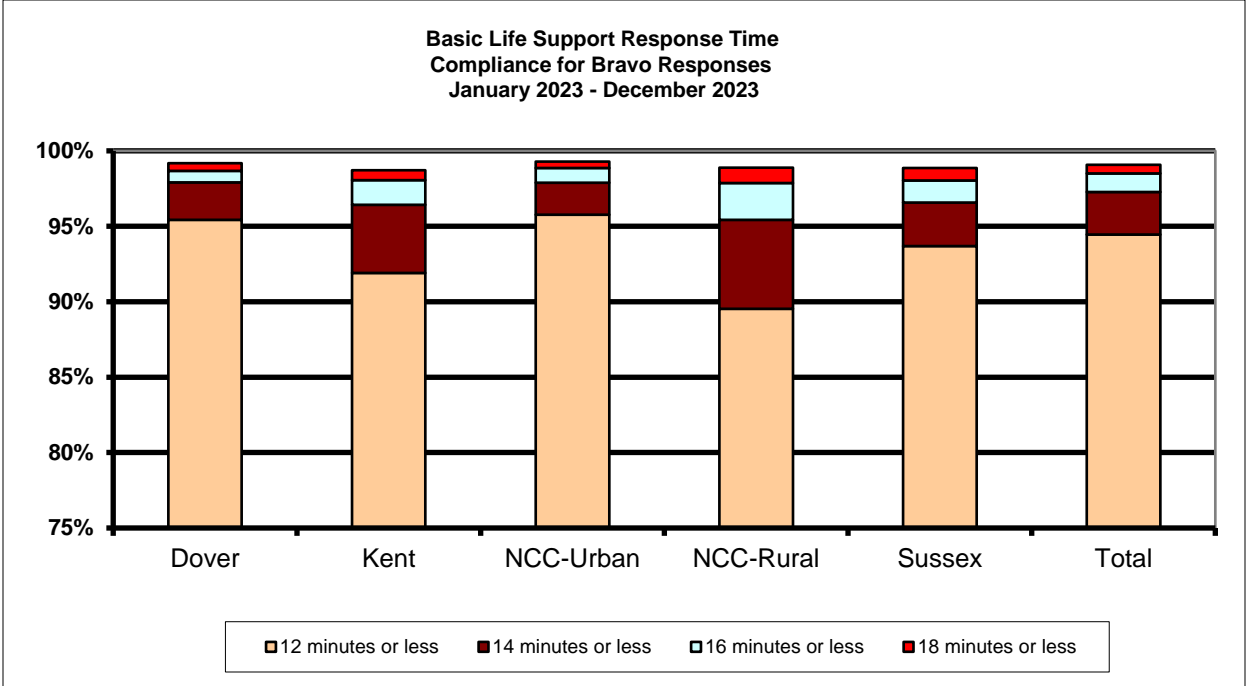
Goal: Each Advanced Life Support (ALS) paramedic agency within the Delaware EMS system provide an ALS paramedic unit, as defined by recognized state standard, on the scene within 8 minutes of the receipt of Delta calls on at least 90% of the time. BLS ambulance unit on scene within 10 minutes of the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



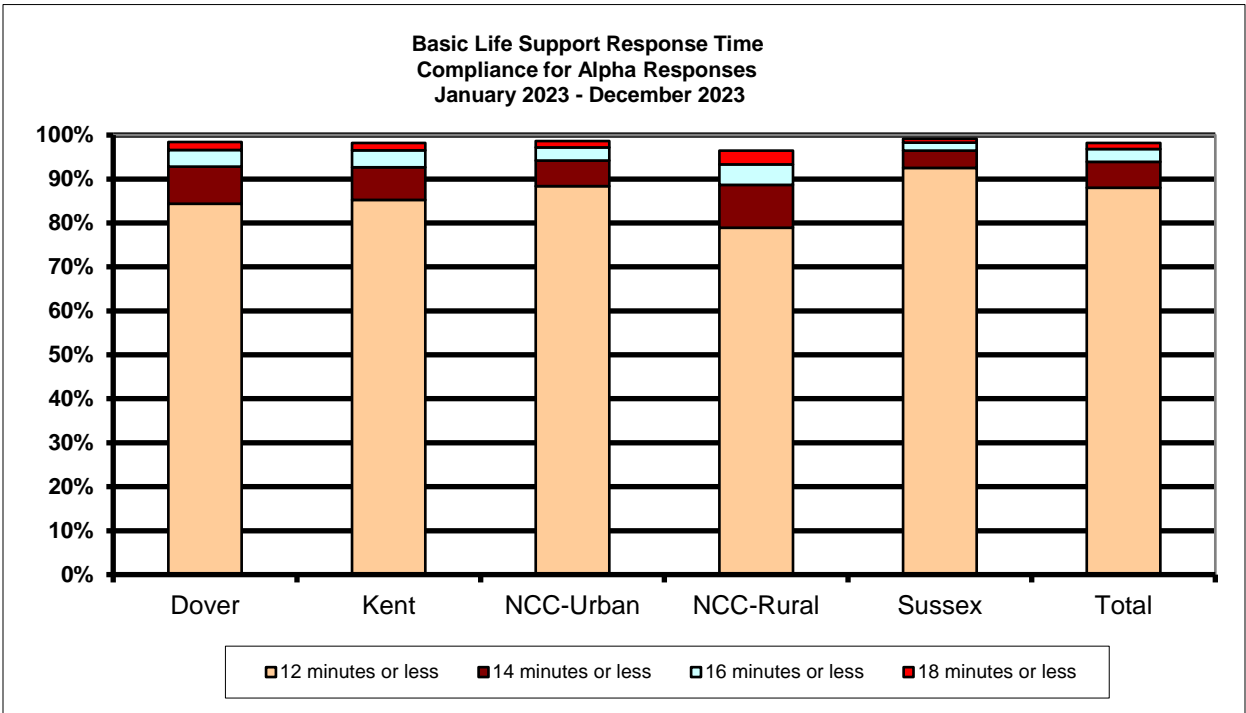


Goal: Each Advanced Life Support (ALS) paramedic agency within the Delaware EMS system provide an ALS paramedic unit, as defined by recognized state standard, on the scene within 8 minutes of the receipt of Charlie calls on at least 90% of the time. BLS ambulance unit on scene within 12 minutes of the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



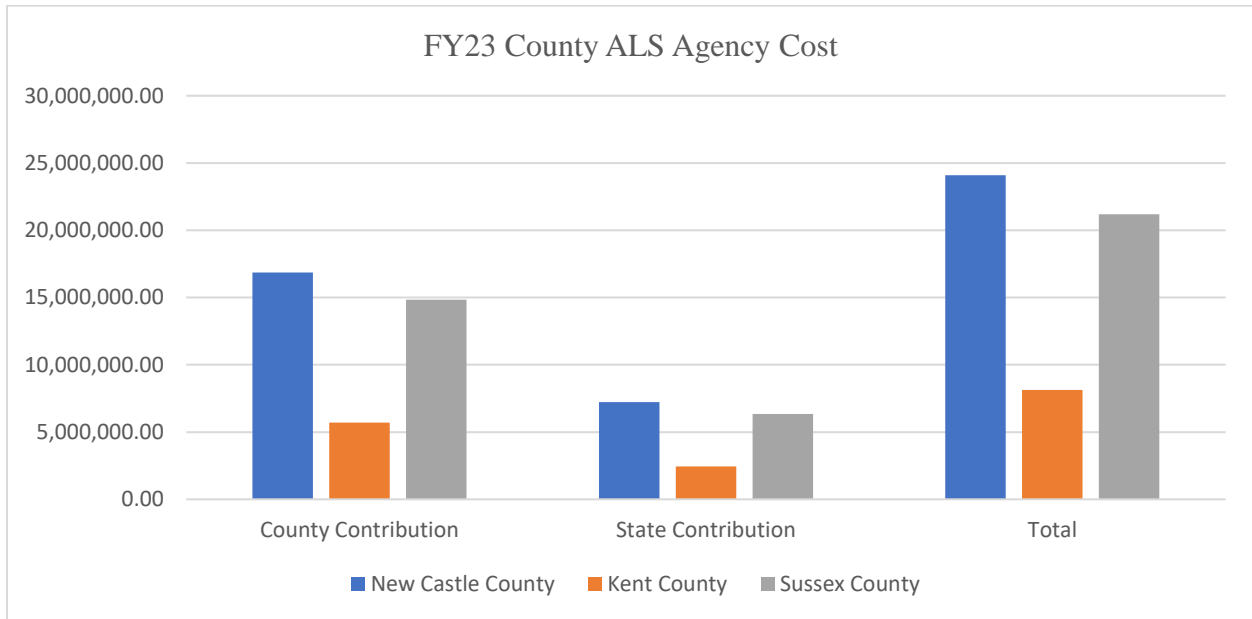


Goal: BLS ambulance unit on scene within 12 minutes of the receipt of Bravo calls on at least 90% of the times in urban areas and 70% of the times in rural areas.



Estimate of EMS System Cost

The Statewide Paramedic Services Act of 1990 was adopted to establish a framework for the creation of an effective and efficient means for the provision of advanced life support services to the citizens of the State regardless of their economic status, who require such services without prior inquiry as to the patient’s ability to pay. The statewide paramedic funding program was established for the purpose of state participation with the counties in the financing of the statewide paramedic program. The counties are reimbursed through the State’s Grant in Aid funds for portions of their expenditures for delivery of paramedic services. By law, the State of Delaware is obligated to reimburse the three counties to operate paramedic services. The law stipulates that these costs must have been incurred by the county for the direct costs to operate paramedic services. Upon inception of the Paramedic Services Act of 1990, the reimbursement level to the counties was 60 percent and has been gradually reduced to the current level of 30 percent in Fiscal year 2023.



PGIA 2024	New Castle County	Kent County	Sussex County
County Contribution	16,871,405.00	5,697,034.00	14,831,287.00
State Contribution	7,230,603.00	2,441,586.00	6,356,266.00
Total	24,102,008.00	8,138,620.00	21,187,553.00

New Castle County Paid Personnel by Agency

Agency Name	Phone Number	Total Paid Personnel	Shifts Covered
*Aetna Hose Hook & Ladder Co.	(302) 454-3309	22 FT- 55 PT	24/72
*Belvedere Fire Co. 30	(302) 998-8021	1 FT - 12 PT	12H
Brandywine Hundred Fire Co. 11	(302) 764-4901	13 FT-8 PT	24/7
Christiana Fire Co. 12	(302) 737-2433	10 FT - 45 PT	24/7
Claymont Fire Company 13	(302) 798-6858	9 FT - 28 PT - 0VOL	24/72
Cranston Heights Fire Co. 14	(302) 998-3140	8 FT - 39 PT	24/7
Delaware City Fire Company 15	(302) 834-9336	8 FT - 20 PT	24 On ~ 72 Off
Elsmere Fire Co. 16	(302) 999-0183	9 FT-27 PT	24/7
*Five Points Fire Company 17	(302) 994-2245	5 FT - 49 PT	24/7
Goodwill Fire Company	(302) 328-2211	8 FT-20 PT	24/7
Hockessin Fire Co. 19	(302) 239-7159	13 FT - 16 PT	24/7
*Holloway Terrace Fire Co.	(302) 654-2817	25 PT	24/7
*MillCreek Fire Company 21	(302) 998-8911	22 FT - 10 PT	24/7
*Minquadale Fire Company 22	(302) 652-0986	9 FT-9 PT	24/72
Minquas Fire Co. 23	(302) 998-3474	4 FT-30 PT	24/7
Odessa Fire Co. 24	(302) 378-8929	9 FT-13 PT	24/7
Port Penn Vol. Fire Co. 29	(302) 834-7483	4 FT - 30 PT	24/7
Talleyville Fire Co.	(302) 478-1110	10 FT- 42 PT	24/7
Townsend Fire Co. 26	(302) 378-8111	9 FT-5 PT	10H
Volunteer Hose Company	(302) 378-7799	13 FT 15 PT	24/7
*Wilmington Fire Department 100	(302) 576-3150	159 Fire Fighters	24/48
Wilmington Manor Fire Co.	(302) 328-3209	15 FT - 30 PT	24/7
<i>*based on the 2022 Report</i>			

Kent County Paid Personnel by Agency

<u>Agency Name</u>	<u>Phone Number</u>	<u>Total Paid Personnel</u>	<u>Shifts Covered</u>
Bowers Fire Co. 40	(302) 335-5966	0 FT-20 PT	12H
Camden-Wyoming Fire Co. 41	(302) 697-3201	12 FT-10 PT	24/7
*Carlisle Fire Company 42	(302) 422-8001	2 FT - 6 PT	24/7
Cheswold Fire Co. 43	(302) 736-1516	4 FT-6 PT	24/7
Clayton Fire Co. 6	(302) 653-7317	60 VOL	0
*Felton Community Fire Co. 48	(302) 284-4800	6 FT - 8 PT	24/7
*Frederica Vol. Fire Co. 49	(302) 335-3235	23 PT	12H
*Harrington Fire Co. 50	(302) 398-8931	5 FT - 20 PT	12H
Hartly Fire Co. 51	(302) 492-3677	0 FT - 25 PT	8H
*Leipsic Fire Co. 53	(302) 674-0829	28 PT	12H
Magnolia Vol. Fire Dept. 55	(302) 335-3260	33 PT	24/7
Marydel Fire Co. 56	(302) 492-9917	1 FT-12 PT	24/7
Smyrna American Legion 64	(302) 653-6465	13 FT-26 PT	12H
*South Bowers Fire Company	(302) 335-4666	60 VOL	
<i>*based on 2022 report</i>			

Sussex County Paid Personnel by Agency

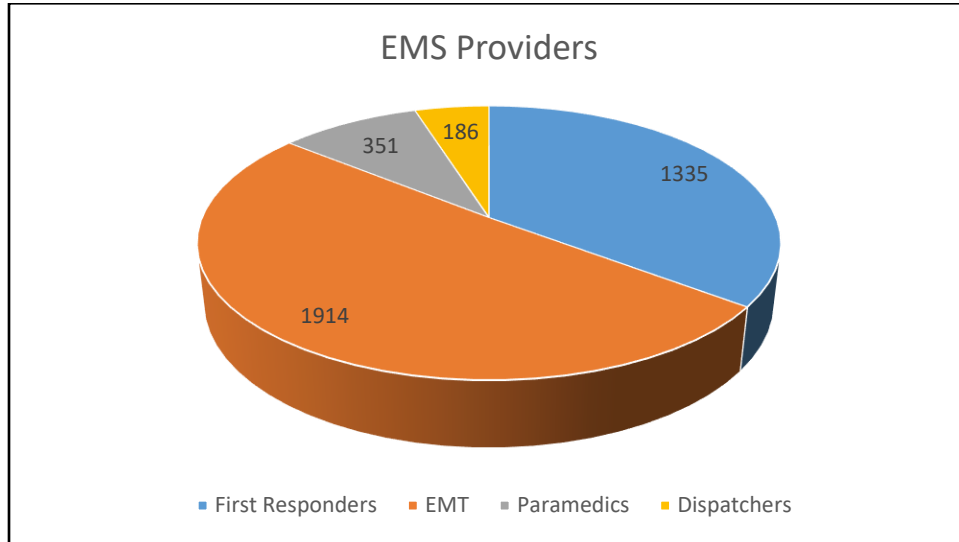
<u>Agency Name</u>	<u>Phone Number</u>	<u>Total Paid Personnel</u>	<u>Shifts Covered</u>
Blades Fire Co.	(302) 629-4896	9 FT -20 PT	24H
Bridgeville Fire Company 72	(302) 337-3000	4 FT- 15 PT	12H/24H
Dagsboro Fire Co. 73	(302) 732-6151	5 FT - 10 PT	24/7
Delmar Fire Co.	(302) 846-2530	9 FT - 16 PT	24/7
Ellendale Fire Co.75	(302) 422-7711	5 FT - 20 PT	24/7
Frankford Fire Co. 76	(302) 732-6662	4 FT - 5 PT	24/7
Greenwood Fire Co. 78	(302) 349-4529	7 FT-10 PT	24/72
Gumboro Vol. Fire Co. 79	(302) 238-7411	8 FT - 12 PT	12H
Laurel Fire Dept. 81	(302) 875-3081	7 FT - 10 PT	24/7
*Lewes Fire Dept 82	(302) 645-6556	25 FT - 17 PT	24/72
*Memorial Fire Co. 89	(302) 422-8888	3 FT - 4 PT	24/7
Mid Sussex Rescue Squad Inc.	(302) 945-2680	13 FT - 25 PT	24H
Millsboro Fire Co 83	(302) 934-8359	13 FT - 18 PT	24/72
Millville Vol Fire Company 84	(302) 539-7557	16 FT - 23 PT	24/72
Milton Fire Co. 85	(302) 684-8500	7 FT - 8 PT	24/7
Rehoboth Beach Vol. Fire Co. 86	(302) 227-8400	15 FT - 13 PT	24/7
Roxana Vol. Fire Co. 90	(302) 436-2300	8 FT - 30 PT	24/72
Seaford Vol Fire Co. 87	(302) 629-3112	10 FT - 23 PT	24/7
*Selbyville Fire Co. 88	(302) 436-8802	8 FT - 8 PT	24/72
<i>*based on 2022 report</i>			

EMS System Resources

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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 2023 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 2010 and 2050, Delaware’s population will increase 18.7%. Sussex County is expected to see the largest percent increase in population by 30%. Kent County's population is projected to reach 210,671 by 2050, an increase of 22%. New Castle County is expected to grow by approximately 11% over the same period, adding 66,520 to reach a 2050 population of 606,162.

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 the EMS program to increase the availability of training and allow students to transition to the Delaware Tech program upon graduation.

Education and Training

Delaware recognizes three levels of Emergency Medical Services training. They are First Responder, Emergency Medical Technician, and Paramedic. Registration through the National Registry of Emergency Medical Technicians (NREMT) is offered for each of these levels.

Emergency Medical Responder

Personnel certified at the First Responder level are regulated by the Delaware State Fire Prevention Commission. The Delaware State Fire Prevention Commission does not require NREMT certification at this level, however it is highly encouraged. The lead agency for First Responder education is the Delaware State Fire School.

Emergency Medical Technician

Personnel certified at the Emergency Medical Technician level are regulated by the Delaware State Fire Prevention Commission. NREMT certification is required to obtain initial Delaware EMT-B certification. All EMT's must maintain their NREMT certification to maintain a Delaware EMT Certification. The lead agency for Emergency Medical Technician education is the Delaware State Fire School.

Nationally Registered Paramedic

Personnel certified at the Paramedic level are regulated by the Delaware Office of Emergency Medical Services. The lead agency for initial paramedic education is Delaware Technical and Community College, Terry Campus. National certification is required to obtain and maintain certification by the OEMS and licensure by the Delaware Board of Medical Licensure and Discipline. Each Advanced Life Support (ALS) agency is responsible for the continuing education and transition education of their paramedics with oversight from the OEMS.

National Continued Competency Program (NCCP)

The State Fire Prevention Commission adopted the National Registry of EMTs National Core Curriculum Program (NCCP) for EMTs and EMRs in the State of Delaware. This program changes requirements for recertification at both levels. This streamlines the recertification process into three categories consisting of National, Local, and Individual.



Paramedic Education

Submitted by Chris Hainsworth

Delaware Technical Community College offers paramedic education as part of a two-year Associate of Applied Sciences degree. The program is structured and staffed to produce paramedic graduates that will help to meet the staffing needs of the Delaware paramedic services. The curriculum follows the National Paramedic EMS Education Standards and consists of approximately one thousand seven hundred hours of classroom, simulation lab, clinical and field internship experiences.

The Delaware Tech Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). The program has maintained accreditation since 1999.

2023 Accomplishments

In 2023, Delaware Tech continued the practice of starting two cohorts of students annually to help meet the staffing shortages experienced by the county paramedic services and the State Police Aviation Section. The paramedic program had nine graduates in 2023. All graduates passed the National Registry Paramedic certification exam on their first attempt, maintaining the program's one hundred percent pass rate. All graduates were hired into the Delaware workforce, and almost all of them were hired before they graduated from the program.

The other accomplishment in 2023 was the revision of our certificate program. This revision was in response to the county paramedic agencies' request through the paramedic program advisory board for an offering that was shorter than the existing program without pre-requisite course work. The revision project was initiated in February 2023 with the goal of being operational by January 2024. The college's curriculum revision process normally takes twelve to eighteen months to complete, the process was accelerated and completed in ten months. This project required developing a curriculum without pre-requisite course work that could be completed within a year, rewriting courses, and getting the new curriculum approved through the college's curriculum review process. The new curriculum requires incoming students to be certified as an Emergency Medical Technician, to demonstrate college readiness, and they must be in good academic standing with the college.

The new certificate program is significantly shorter than the degree program. It is comprised of seven courses that require one thousand, one hundred and seventy clock hours to complete. As a result, the new program will have to be accredited separately from the existing degree program. The accreditation process began with requesting a Letter of Review from the Committee on Accreditation of Education Programs for the EMS Professions (CoAEMSP). To receive the Letter of Review, we had to complete a self-study report which showed all the required components of the program were in place and compliant with accreditation standards. The self-study report was verified through a site visit by CoAEMSP, and we received our Letter of Review on November 30, 2023. This was the last obstacle to enroll students. The accreditation process will continue once the first class has graduated. Once the class graduates, we will request Initial Accreditation, submit another self-study report which will be followed by another site visit. That process will begin in

January 2025, and will likely be complete in 2026. We will be able to continue to admit students under the Letter of Review until this process is finished.

We plan to admit one cohort of certificate students and one cohort of degree students each year. The certificate offering has been designed primarily for the county paramedic services to be able to send recruits to paramedic school. The priority of admission is given to sponsored candidates, with college students filling the cohort on a first-come, first served basis. The first cohort of twelve students were admitted in December and started classes in January 2024. They are scheduled to complete their courses in December 2024.

2024 Challenges/Goals

The most significant challenge that continues to face the program in 2024 is enrollment. However, this is an issue challenging paramedic programs nationally post-pandemic. At Delaware Tech, enrollment in the college has increased and the number of applications for the paramedic program have also increased. We believe that this challenge may not be as significant in 2024 as it has been in the past.

Our goals for 2024 are centered around accreditation and expansion. In addition to the certificate program accreditation activity, the degree program will continue through the process of obtaining Continued Accreditation. The degree program's self-study report was submitted in February 2023 and the site visit is scheduled to take place in September 2024. We expect that the final review and accreditation award by CAAHEP will take place in 2025.

In 2024, the process to expand the certificate program to the Wilmington Campus as a satellite will be initiated. Construction to renovate existing space in Wilmington was started last year. Part of this project includes the construction of a paramedic simulation lab. Construction is expected to be completed by January 2025, with the paramedic certificate classes expected to be offered at the Wilmington campus later in the year. The certificate program will be offered at both campuses and the degree program will continue to be offered at the Dover campus.

Summary

The Delaware Technical Community College remains committed to help meet the staffing needs of the Delaware paramedic agencies. The paramedic program is changing to better meet the needs of the system. Our graduates continue to be well prepared to obtain their paramedic certification and enter the Delaware workforce.

Delaware Healthcare Preparedness through the Hospital Preparedness Program Grant

The Hospital Preparedness Program (HPP) grant is funded by the Administration for Strategic Preparedness and Response (ASPR) and is managed by the Office of Emergency Medical Services (OEMS) that is located within the Delaware Department of Health and Social Services, Division of Public Health (DPH). “ASPR leads the nation's medical and public health preparedness for, response to, and recovery from disasters and public health emergencies.” The state is in the fifth year of a five-year grant cycle and is working on the following projects:

Delaware Healthcare Preparedness Coalition (DHPC)

The Delaware Healthcare Preparedness Coalition (DHPC) is co-chaired by a representative from the Delaware Healthcare Association and the Office of Emergency Medical Services. DHPC meets monthly to promote communication, information sharing, resource coordination, and coordinated operational response and recovery should an event occur. DHPC has a preparedness plan that includes information collected on hazard vulnerabilities and risks, resources, gaps, needs, and legal and regulatory considerations. Planning priorities are based on statewide needs and gaps and federal grant guidance. DHPC continues to work on restructuring the coalition by adding subcommittees, such as Long-Term Care Facilities (LTCF). The LTCF’ subcommittee meets separately and send a representative from their working group to the core DHPC meetings to share best practices with members.

Long-Term Care and Sub-Acute Facilities Workshop

A half-day workshop was developed and conducted in October 2023 for both long-term and sub-acute care facilities in Delaware. The topic was “Expert Insights into Respiratory Viruses”. Agenda topics included respiratory diseases in Delaware with a focus on long term care facilities, respiratory viruses in 2023, and a panel discussion focused on respiratory viruses and mitigation and preparedness activities, resource management, and response triggers.

Medical Surge Planning and the Medical Response and Surge Exercise

Each year the HPP grant requires a Medical Response and Surge Exercise (MRSE) which plays an integral part in the planning and response to a sudden health care crisis in Delaware. The exercise uses a scenario to help the DHPC members and other stakeholders assess how well they can work together. The exercise is designed to test the healthcare system's functional surge capacity and to identify gaps in planning. Over the five-year grant cycle, the following surge plans were addressed: Trauma/Burn Surge, Pediatric Surge, Infectious Disease Surge, Radiological Surge, and Chemical Surge. These planning efforts help guide and coordinate statewide efforts for the care of ill or injured patients during a natural or human-caused disaster incident or public health emergency that exceeds the normal medical capabilities within Delaware’s healthcare system.

The exercise scenario for 2023 was a Radiological Dispersal Device (RDD) detonation at the post-event gathering of the fictional Dover Bike Tour. Since the exercise play included injured spectators and participants, adults and pediatric patients with acute injuries were distributed to local area hospitals. Large numbers of potentially exposed individuals and worried well citizens

self-transported to facilities following public notification of the presence of radiation. Exercise objectives include Healthcare and Medical Response Coordination and Medical Surge.

Information Sharing Guideline

Work continues on the Information Sharing Guideline based on identified needs from the COVID After Action Report. The purpose of this guideline is to provide member organizations with a framework under which information will be shared in day-to-day operations and in emergency operations. The Information Sharing Guideline includes sections on DE-Trac (patient tracking and patient information confidentiality), the Delaware Information and Analysis Center (DIAC) alerts, essential elements of information, and flowcharts of information during normal and emergency operations. The flowcharts will be shared with key personnel to standardize information sharing during an event within the state. It will also streamline the flow of information from and within the DHPC.

Alternate Care Site Strategies Guideline

DPH's Emergency Medical Services and Preparedness Section (EMSPS) and DHPC members continue to collaborate on the development of the Alternate Care Site (ACS) Plan to remove and reduce the burden on the healthcare system. A variety of strategies are included in the plan: decreasing the number of patients presenting to a hospital emergency department by triaging to other appropriate facilities; deploying internal decompression strategies for a facility; and discharging patients to facilities that can address patient needs. The guideline provides a system of coordination and collaboration where victims/patients can receive the level of care that is appropriate to their needs.

Crisis Standards of Care Guideline

DPH's EMSPS continues work to update the state's Crisis Standards of Care (CSC) Guideline for Delaware Healthcare Facilities. The CSC assists the state and its healthcare facilities to establish a framework for responding to a public health emergency. Due to extreme stress on the healthcare system, this framework requires altered standards of care. This may result in a need to determine the appropriate allocation of scarce resources.

Partnership for One Health Delaware (POHD)

The Office of Infectious Disease Epidemiology (OIDE) works with OEMS to communicate, coordinate, and collaborate with human, animal, and environmental health partners. POHD meets quarterly and is planning the One Health Regional Consortium Conference for the summer of 2024. Some meeting agenda topics include extreme heat events, Lyme disease, West Nile Virus, and Eastern Equine Encephalitis.

2023 Delaware Healthcare Preparedness Coalition Conference

The Delaware Healthcare Preparedness Coalition (DHPC) held its Annual Conference on Thursday, February 2, 2023. This event had 59 individuals from 29 different organizations in attendance who represented public health, emergency medical services (EMS), emergency management, and healthcare partners. The conference focused on strategies, best practices, and lessons learned to mitigate the effect of medical surges on healthcare facilities. Speakers presented on their experiences dealing with the pandemic and other medical surge events.

EMS Interfacility Transport

Interfacility transport services are an important part of any well-designed EMS system. The EMS system is often thought of as the 911 emergency response service, but the 911 emergency response service is just one part of the whole EMS transport system. The 911 transport system is not staffed to provide transport services for the non-emergent patients and remains available for emergencies as they arise. Interfacility transport services fill the important role of non-emergent patient transport allowing the 911 emergency response units to remain available for emergent request for service.

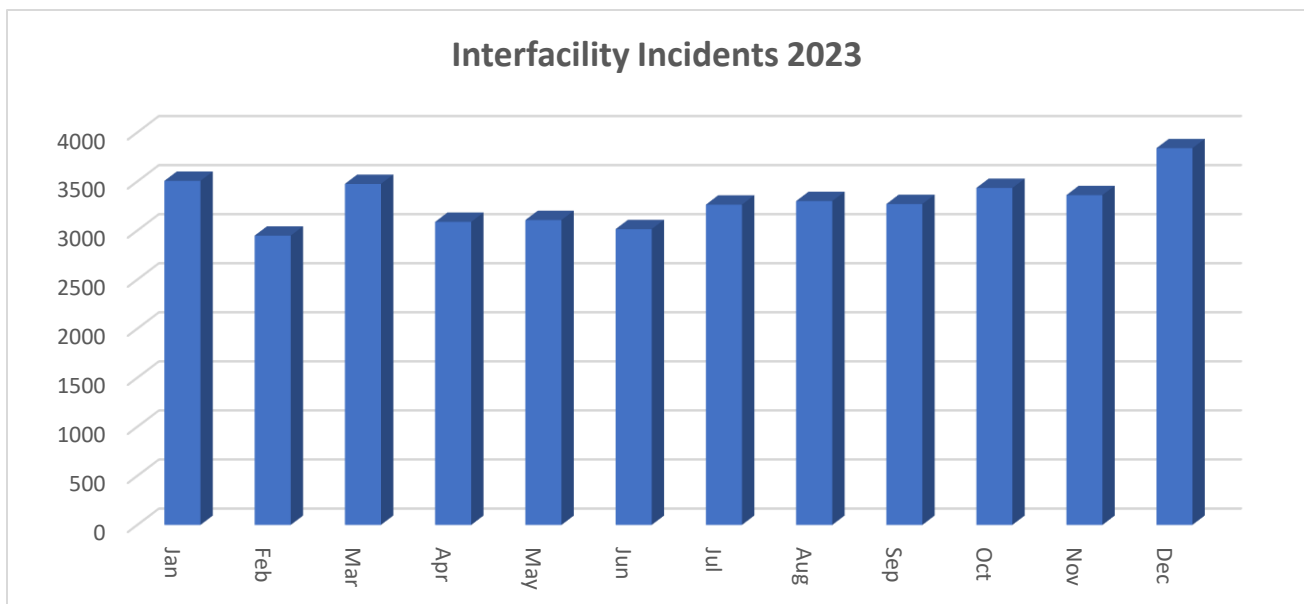
There are three types of ground Interfacility transport ambulances in Delaware:

- **Basic Life Support (BLS):**
 - Ambulances are staffed with Emergency Medical Technicians (EMTs). EMTs provide basic care and patient monitoring including oxygen therapy, bandaging, and splinting, etc.
 - Interfacility transport EMTs have the same scope of practice as 911 EMTs and utilize the same statewide treatment protocols.
 - Delaware has 15 Basic Life Support Interfacility agencies with a total of 74 BLS Interfacility ambulances and 177 911 ambulances licensed and operating in Delaware:
 - AEC Medical Transport
 - Alpha Ambulance
 - Ambulnz
 - Christiana Care
 - Delaware Park
 - GEM
 - Hart to Heart
 - Keystone Ambulance
 - LifeStar
 - MedLink
 - Metro Medics
 - Nemours Children's Health
 - St. Favour
 - TBM Ambulance Service
 - Unique Care
- **Advanced Life Support (ALS):**
 - 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 eight licensed paramedic Interfacility agencies:
 - AEC

- Ambulnz
 - Christiana Care; Life Net
 - GEM
 - Hart to Heart
 - LifeStar
 - Nemours
 - St. Francis
- **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 can perform procedures and assessments authorized by a prescribing practitioner and overseen by the medical facility. The EMT provides support to the transport team.
 - Delaware has three hospital-based transport teams:
 - Christiana Care Specialty Care Transport Unit
 - AI duPont Hospital for Children
 - St. Francis

Interfacility ambulance services can be used for the following types of 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.



Speciality Care

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Delaware Systems of Care

Submitted by Delaware Systems of Care

What is a System of Care?

A System of Care is an **inclusive**, statewide structure that incorporates **all** patients, **all** providers, and **all** facilities into an **all-encompassing** continuum of care. Each System implements evidence-based and data-supported standards to continuously improve this continuum.

Benefits of a System of Care

- Improved communication and collaboration among stakeholders.
- An organized approach to patient management throughout the continuum of care statewide.
- Patients receiving the same quality of care no matter where in the state they enter the system.
- Coordination of care, prehospital transport, and inter-facility transfer.
- System data to document incidence, availability of resources, and assure quality.
- A data-driven public education program targeted to high-risk populations.
- Improved patient outcomes.

Overarching Goals

- Reduce morbidity and mortality.
- Match resources with the needs of the patients.
- Get each patient to the right facility in the right amount of time.
- Preserve lives and livelihoods.
- Save healthcare dollars.

Systems of Care are Legislated

Delaware has four Systems of Care that are created and defined by Delaware State Code, Title 16, Part X, Chapter 97.

- Trauma System of Care – Enabling legislation: 1996
- Pediatric System of Care – Enabling legislation: 2012
- Stroke System of Care – Enabling legislation: 2016
- Overdose System of Care – Enabling legislation: 2018

Per legislation, the Division of Public Health Office of Emergency Medical Services, is responsible for the development, implementation, and maintenance of the Systems of Care.

Requirements for Each System

- **Oversight Committee:** Membership to reflect phases of care from prevention through rehabilitation.
- **Quality Evaluation Committee:** Identify areas for improvement and suggest changes to make those improvements.
- **Facility Designation Process/Committee:** Process to become designated by the state of Delaware and to advertise as a Delaware designated facility.
- **Specific System of Care Rules and Regulations:** Make up the specific system's plan.

Regulation Requirements per Legislation

- Prevention/Public Education
- Prehospital Care
- Hospital Care
- Rehabilitative Care
- Continuing Education/Training for Personnel/Providers
- System Evaluation

What it Means to Delawareans

Wherever an injury, stroke or overdose occurs to adults or children in Delaware, the Systems of Care provides timely access to a system that ensures optimal, equitable and accessible care throughout the entire continuum of care, from the time a patient enters the system, through their treatment and through their rehabilitation and recovery. *The right patient to the right facility in the right amount of time.*



The Delaware Trauma System of Care

Submitted by Sean Elwell, Chair

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 **voluntarily** participates in the Trauma System and has met the standards for American College of Surgeons

Committee on Trauma (ACS COT) verification and state designation as a Trauma Center. 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.

Current Delaware Trauma Center designations are:

REGIONAL LEVEL 1 TRAUMA CENTER – Christiana Care-Newark

PEDIATRIC REGIONAL LEVEL 1 TRAUMA CENTER - Nemours Children's Health

COMMUNITY LEVEL 3 TRAUMA CENTERS - Bayhealth Hospital, Kent Campus; Bayhealth Hospital, Sussex Campus; Beebe Healthcare; Christiana Care - Wilmington Hospital; Saint Francis Healthcare; Tidal Healthcare - Nanticoke; Peninsula Regional Medical Center (Salisbury Maryland) via reciprocity

Accomplishments

Trauma System of Care Committees and subcommittees are continuing to meet and are well attended. All legislated positions have been filled.

The Quality and Evaluation Committee is very active with review of trauma data and case studies at the quarterly meetings. One of quality improvement projects from this committee is the review of interfacility transfer data. A workgroup has been formed under Dr. Robert Rosenbaum's guidance, and the data is being broken down to determine if there are interfacility delays and if so, what are the potential causes.

With the inevitable sunset of the current trauma patient registry, a group of trauma system leaders and OEMS staff are looking at the options available to the state in purchasing and contracting for a new patient registry. There will be a considerable cost increase for this, and OEMS staff are looking into possible grants to offset the costs.

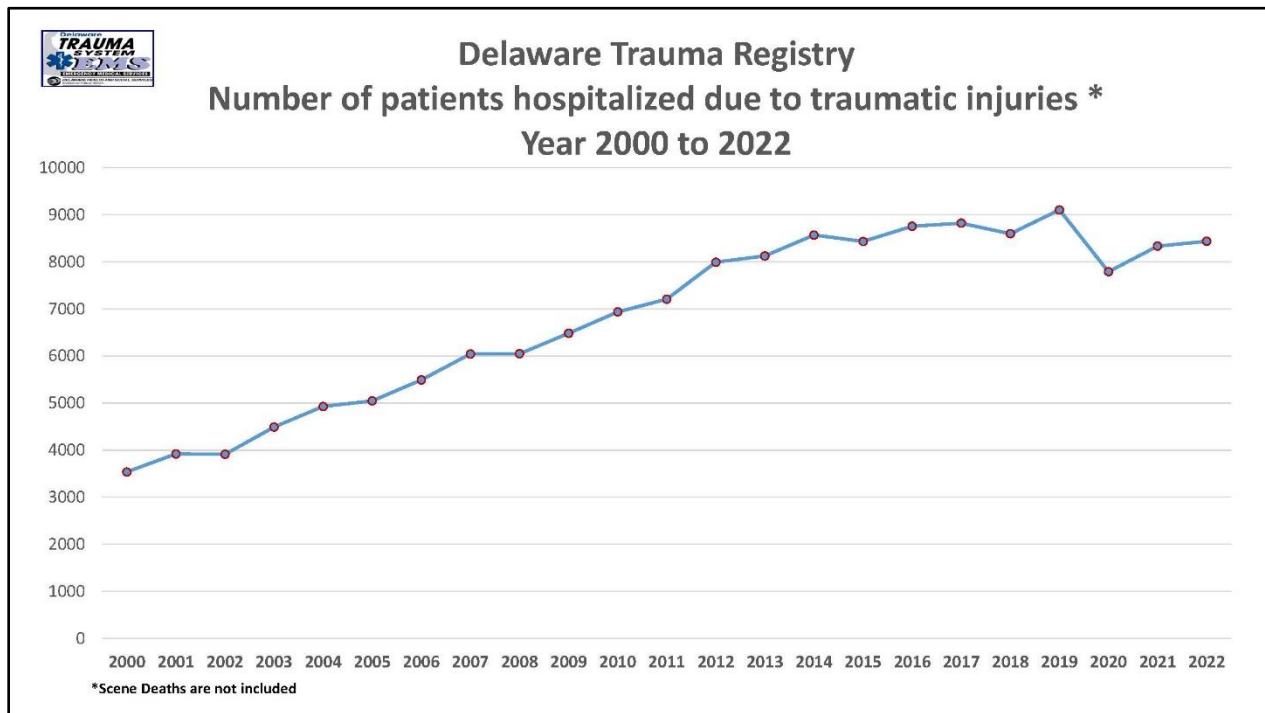
Trauma System and Regulations (Administrative Code 4305) have been approved and published.

Trauma System Committee Leadership, led by the Trauma System's Medical Advisor Dr. Kevin Bradley, has begun to advocate for public Stop the Bleed initiatives across the state.

Challenges

Trauma funding continues to be a major concern within the Trauma System. It is very difficult to determine the cost of trauma in Delaware. The Centers for Disease Control estimate that in 2019, the nationwide cost of trauma was \$4.2 trillion, with \$327 billion in medical care alone.¹ By comparing the number of 2019 trauma patients nationwide to the number of trauma patients in Delaware, this translates to an estimated cost of \$8.7 million for medical care alone. This does not include the costs of physical assets, personnel, lost wages, extended care, etc.

Interfacility transports, which is a key component of getting patients from one facility to a facility that provides a higher level of care, is facing several challenges of timely and appropriate transfers. This problem is being addressed through the Office of EMS and the Trauma System of Care.



Delaware Trauma Registry – 2022 Data (latest year with complete data)

¹ CDC MMWR Economic Cost of Injury – United States, 2019



The Delaware Stroke System of Care

Submitted by Stroke System Committee

The Delaware Stroke System of Care was created through enabling legislation passed in June 2016 (Title 16 Chapter 97). The Stroke System of Care has experienced significant growth. In addition to the Stroke System of Care Committee, there are several subcommittees and workgroups, including the Stroke System Quality Evaluation Subcommittee, Public Education Subcommittee.

The Delaware Vital Statistics Annual Report 2021 (Table F-30) lists Cerebrovascular Disease as the fourth leading cause of death in the state, causing 46.3 deaths per 100,000 population.

TABLE F-30. FIVE-YEAR AGE-ADJUSTED MORTALITY RATES FOR SELECTED CAUSES OF DEATH BY COUNTY, DELAWARE, 2017-2021						
LEADING CAUSES OF DEATH	AREA				NON-HISPANIC	
	DE	Kent	NCC	Sussex	White	Black
Malignant neoplasms	152.5	168.4	154.2	143.0	153.9	181.6
Diseases of the heart	148.4	176.1	145.7	138.4	148.9	168.6
Accidents (unintentional injuries)	69.9	67.2	70.7	72.8	80.5	67.7
Cerebrovascular diseases	46.3	47.7	54.3	33.9	43.3	65.5
Chronic lower respiratory diseases	35.7	45.7	34.6	32.8	38.9	29.6

Delaware Vital Statistics Annual Report 2021 (Table F-30)

The non-Hispanic black stroke mortality rate of 65.5 deaths per 100,000 population is 51.3 percent higher than the non-Hispanic white rate of 43.3 deaths per 100,000 population. Addressing these disparate rates is part of the mission of the Delaware Stroke System of Care.

Stroke is also a leading cause of death nationwide. The Center for Disease Control’s National Center for Health Statistics (NCHS) Data Brief, December 2022, page 4, lists stroke as the fifth leading cause of death nationwide at 41.1 per 100,000 population.

Delaware exceeds the national death rate by approximately 12%. The Stroke System of Care Quality Evaluation Committee has formed a workgroup to investigate the data to try to determine why.

The time of onset of symptoms to the time of treatment have a significant impact on the outcome of the stroke patient. Continued development of an organized Stroke System of Care will enable effective management of increasing patient populations with improved patient outcomes.

Delaware Stroke Centers are certified through The Joint Commission on Accreditation of Healthcare Organizations (TJC). Site visits occur every two years, with review of the entire hospital system for stroke care, including policies and protocols, medical resources, performance improvement program with stroke registry, and professional and public education programs. Per Delaware Code, any hospital that receives accreditation through The Joint Commission as a stroke

center are automatically designated as a Delaware Stroke Center. This differs from how Trauma Centers are designated.

COMPREHENSIVE STROKE CENTER - *Christiana Care – Newark Campus*

PRIMARY STROKE CENTERS - *Bayhealth Kent Campus, Bayhealth Sussex Campus, Beebe Healthcare, Christiana Care - Wilmington Hospital, Saint Francis Healthcare, and Tidal Health – Nanticoke.*

Accomplishments

All Stroke Centers in Delaware have been recognized by the American Heart Association and have the highest available AHA Stroke awards (Gold Plus Achievement). [The Road to a Healthy Heart Starts Here \(usnewsbrandfuse.com\)](https://www.usnewsbrandfuse.com)

Both Advanced Life Support and Basic Life Support agencies have implemented a stroke score to identify large vessel occlusion (LVO - a major type of stroke), to provide timely and direct transport to a stroke center with the resources to handle an LVO. This has resulted in several cases where a stroke patient after being flown to Christiana Care has made a full recovery due to the timely administration of brain tissue saving treatment!

New Stroke Regulations have been completed and should be approved in March 2024.

Challenges

Interfacility transports, which is a key component of getting patients from one facility to a facility that provides a higher level of care, is facing several challenges of timely and appropriate transfers.

The Quality Evaluation Subcommittee is working to get data for Delawarean stroke patients who have been transported outside of the state.

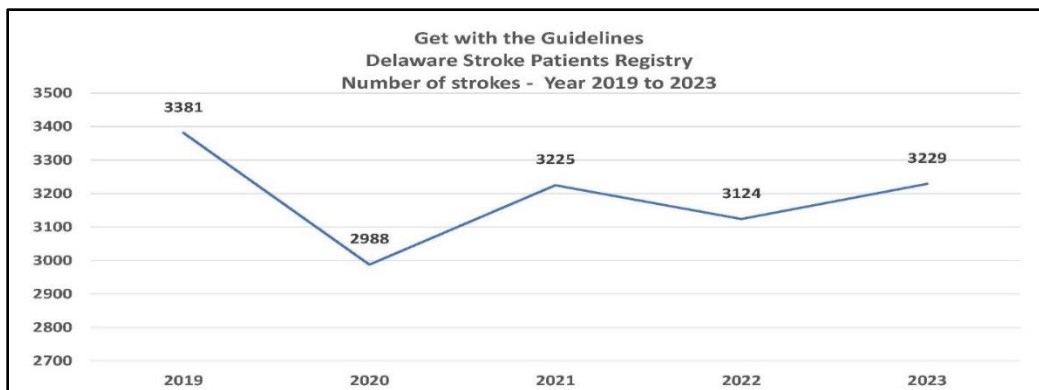
Stroke Numbers

In 2023, there were 3229 patients entered into the Get with The Guidelines Delaware Stroke Patient Registry.

Age: 67% > 66 years old

Sex: 48% male, 52% female

Race: 67.6% White, 25.9% Black, 3.1% Hispanic



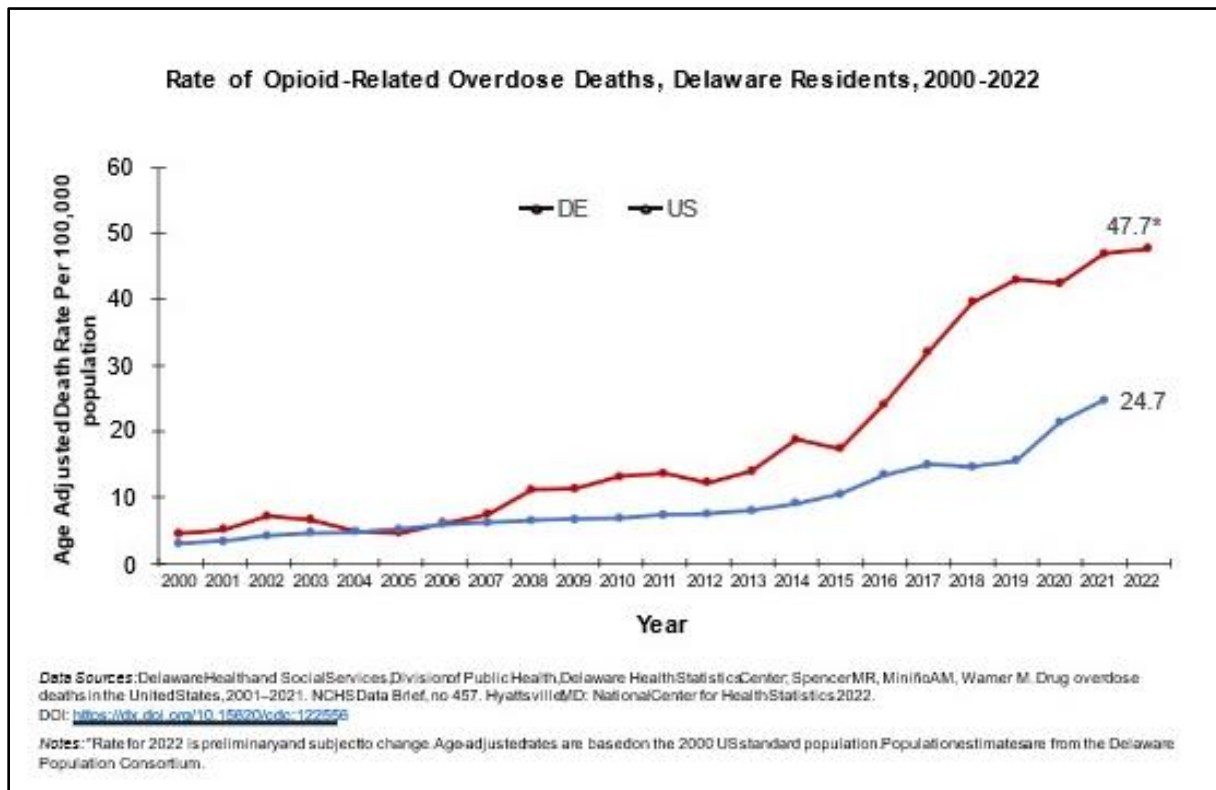
AHA Get With The Guidelines - Delaware Stroke Registry



Delaware Overdose System of Care

Submitted by Rebecca Walker & Joanna Champney: Co-chairs

Delaware overdose deaths are continuing to exceed the national average. The data obtained from the Delaware Health Statistics Center and the National Center for Health Statistics show that the national age adjusted death rate per 100,000 population is 24.7. Delaware's age adjusted death rate per 100,000 population is 47.7, nearly double of the national death rate.



Delaware Health Statistics Center and the National Center for Health Statistics, 2001-2021

Accomplishments

2023 was a busy year for the Overdose System of Care as the committee and its subcommittees search for ways to reduce these numbers and serve overdose patients in Delaware. Some of the accomplishments seen in 2023 include:

- Established referral pathways to treatment providers and provided those pathways to EMS and Emergency Departments to assist an overdose patient in contacting a provider for MOUD if they desire.

- All three county EMS agencies have implemented buprenorphine (an MOUD) initiation to patients that have experienced an overdose and have been resuscitated with naloxone.
- A quarterly Quality Evaluation Process to evaluate OSOC's work in responding to this crisis was developed and the first sessions started in August. The QE process is modeled after the other Systems of Care QE processes and involves case studies and data review.
- ODMAP, a mapping tool that shows close to real-time locations of overdoses, was integrated using data from the Division of Forensic Science, Delaware Office of EMS and law enforcement agencies. This will allow specific response partners to identify hot spots or areas of a sudden increase in overdoses to allow for rapid deployment of resources.
- Focusing on targeted distribution to networks, friends and family of individuals who have experienced non-fatal overdoses, over 31,000 naloxone kits were distributed over a 12-month period, ending Q3 of 2023.
- Continued identifying and working with transportation partners to support transportation to and from MOUD and related appointments in rural areas.
- Expanded awareness of the Delaware Libraries' teleservice booths to connect individuals with treatment and support services in Sussex County.
- Increased distribution of naloxone and Deterra bags as tools to reduce overdoses and overdose deaths. Deterra bags provide a person with a means to dispose of unused medications by making them inert.

Challenges

While death rates in Delaware remain high, we anticipate a slight reduction for 2023 to be announced by the Delaware Department of Safety and Homeland Security, Division of Forensic Science. Fentanyl is the leading cause of overdose deaths, being present in 87.5% of all overdose deaths, per the Division of Forensic Science.

One of OSOC's biggest challenges is to determine if actions that are being taken to curb overdose deaths is making a difference. The data is hard to compile due to privacy and multiple data sources that are required to gather the data.

The Overdose System of Care remains committed to abatement and response efforts, to further reduce overdoses and overdose deaths in Delaware.



Emergency Medical Services for Children

Each year, approximately 30 million children are evaluated in emergency departments (EDs) in the United States. Children account for approximately 10% of all Emergency Medical Services (EMS) transports. Since the needs of children treated in the prehospital setting are different from those of adults, prehospital care providers must have appropriate equipment and training, along with safe and effective protocols to treat children (Foltin, G. L., Dayan, P., Tunik, et al. 2010. Priorities for pediatric prehospital research. *Pediatric emergency care*, 26(10), 773-777).

Children account for nearly 25% of ED patients, and the vast majority are not seen in children's hospitals (Institute of Medicine Committee on the Future of Emergency Care in the US Health System. 2006. Hospital-based emergency care: at the breaking point). While as many as 50% of U.S. hospitals see fewer than 10 pediatric patients per day, all hospitals can and should be pediatric ready (Remick, K., Snow, S., & Gausche-Hill, M. 2013. Emergency department readiness for pediatric illness and injury. *Pediatric emergency medicine practice*, 10(12), 1-13).

The Delaware Emergency Medical Services for Children (EMSC) program supports a high-quality emergency care system that provides optimal care for ill and injured children. It implements and evaluates the EMSC Performance Measures as directed by the U.S. Department of Health Resources and Services Administration (HRSA). Delaware was awarded its first EMSC grant in 1997 from HRSA's Maternal and Child Health Bureau and has been granted in 5-year increments since its inception.

The Delaware EMSC Advisory Committee is chaired by a pediatrician who advises on program development and represents the EMSC program on the Delaware Emergency Medical Services Oversight Council (DEMSOC). EMSC promotes the medical home concept and encourages cultural diversity and cultural competency in the health care workforce. In addition, EMSC plans methods of integration of EMSC priorities into statutes, regulations, and everyday health care practice.

2023 Accomplishments

In 2023, the EMSC Program focused specifically on the following EMSC metrics and surveyed 100% of all EMS agencies in partnership with the EMSC Data Center:

EMSC metric 02: A PECC (PEDIATRIC EMERGENCY CARE COORDINATOR): The percentage of EMS agencies in the state or territory that have a designated individual who coordinates pediatric emergency care.

There survey data for this metric increased significantly, from 60% in 2022 to 85.7% in 2023.

EMSC metric 03: The percentage of EMS agencies in the state or territory that have a process that requires EMS providers to physically demonstrate the correct use of pediatric-specific equipment. The EMSC has educated the agencies of the importance of a PECC representative and pediatric equipment training.

The survey data for this metric increased significantly, from 26.5% in 2022 to 47.6% in 2023.

Delaware has added another facility to the Pediatric Recognition program. In April 2023, South Coastal of Beebe Healthcare in Frankfort Delaware, was added to the program as a Level IV. Delaware maintains 100% participation in the pediatric recognition program with all 11 hospital facilities in Delaware maintaining or receiving pediatric recognition status.

The EMSC program has resumed in-person simulation Pediatric skills trainings with Nemours Children's Hospital to aid in meeting metric EMSC 03.

The EMSC Quality Program has collected pediatric quality indicator data from the hospitals, including ED documentation. Along with the hospital who is assigned to providing the case study, the EMS providers' perspective was added to capture patient transport to the hospital. Prehospital services are included at the quality indicator meetings.

The Advisory Committee has discussed and is in the infancy stages of creating a Prehospital Pediatric Recognition program. A subcommittee of the EMSC manager, Advisory chair, and each county PECC has scheduled meetings in early 2024 to assess progress.

2024 Challenges and Goals

The goals of the Delaware EMSC program are to ensure continuous improvement of the state EMS System by integrating EMSC priorities into all aspects of that system. The program's goals are to:

1. Provide pediatric specific training of pre-hospital and hospital staffs.
2. Ensure ED's and ambulances have essential pediatric equipment.
3. Monitor the timely and safe transport and transfer of pediatric patients within the Pediatric System.

It is vital to maintain a system that is prepared to provide optimal care for pediatric patients statewide. Through continued partnership and coalition-building, the Delaware EMSC Program will achieve and sustain its goal of assuring optimal emergency care for all children in the state. The Program will continue implementing Metrics 1.0 to 3.0 per the National Pediatric Readiness Project this year, and to have all agencies complete EMSC data center surveys.

Delaware will be accepting 10 out of 11 facilities recognition applications by January 2024. The EMSC Program will complete facility site visits between March and April 2024 to meet the three-year recertification deadline. Delaware has a new facility, Bayhealth Totalcare in Milton Delaware, that will apply in July 2024 for pediatric recognition. Its site visit will be in late summer 2024, for a total of 12 facilities that will be expected to maintain 100% facility pediatric recognition. The Delaware EMSC's goal is to fully implement a prehospital pediatric recognition program with a minimum target of 10% of Delaware's EMS agencies to be recognized in 2024. This is to meet HRSA's EMSC metric 2.1: 10% of prehospital EMS agencies recognized through a statewide, territorial, or regional standardized program that can stabilize and/or manage pediatric emergencies.

Summary

Delaware EMSC is proud of its 2023 successes. Despite a high turnover in pediatric emergency care coordinators at most of the facilities that impacted all areas, the hospital leadership supported the EMSC Program. Although EMSC has made great progress over the years, much remains to be done to ensure children consistently receive optimal emergency care. Through its programs and projects, the EMSC program will continue to aid in reducing death and disability of children in Delaware.



Delaware Organ and Tissue Donor Awareness Board (OTDAB)

Submitted by OTDAB members

Created by Delaware Code, Title 16, Chapter 27, Anatomical, Gifts and Studies, Section 2730, this Governor-appointed Board has the responsibility of promoting and developing organ and tissue donor awareness educational programs in Delaware. These programs include various types of public education initiatives aimed at educating residents about the need for organ and tissue donation and encouraging them to become designated organ donors through the state driver's license or identification card program.

Accomplishments

Since 2019, the Delaware Organ and Tissue Donor Awareness Board has established a program to encourage high school students to create videos promoting organ donor awareness. OTDAB arranges for the program to be advertised and promoted and it also arranges for the videos to be collected, viewed, and judged. Up to \$5000.00 are awarded each year, with a minimum of one winner per county.

As of January 2024, there are 435,310 (49.68%) Delawareans with organ donor designation currently registered through the DMV in Delaware. This is 6,987 more Donor Designations than 2022.

2022 Registered Organ Donors per DMV

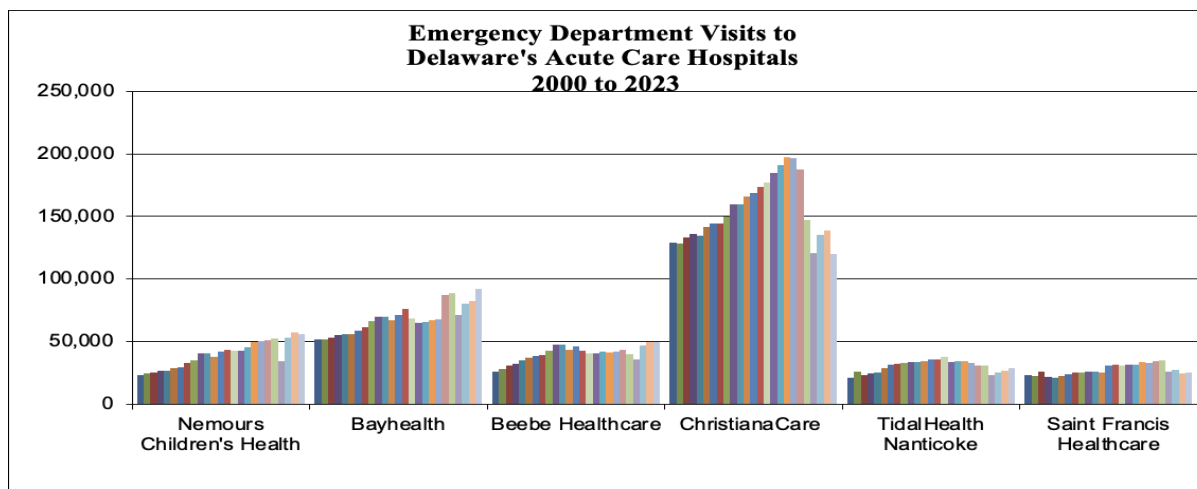
County	Total	Donor Designations	Percentage (%)
New Castle	480,835	232,066	48.26
Sussex	241,672	131,178	54.28
Kent	153,751	72,066	46.87
Total DL/ID	876,258	435,310	49.68

Delaware Division of Motor Vehicles, Office of Driver and Vehicle Services

Delaware Healthcare Association

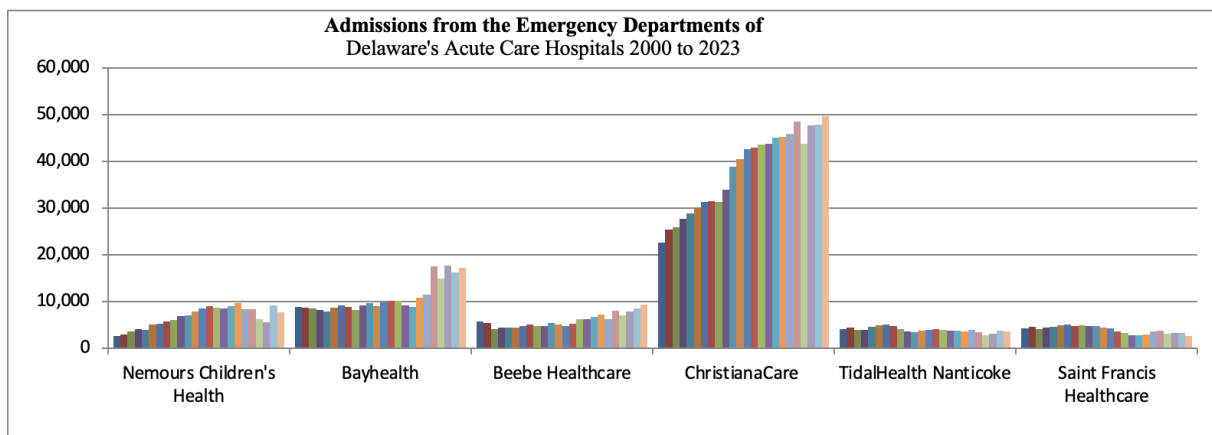
As Submitted by Megan McNamara Williams

Information provided by the Delaware Healthcare Association indicates there were 371,743 visits to the Delaware acute care hospital emergency departments in 2023, which is an increase of 97,212 (35.41 %) hospital emergency department visits statewide from the same period in 2000.



Of note, there was a decrease of 1.8% in visits to our Delaware hospital emergency departments from 2022 to 2023 (378,424 vs 371,743).

In addition, there were 89,943 patient admissions from the emergency department for 2023, an increase of 41,931 (87.34%) from the same period in 2000.



Of note, there was an increase of 1.6% in admissions from our Delaware hospital emergency departments from 2022 to 2023 (88,553 vs 89,943).

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NEW CASTLE COUNTY EMERGENCY MEDICAL SERVICES 2023 ANNUAL REPORT



2023 Data Submitted by Chief Mark R. Logemann
"Our Mission is Your Life"



OVERVIEW

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

The New Castle County Emergency Medical Services Division 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” to be nationally accredited by the Commission on Accreditation of Ambulance Services (CAAS).

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

In 2023, New Castle County EMS deployed nine (9) full-time paramedic units during its high call volume period during the day and eight (8) full-time paramedic units during non-peak operating hours at night. The EMS Division field supervision includes two (2) Paramedic Sergeants on a 24-hour basis. An EMS Lieutenant serves as the shift commander on a 24-hour basis. Both Paramedic Sergeants and the on-duty EMS Lieutenant are equipped as advanced life support responders. No part-time personnel were utilized in 2023.

Our personnel strive to demonstrate their commitment to our motto “*Excellence in Service*” each and every day, because “*Our Mission is Your Life.*”

Further information regarding the New Castle County Paramedics is available on our web site at: ems.newcastlede.gov, or follow us on [Facebook](#) (@NCC.Paramedics) and [Instagram](#).



ORGANIZATION

The Emergency Medical Services Division is a component of the New Castle County department of Public Safety with the Chief of Emergency Medical Services reporting to the Director of Public Safety, who is appointed by the County Executive. The service is divided into two main components: The Operations Branch and the Administration/Special Operations Branch. Each branch is commanded by an Assistant Chief. The Operations Branch is primarily responsible for the delivery of pre-hospital care, and consists of four shifts, or platoons, that provide 24-hour service on a rotating shift schedule. The Administration/Special Operations Branch is primarily responsible for the support services component of the agency, including Recruitment and Applicant Processing, System Improvement, Training/Continuing Education, Fiscal Management, Logistical Support and Procurement.

EMERGENCY MEDICAL SERVICES DIVISION STAFF



Chief Mark R. Logemann
Chief of Emergency Medical Services Division



Assistant Chief Christopher A. Johnson
Commander, Administration/Special Operations



Assistant Chief Kelli A. Starr-Leach
Commander, EMS Field Operations



Lieutenant Isaac J. Hankins
Commander, EMS Platoon 1



Lieutenant Matthew W. Watson
Commander, EMS Platoon 2



Senior Lieutenant Joseph J. Dudley
Commander, EMS Platoon 3



Lieutenant Abigail E. Haas
Commander, EMS Platoon 4



Lieutenant David B. Aber
Office of Training & Continuing Education



Lieutenant Peter T. Small
Office of System Improvement



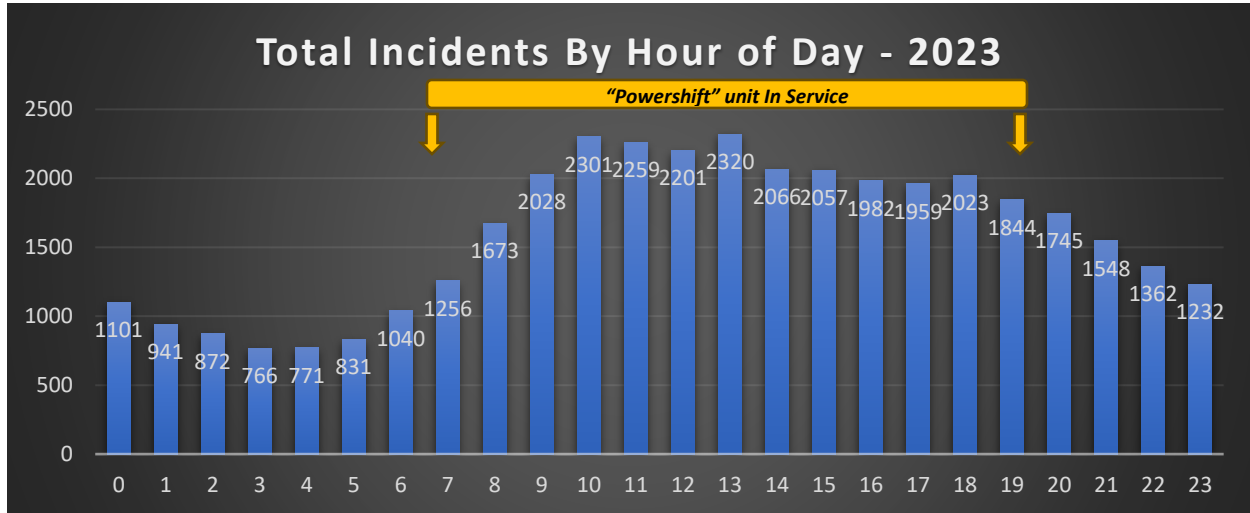
Senior Lieutenant Michael A. McColley
Recruitment, Applicant Processing, Academy



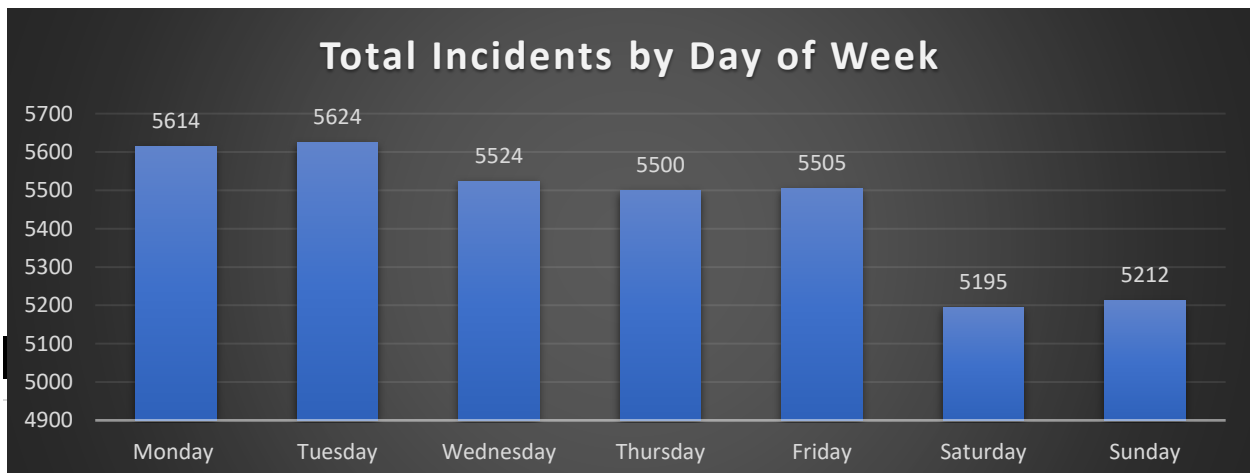
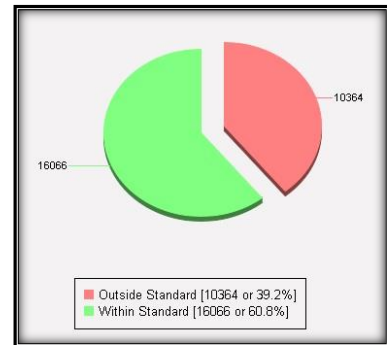
Senior Lieutenant Michael R. Nichols
Office of Support Services

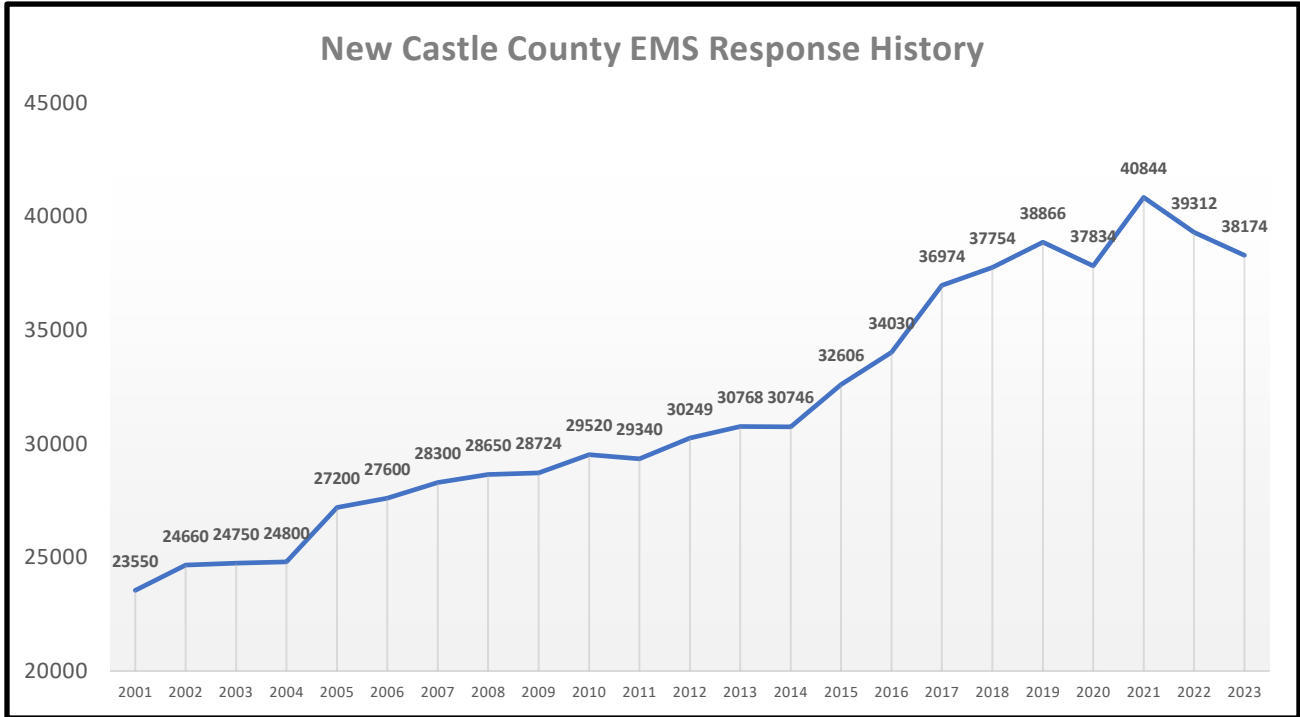
OPERATIONS

New Castle County EMS has a clearly defined call volume pattern that begins to increase at approximately 0700 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. Additional paramedic units have been placed in service for special circumstances, including inclement weather conditions and other events that could potentially impact paramedic service delivery in New Castle County.



The New Castle County Paramedics responded to **38,174** total incidents during calendar year 2023 with a paramedic unit arriving on scene 60.8% of the time in 8:59 or less, regardless of the incident priority. Many of the incidents involved a response by more than one New Castle County paramedic unit due to multiple patients or complicated circumstances. A total of **57,279** paramedic unit responses were noted throughout the year. Paramedic “responses” are higher than incidents due to multiple paramedic units responding to one single incident at times of significant incidents.



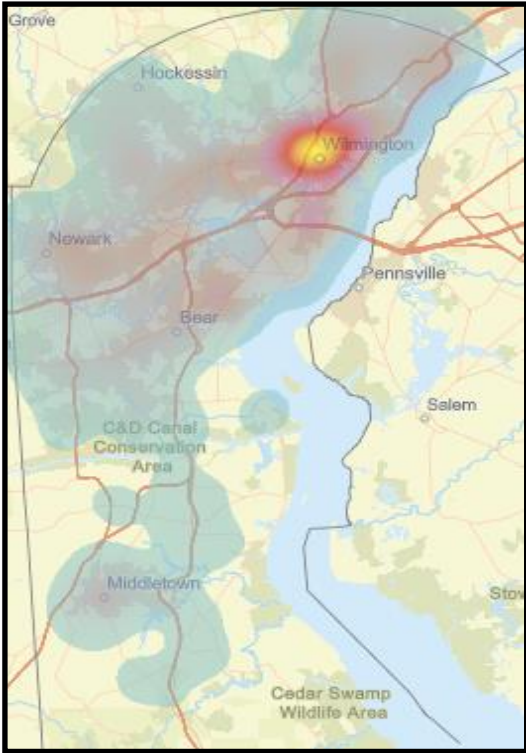


<u>2023 TOTALS:</u>	
Incidents	38,174
Responses	57,279
Transports	18,025

Over the past two years, New Castle County EMS has seen a **6.5% decrease in call volume**. Recent decreases in volume have been attributed to the changes in PMD responses resulting in a “BLS only” response to certain identified “Charlie” and “Delta” level responses which had few advanced life support transports.

New Castle County EMS continues to see more incidents occurring within densely populated areas of the county to include the City of Wilmington, Newark, Bear and the Middletown areas.

Paramedic unit deployment and station location identification have been focused on these highly populated areas and locations of increased paramedic responses.



2023 PARAMEDIC UNIT RESPONSES

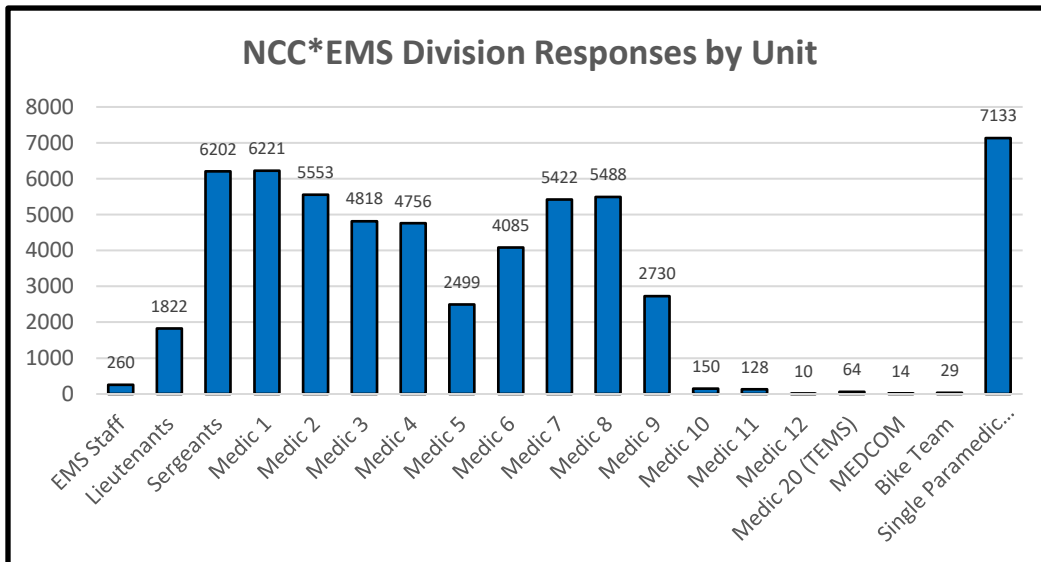
NCC*EMS Division Responses <i>(January 1 to December 31, 2023)</i>	
EMS Senior Staff	260
EMS Lieutenants	1822
EMS Sergeants	6202
Medic 1 (Wilmington)	6221
Medic 2 (New Castle)	5553
Medic 3 (Newark)	4818
Medic 4 (Brandywine 100)	4756
Medic 5 (Middletown)	2499
Medic 6 (Glasgow)	4085
Medic 7 (Prices Corner)	5422
Medic 8 (Wilmington)	5488
Medic 9 (12 hour/day unit)	2730
Medic 10 (as staffing permits)	150
Medic 11 (Special Duty)	128
Medic 12 (Special Duty)	10
Medic 20 (Tactical EMS Team)	64
MEDCOM	14
Bike Team	29
Single Paramedic Responses	7133
TOTAL RESPONSES	57277

A number of paramedic units may make a paramedic response to any incident, stand-by, or special request for paramedic service.

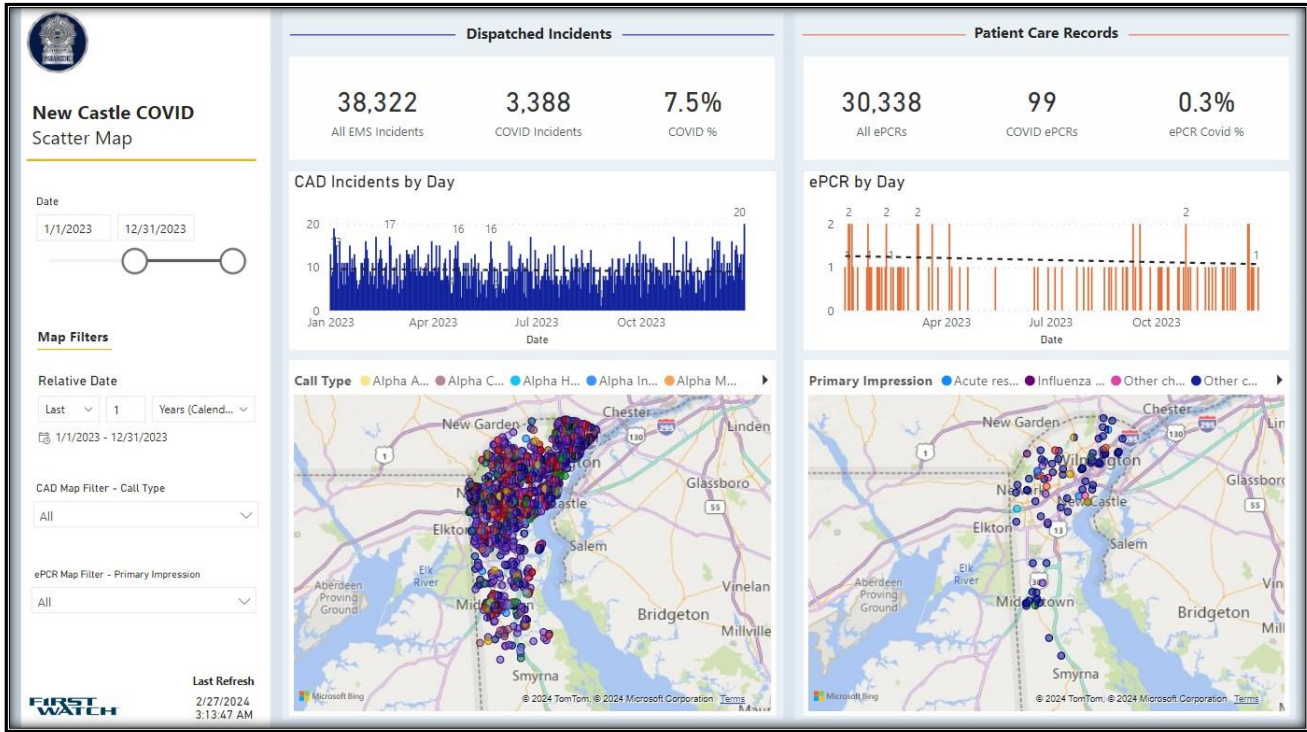
EMS Senior Staff consists of the senior leadership of the organization to include Chief, Assistant Chief and Captain. Sergeants and Lieutenants serve at the shift supervisors and oversee all field paramedic units in daily operations. Medic 10 is a supplemental operational unit that is placed in service when staffing permits.

Medics 11 & 12 include special events. Medic 20 is staffed with TEMS certified paramedics and supplements the New Castle County SWAT Team on missions. MEDCOM is a medical and communications unit that is staffed on large scale incidents or special events. The Bike Team also covers special events when necessary.

Single paramedic responders are used when the paramedic partner is transporting to a hospital or when additional staffing permits.



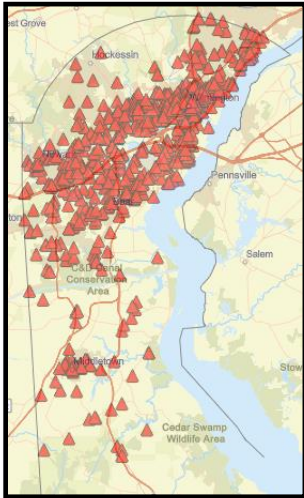
2023 COVID-19 REPSONSES IN NEW CASTLE COUNTY



The above charts represent a comparison between number of incidents dispatched with COVID precautions, as compared to patient care records that the paramedic indicated signs and/or symptoms of suspected COVID or positive diagnosis. New Castle County Paramedics continue to maintain airborne droplet precautions during all patient contacts due to the continued potential of airborne illness exposure to all employees. Of the 3,388 incidents for which suspected COVID-19 was a dispatch concern, only 99 of those incidents (2.9%) were found by paramedic responders to be related to a COVID-19 diagnosis.

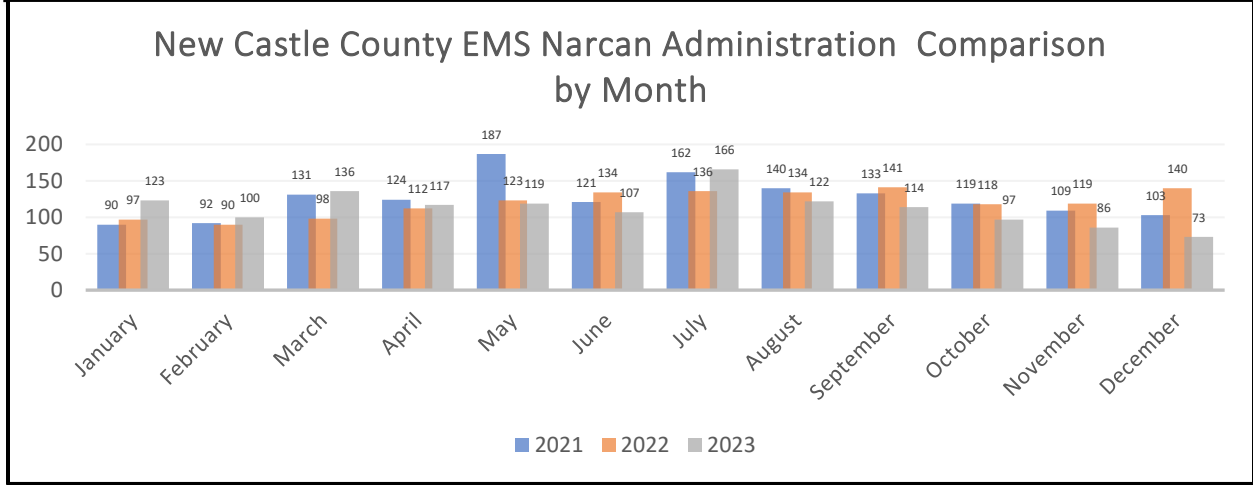
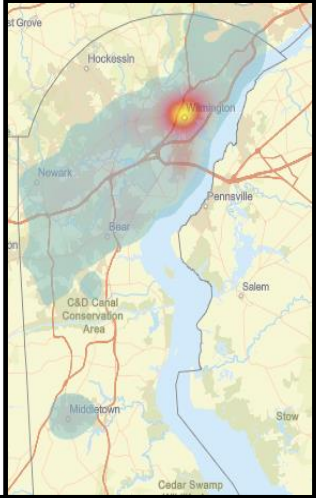


2023 USE OF NARCAN AND SUSPECTED OPIATE OVERDOSE

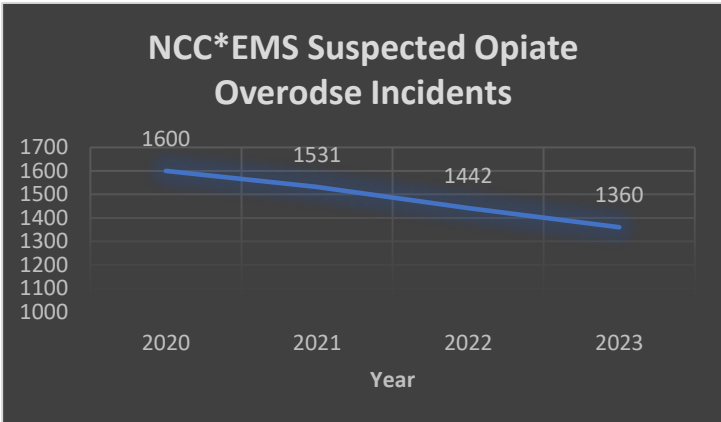


The administration of Naloxone (Narcan) is used by New Castle County EMS as an indicator for possible opiate overdose call type.

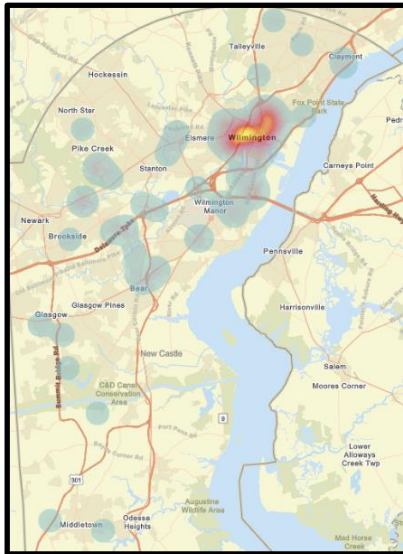
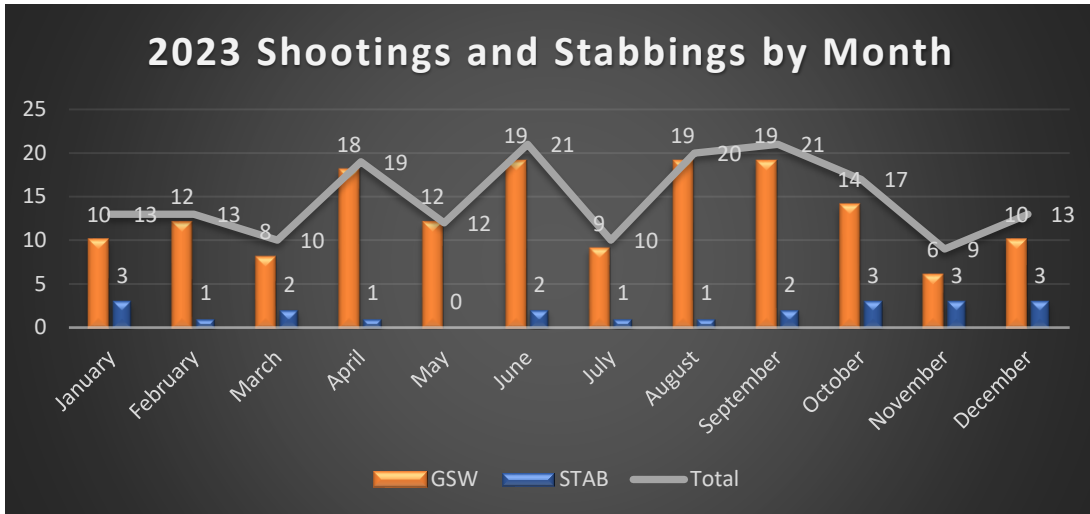
New Castle County Paramedics responded to 1,360 incidents in 2023 of suspected opiate overdose compared to 1,442 incidents in 2022. There has been a 15% decrease in Narcan administration in New Castle County since 2020.



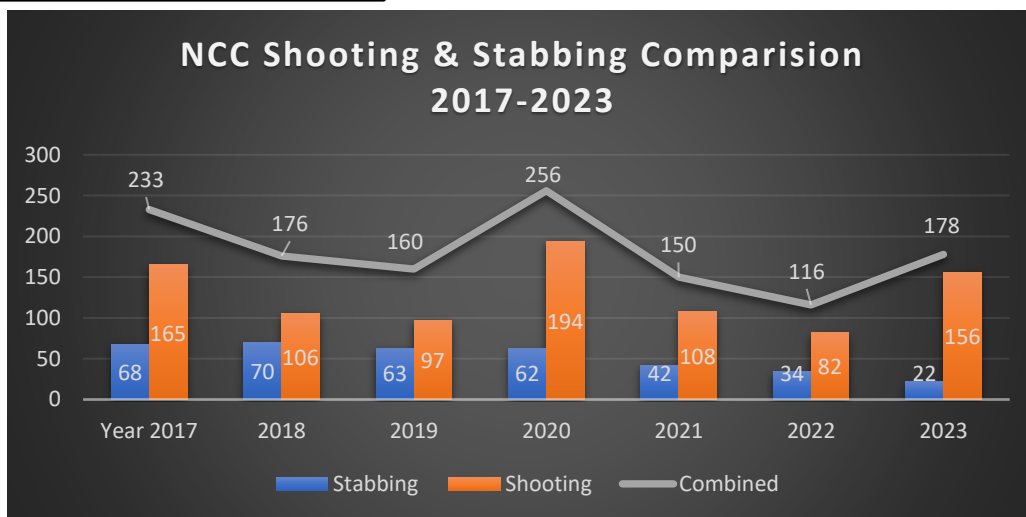
Pre-Hospital Buprenorphine: On April 28, 2023, New Castle County EMS began a pilot program modeled after Camden, County, New Jersey where patients are given an option of receiving the opioid use disorder medication, buprenorphine, in addition being entered into treatment. Through a partnership with the Delaware Division of Public Health, Office of Emergency Medical Services, Brandywine Counseling, and CORAS (Championing Optimal Recovery Advancing Self-Sufficiency), patients are given an “open door” to follow-up treatment within twenty-four hours. Twenty-six patients were administered buprenorphine in 2023 through this pilot program.



2022 PENETRATING TRAUMA INCIDENTS



Penetrating trauma continues to be a significant portion of the trauma patients treated by paramedics in New Castle County. New Castle County EMS saw a dramatic increase in penetrating trauma call types in 2023 as compared to the previous year. The number of shooting incidents increased 47% while the number of stabbing incidents decreased by 35% as compared to the same incident types in 2022. The total number of penetrating trauma incidents increased by 35%. Heat maps show the concentration of penetrating trauma victims from the City of Wilmington, Bear, western Newark areas, New Castle, and the Pike Creek areas. The New Castel County EMS Community Outreach Team will an effort in 2024 to expand its reach by including “Stop the Bleed” in its cadre of outreach programs.



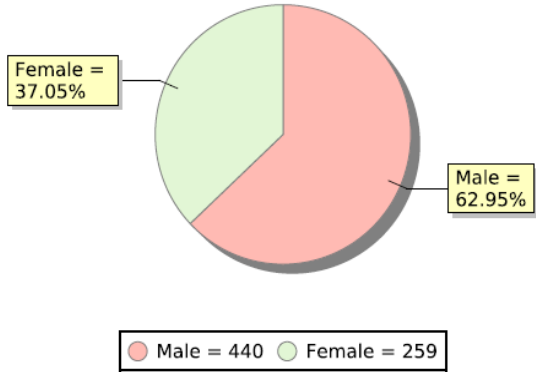
CARDIAC ARREST DEMOGRAPHICS / 2023 CARES DATA

Demographics

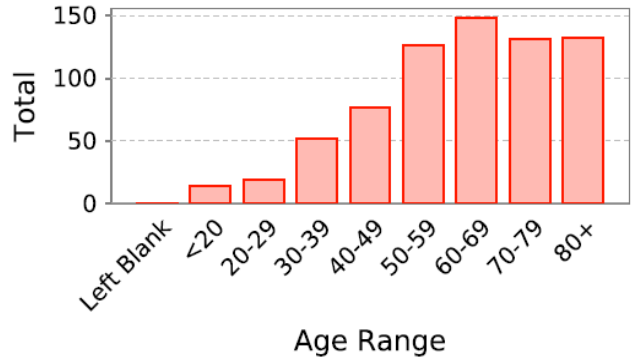
New Castle County EMS

Presumed Cardiac Arrest Etiology: Presumed Cardiac Etiology, Respiratory/Asphyxia, Drowning/Submersion, Electrocutation, Other, Drug Overdose, Exsanguination/Hemorrhage | Date of Arrest: 01/01/23-12/31/23 | Resuscitation Attempted by 911 Responder: Yes | End of the Event: Pronounced in the Field, Pronounced in the ED, Ongoing Resuscitation in ED

Gender



Age



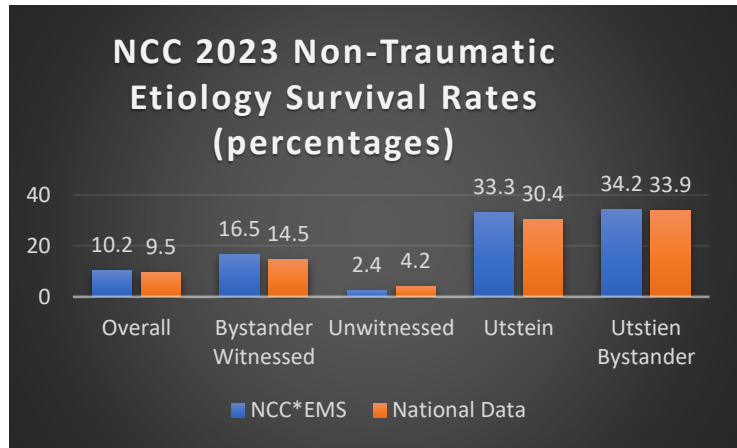
Mean Age: 61

Location Type	Count
Home/Residence	458 - 75.1%
Nursing Home	50 - 8.2%
Public/Commercial Building	43 - 7.1%
Street/Hwy	32 - 5.3%
Healthcare Facility	13 - 2.1%
Place of Recreation	9 - 1.5%
Industrial Place	4 - .7%
Other	1 - .2%

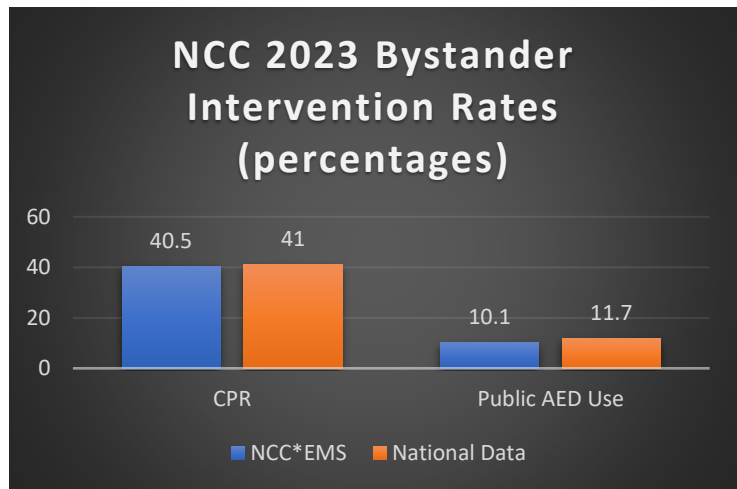


SUDDEN CARDIAC ARREST SURVIVABILITY

High Sudden Cardiac Arrest Survivability: New Castle County EMS continues to see a high percentage of sudden cardiac arrest survival with positive outcomes continuing to be above the national average in all areas. Overall survivability from sudden cardiac arrest is above the national average. If a bystander witnesses the sudden cardiac arrest, New Castle County sees a 2% higher survivability rate than the national average. Higher numbers when a bystander witnesses the arrest can be attributed to the robust community outreach CPR program of the New Castle County EMS Division.



Bystander Intervention Rates: The rate at which a bystander chooses to act and provide life-saving chest compressions continues to be below the national average. This problem was named one of the goals of the New Castle County EMS Division for 2024. The EMS Division has hired a part-time community outreach coordinator and added a Community Health Fellow from the AmeriCorps organization to increase the awareness, number of programs, outreach, and public participation with hands-only CPR programs and public AED use. The increased awareness of the PulsePoint app and dispatcher assisted CPR are additional areas identified to assist with improving the bystander intervention rates in New Castle County.



Hands-Only CPR Programs: New Castle County has a part-time community outreach coordinator and AmeriCorps Community Health Fellow who oversee community outreach initiatives which include Hands-Only CPR programs. This individual works with an internal core work-group of hands-only CPR instructors who travel throughout the county teaching non-certification programs to those in our communities to increase awareness and knowledge of this life-saving skill.



Sudden Cardiac Arrest Survivor Reunion: New Castle County EMS held its 11th annual Sudden Cardiac Arrest Survivor Reunion on May 17, 2022, at the Cab Calloway School of the Arts in Wilmington. This annual event brings together sudden cardiac arrest survivors with the bystanders, 911 call takers and all first responders who assisted in their care and successful resuscitation. 34 cases where a patient received a cerebral perfusion score of “1” (no neurologic deficit and no rehab required) after suffering a sudden cardiac arrest were recognized.



Mission Lifeline: New Castle County EMS received the 2023 Mission Lifeline Gold Plus Recognition. This achievement is presented through the American Heart Association and given to agencies that demonstrate strict adherence to clinical guidelines to support better outcomes for all cardiac patients. 1% of EMS agencies in the country are awarded with this recognition.



Cardiac Arrest Survivor Meet and Greets:

Paramedics continue to meet with patients and their families following successful cases. In March of 2023 paramedics met and spent time with Mrs. Jacqueline DelCampo, a cardiac arrest survivor. Mrs. DelCampo suffered a sudden cardiac arrest at her church. Members of church staff were trained in “hands-only” CPR by NCC Paramedics, just one week prior to Mrs. DelCampo’s sudden arrest while leaving the church. She was resuscitated by paramedics and walked out of the hospital with no neurologic deficit. Mrs. DelCampo reunited with the church staff, EMTs and Paramedics to thank them for saving her life.

The Delaware Resuscitation Academy: New Castle County EMS has committed to host and coordinate the Delaware Resuscitation Academy held three times a year. Two events are open to any provider in the region, with the third conducted as part of the paramedic training academy. The Resuscitation Academy’s mission is to improve survival from cardiac arrest through a fellowship program designed specifically for EMS Providers, Managers, Directors and EMS Medical Directors. The Delaware Resuscitation Academy models itself after the Seattle Resuscitation Academy. Lecture modules and hands-on skill stations with feedback mannequins make for a stimulating learning environment. Participants will gain an understanding of the science behind high-performance CPR, performance measures, and the knowledge, skills, and abilities to increase survival.



PulsePoint App: New Castle County EMS continues to provide funding for the PulsePoint app in an effort to increase bystander intervention rates to those in sudden cardiac arrest. New Castle County has the PulsePoint Foundation app available for free. Pulse Point will alert those nearby in the event of a sudden cardiac arrest in a public setting. The Pulse Point app will also direct bystanders to the nearest AED. There are currently 12,511 users of the PulsePoint app in New Castle County. Download the app today and help save a life!

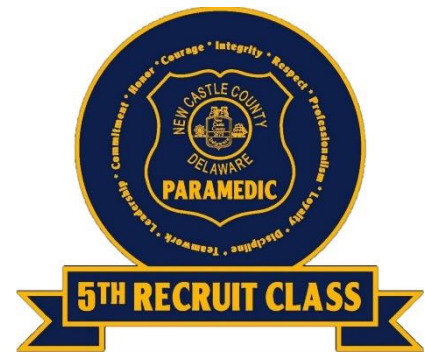
PARAMEDIC ACADEMY TRAINING

4th New Castle County Paramedic Academy:

The 4th New Castle County Paramedic Academy was hired in January of 2022 and underwent a 13-month paramedic program at the Good Fellowship Ambulance and EMS Training Institute in West Chester, Pennsylvania. A graduation event was held on February 22, 2023 at an event held on the University of Delaware’s STAR Campus. The academy was supervised by two New Castle County paramedics: Paramedic Supervisor Sergeant Allen C. Short and Paramedic Academy Coordinator Sergeant Laura E. Hill. 336 applicants applied for the position of “entry-level” paramedic academy applicant and 18 were selected for the program. All 18 successfully completed the paramedic program and obtained National Registry Paramedic certification. Fourteen completed field training and obtained Delaware Paramedic licensure and are currently working on paramedic units in New Castle County.



5th New Castle County Paramedic Academy: The 5th New Castle County Paramedic Academy was hired on March 6, 2023, and underwent a 13-month paramedic program. The academy was supervised by two New Castle County paramedics; Paramedic Supervisor Sergeant Laura Hill and Paramedic Academy Coordinator Corporal William Doan. 369 applicants applied for the position of “entry-level” paramedic academy applicant and 19 were selected for the program. Seventeen successfully completed the paramedic program and obtained National Registry Paramedic certification. The paramedic program is held at the Good Fellow EMS and Training Institute in West Chester, Pennsylvania. A graduation ceremony is set for early 2024. Recruits will then participate in field training to obtain Delaware Paramedic licensure to become State of Delaware paramedics.



RECRUITMENT INITIATIVES

Recruitment Events: The EMS Division’s application process and recruitment office remained busy throughout the year. The EMS Division has field providers who also serve as “Assistant Recruiters”. These individuals are responsible for recruiting applications for the NCC*EMS Paramedic Academy in addition to pre-certified applicants. Recruitment initiatives throughout 2023 included a continued partnership with Saint George’s Technical High School where students shadow paramedics, Wilmington Police Community Outreach programs, visits to local high school medical technology programs, National Night Out, NCC Public Safety Christiana Mall recruitment event, Delaware State Fair, CODE EMS Conference, multiple First Responder Appreciation events and multiple paramedic program visits throughout the east coast.



6th New Castle County Paramedic Academy: The recruitment and hiring process for the 6th New Castle County Paramedic Academy took place from June through October of 2023. Eight information sessions were held throughout the summer and fall months both in person and virtually. Throughout the recruitment process over 350 applications were submitted for the 6th New Castle County Paramedic Academy Class. Thirteen paramedic academy recruit applicants were given tentative offers of employment and will begin the 6th New Castle County Paramedic Academy in May of 2024.



COMMUNITY OUTREACH

Community Outreach Team: New Castle County EMS has a Community Outreach team comprised of a dedicated part-time Community Outreach Coordinator, a volunteer Community Health Fellow from AmeriCorps, and a group of dedicated field providers. These individuals work together to oversee all of the division’s community outreach efforts. Currently, programs include EMS awareness, the NCC*EMS Vial of L.I.F.E. program, Paramedic Assist Class, Hands Only Community CPR, PulsePoint, Smart911, youth education, and many more.

Community Outreach Events: In 2023, New Castle County EMS participated in multiple community outreach events educating and promoting programs. These programs included NCC Police Youth Academy, Hands Only CPR programs, BLS Education Outreach Programs, BLS Paramedic Assist Programs, Community Resource Fairs, Elementary School Book Readings, National Night Out Events, and Police and Paramedic Summer Youth Camp, Thanksgiving food basket assemblies.



- 2023 Programs**
- 32 Hands Only CPR Programs
 - 21 Vial of L.I.F.E. / Pulse Point Programs
 - 12 Wilmington Community Health Fairs
 - 10 Elementary School/Book Reading Events
 - 2 BLS Education Outreach Programs
 - 4 BLS Paramedic Assist Programs
 - 4 School Career Day Presentations
 - 3 Summer Camp/Youth Academies
 - 3 Resuscitation Academies
 - 2 National Night Out Events
 - 2 Holiday Food Donation Events



CLINICAL INITIATIVES

Narcan Leave-Behind Kits: Throughout 2023 New Castle County EMS continues to carry opioid rescue kits on each paramedic response vehicle. The State of Delaware Office of Emergency Medical Services provided the kits as part of an outreach program to target those at risk of death secondary to opioid overdose. The goal is to leave a rescue kit in the hands of a patient, friends, or family members who may be with a person at their time of crisis. Over **60 Narcan Leave-Behind kits** have been left behind with a patient, family, or friends in 2023. In addition, 2023 saw over **150 New Castle County citizens trained** in their use. NCC*EMS continues to identify incidents in which kits met the criteria but were not left behind.



Butterfly Point-Of-Care Ultrasound (POCUS): New Castle County EMS has expanded its use of Point of Care Ultrasound (POCUS) onto all paramedic units. Prior to 2023 only supervisor vehicles carried this assessment tool. Through a grant from the New Castle County Records of Deeds Office, an additional 20 units were purchased and placed into service. In addition to confirming the absence or presence of heart muscle movement, the use of POCUS has expanded to include assessment for carotid artery



perfusion. This technology is currently utilized by only 4% of EMS systems in the country. All New Castle County Paramedics were re-trained to utilize POCUS throughout the recertification cycle due to expanding its use. Treatment with POCUS is a massive step forward for the pre-hospital service and one that will prove to greatly enhance critical decisions made, leading to improved patient outcomes. In November of 2023, New Castle County Paramedics traveled to Kent County to conduct training for all paramedics in Kent County, Delaware.

Infusion Pumps: NCC*EMS placed into service 4 Sapphire IV infusion pumps in the fall of 2023. Infusion pumps are being added to the equipment carried by paramedics to ensure a safer and more effective delivery of intravenous or interosseous medications. Patient safety and decreasing medication errors remains a top priority in the delivery of patient care in New Castle County. In 2023, all paramedics received training and education to ensure a safe and effective roll out of the new devices that will be carried on supervisor vehicles.



PRE-HOSPITAL WHOLE BLOOD

Whole Blood Initiative: New Castle County has initiated a pre-hospital whole blood program to bring the delivery of whole blood to the prehospital environment. The initial planning and basic framework for this project began in late 2022 and continued through early 2023. In May of 2023, New Castle County EMS began a pilot project with the support of the Blood Bank of Delmarva, Office of EMS, the State of Delaware EMS Medical Director, New Castle County Medical Directors, New Castle County Executive's Office, and the Board of Medical licensure and Discipline. Continuing education for all paramedics took place in the Spring of 2023 and additional funding and equipment initiatives continue to be investigated. Over fifty (50) patients received pre-hospital whole blood throughout 2023 with over 92% having a positive outcome.



Blood Bank of Delmarva: New Castle County Paramedics continue to be a strong partner with the Blood Bank of Delmarva well beyond the clinical partnership of obtaining and administering whole blood in the field setting. Paramedics attended Blood Donor Month initiatives to support the Blood Bank of Delmarva's cause and encourage blood donation throughout the county. New Castle County Paramedics continue to support various blood drives throughout the county and have worked with the administration in New Castle County to hold blood drives for county employees.

Whole Blood Administration: The first incident in which pre-hospital whole blood was used in Delaware occurred only two days after the pilot was initiated in New Castle County. The patient was involved in a serious motor vehicle collision in the Middletown area of New Castle County. Due to the remote location of the incident and the distance to the trauma center, whole blood administration proved to be vital to the positive patient outcome. Corporal James Haddix of the Aberdeen Police Department was involved in a serious motor vehicle collision in May of 2023 and also received pre-hospital whole blood while still trapped in his vehicle. Corporal Haddix surprised the paramedics who treated him in September of 2023 and credits whole blood administration for saving his life and positive outcome.



SPECIAL EVENTS

Throughout 2023, New Castle County Paramedics provided medical support and stand-by coverage to multiple New Castle County events, community programs and mass gatherings. In a count of over 591,000 citizens with even more visitors to our county, the need for advanced life support coverage remains a need. **Nearly 100 special events** saw paramedic coverage from New Castle County EMS.

Presidential Motorcade Details: The President of the United State of America (POTUS) has primary residence in New Castle County. The United States Secret Service works hand-in-hand with New Castle County EMS to assure paramedic and EMS coverage is provided with all presidential motorcade movements when the president travels to and from his primary residence. In addition, there are multiple off the record movements in which New Castle County EMS provides Presidential detail protection. **A total of 74** presidential motorcades saw New Castle County Paramedic coverage in 2023.



Old Fashion Ice Cream Festival: In July of 2023, New Castle County hosted its annual “Old Fashion Ice Cream Festival” at the Rockwood Mansion and Park in North Wilmington. Paramedics worked with our partner EMS agencies to provide planning and medical operations during the event. Hundreds of visitors to the North Wilmington area were cared for by paramedics, EMTs and firefighters. Due to the time of year and weather, this event continues to see a large number of attendees needing medical attention.



New Castle County Sleep Under the Stars: In October of 2023, New Castle County hosted its annual “Sleep Under the Stars” event at the Carousel Park in Pike Creek. Paramedics provided planning and medical operations during the event. Hundreds of visitors to the park were watched overnight as families participated in community camping.



Delaware Marathon: The Delaware Marathon is an annual event held in New Castle County in the City of Wilmington. The medical coverage for this event is coordinated by the New Castle County EMS Division. Medical support is a combined effort with local fire departments, Saint Francis EMS and the Wilmington Fire Department.

SPECIAL OPERATIONS

Tactical EMS Team (TEMS): The New Castle County EMS Tactical EMS Team (TEMS) is comprised of eight tactical paramedics who provide tactical medical support primarily to the New Castle County Police Special Weapons and Tactics (SWAT) team. In 2023, this team also provided support to the Delaware State Police, Federal Bureau of Investigation (FBI), Drug Enforcement Agency (DEA), Wilmington Police Department, and United States Secret Service. The TEMS team trains twice a month and has 2024 goals of adding two additional paramedics who are currently scheduled to attend COTOMS training in Arlington, Virginia.



Technical Rescue Team: In 2022, New Castle County EMS partnered with the New Castle County Fire Service Collapse and Trench Rescue Team to name five paramedics to the Tech Rescue Team. The Tech Rescue Paramedics trained monthly with the Wilmington Fire Department in Special Operations. One supervisor and one paramedic from each operational platoon is currently assigned to the team. In 2023, these five tech rescue paramedics became pro board certified in collapse rescue, high angle rescue, ropes and confined space rescue. In 2024 the tech rescue team looks to expand its scope to become more integrated with the New Castle County Fire Service special operations teams.



Bike Team: The New Castle County EMS Bike Team participated in 12 events in 2023 and multiple training days. Three members are currently certified as International Police Mountain Bike Association (IPMBA) instructors and assisted with three IPMBA classes that were held in conjunction with the New Castle County Police Department. The two programs held were opened to all ALS agencies and fire service throughout Delaware. The team looks to continue holding two

IPMBA certification classes a year taught by the three New Castle County EMS IPMBA instructors.

Honor Guard: The New Castle County EMS Honor Guard participated in eleven events throughout the year including the National EMS Memorial held in Arlington, Virginia. These specially trained men and women present colors at all special events and dignified details throughout the year. The team also trains and practices on a regular basis and is constantly adding additional team members.



ADMINISTRATIVE & TRAINING ACTIVITY

Kiwanis Club Recognition: New Castle County paramedics were honored by the Kiwanis Club of Wilmington as Paramedics of the Quarter for the first, second, third and fourth quarters of 2023 including one being named “Paramedic of the Year”. Paramedic Nicole Capello was named “Paramedic of the Year” by the Kiwanis Club of Wilmington for her dedication to the citizens of the county and overwhelming dedication to the Emergency Medical Services Division by having the most self-initiated paramedic responses and being a member of multiple special operations teams.



Semi-Annual Awards Ceremony: New Castle County Department of Public Safety holds semi-annual awards ceremonies to honor and recognize personnel for significant and critical events throughout the first and second half of the year. In 2023, two such award ceremonies were held recognizing 43 paramedics for their participation in extraordinary events that included both operational and clinical challenges.

Command & Leadership Academy: Two paramedics graduated from the New Jersey State Association of Chiefs of Police Command and Leadership Academy modeled after West Point. The program is a five-month leadership program that is held primarily as a law enforcement senior staff development class. Graduate level leadership theory is taught by experienced law enforcement and EMS leadership to students in the program. Five regions of the program are held with attendees from five states. New Castle County EMS continues to be proud of all supervisory level staff are graduates from this program.



Conference Presentations: New Castle County Paramedics continue to be active teaching at local and regional conferences. In October of 2023, Assistant Chief Johnson presented a program highlighting the paramedic academy at the Eastern Pennsylvania Regional EMS (CODE) Conference in Mount Pocono, Pennsylvania. At the same conference, Paramedic Michael Connell presented a pre-hospital POCUS program. Lieutenant Aber presented at the Delaware IMPACT conference.

International Police Mountain Bike Association: New Castle County EMS continues to be one of the only agencies in Delaware to offer International Police Mountain Bike Association training opportunities to all EMS and Fire agencies in Delaware. Partnered with the New Castle County Police Department, the three NCC*EMS IPMBA instructors hosted training events throughout the year. BLS agencies from Good Will, Aetna, and University of Delaware continue to have interest and paramedics from throughout the state are trained through the NCC*EMS IPMBA programs.



ACTIVE ASSAILANT TRAINING AND RESPONSE

ALERT Active Attack Integrated Response (AAIR): New Castle County EMS has started an initiative to train 100% of paramedics in the Advanced Law Enforcement Rapid Response Training (ALERT) Active Attack Integrated Response (AAIR). In April and May of 2023, paramedics joined with our Delaware State Police partners to complete a one-day AAIR program in Dover. This initiative has continued with New Castle County Police, Fire and EMS agencies with a unified initiative to train all first responders in New Castle County. New Castle County EMS sent two paramedics to the TEEEX ALERT conference in San Antonio, Texas to continue our efforts to adhere to the latest training and tactical strategies in active assailant operations.



Active Assailant In-Service Training: New Castle County EMS sent three paramedics to a five-day Advanced Law Enforcement Rapid Response Training (ALERT) instructor "Train the Trainer" program held at the Corpus Christi School in Elsmere. These paramedics joined fire and law enforcement professionals from throughout New Castle County to become instructors for the program. The goal is to utilize these instructors to train all first responders in New Castle County to have 100% of paramedics in New Castle County trained.

Paramedic education in May of 2023 was dedicated to active assailant training. Paramedics gained knowledge of active assailant nomenclature and basic procedures to prep them for future AAIR training.

Active Assailant Response: In April of 2023, New Castle County Paramedics responded as part of an active assailant response, to a report "active assailant" incident at the Christiana Mall in Newark. New Castle County Paramedic personnel joined a unified command to coordinate resources and assure all patients were accounted for and treated. Paramedics joined several Rescue Task Force (RTF) groups



that entered the mall to treat injured patients. Three patients suffered penetrating trauma from gunshot wounds. Eight total patients were treated and transported from the incident. Paramedic personnel also assisted with staging, staffing the joint information center, treatment of patients, and logistics. The well-coordinated response to this incident was a direct reflection of the training and planning that has been taking place over the past year.



Active Assailant Equipment: New Castle County Paramedics purchased and placed in service new active assailant equipment to enable personnel to have "hands free" and carry only necessary equipment during such incidents. These new bags will enable paramedic personnel to actively participate in Rescue Task Force Operations with no limitation.



ACCOMPLISHMENTS FOR 2023

- The EMS Division was evaluated by representatives from the American Heart Association and Mission Lifeline Gold Plus Recognition was received.
- Expansion of pre-hospital Point of Care Ultrasound (POCUS) to all paramedic units in New Castle County.
- Held an academy of 19 paramedic recruits and held a rigorous training academy resulting in the graduation and National Registry Paramedic certification of all 17 of those that were hired.
- Completed an aggressive recruitment initiative for the 6th New Castle County Paramedic Academy resulting in the hiring of thirteen (13) paramedic recruits for the next academy.
- Completion of site exploration to relocate and expand future paramedic locations to provide more efficient paramedic responses.
- Continued aggressive recruitment of certified paramedic applicants. The recruitment of certified paramedics along with the running of paramedic academies is necessary to fill vacancies.
- Established relationships with Blood Bank of Delmarva, the Office of EMS, Sussex County EMS, and San Antonio Fire/EMS (Texas) for the pre-hospital whole blood initiative.
- Began a pre-hospital whole blood administration pilot program.
- Addition of a volunteer AmeriCorp part-time community outreach position to assist with community outreach initiatives (hands-only CPR, Vial of L.I.F.E., PulsePoint, Smart 911, etc.)
- Established a peer review work group of field provider paramedics
- Monthly Community Health Fair outreach programs continue to be held with our City of Wilmington partners.
- Technical Rescue Paramedic Team of five members successfully completed certification in Collapse Rescue, Ropes, High Angle and Confined Space Rescue. All members received pro-board certification.
- Held second annual New Castle County Police and Paramedic Youth Summer Program.
- Capital replacement project of all 65 LifePak 15 cardiac monitors to the newest version was completed.
- Expanded the use of Twiage to include stroke and worked with the Christiana Care Neuro Interventionalists to assure positive patient outcome.



2024 GOALS

- Completion of the 6th New Castle County Paramedic Academy to allow the EMS Division to deploy a diverse cohort of paramedics in order to increase staffing to achieve more efficient response to critically ill or injured patients.
- Recruit and hire the 7th New Castle County Paramedic Academy to allow the EMS Division to continue deploying diverse cohorts of paramedics in order to increase staffing to achieve more efficient response to critically ill or injured patients.
- Maintain the administrative, operational and organizational requirements for national accreditation. The achievement of accreditation requires ongoing maintenance of the standards to verify the EMS Division continues to meet the “gold standard” for a modern emergency medical service. December 2024 will mark the 14th consecutive year of accreditation for the New Castle County EMS Division.
- Committee on Accreditation of Ambulance Services (CAAS) accreditation submission and site visits to achieve re-accreditation for 2024-2027.
- Expand the use of pre-hospital whole blood in the pre-hospital setting.
- Expand the use of pre-hospital Point of Care Ultrasound (POCUS) devices on conditions outside of sudden cardiac arrest.
- Expand the reach of the Technical Rescue Paramedic Team from collapse and trench rescue to include high angle and confined space rescue situations.
- Increase the sudden cardiac arrest survivability rates by increasing community outreach programs and increasing the percentage of incidents where bystanders performed chest compressions.
- Expand the use of PulsePoint to permit first responders to have access to the “verified responder” side of the app.
- Train all paramedics in ALERRT awareness and operations level for active shooter incidents.
- Become a Resuscitation Academy Lighthouse Community and continue to deliver the Delaware Resuscitation program to first responders in the tri-state area.

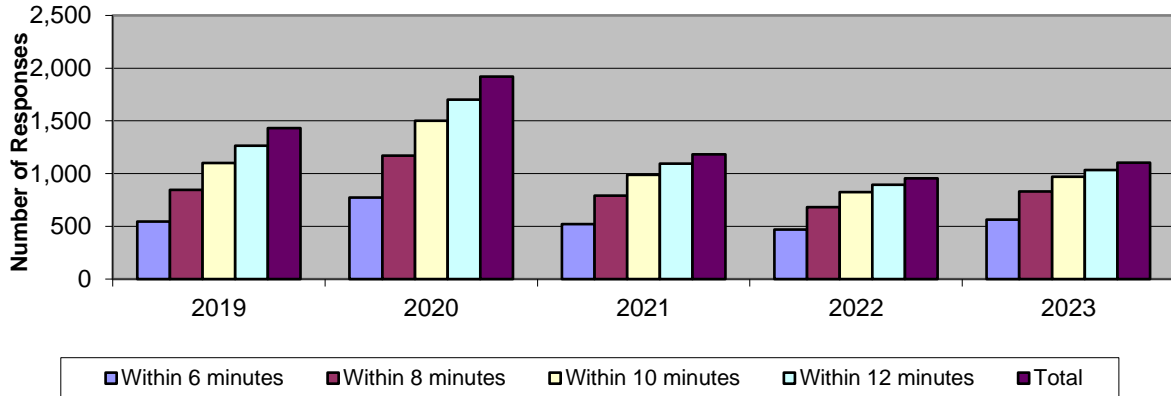


In Summary, The New Castle County Emergency Medical Services Division is dedicated to living up to our motto of “Excellence in Service” The New Castle County Emergency Medical Services Division continues move forward in providing the best medical care to the sick and injured residents and visitors of New Castle County. Embracing new technologies and training personnel to the highest standards are critical to our success.

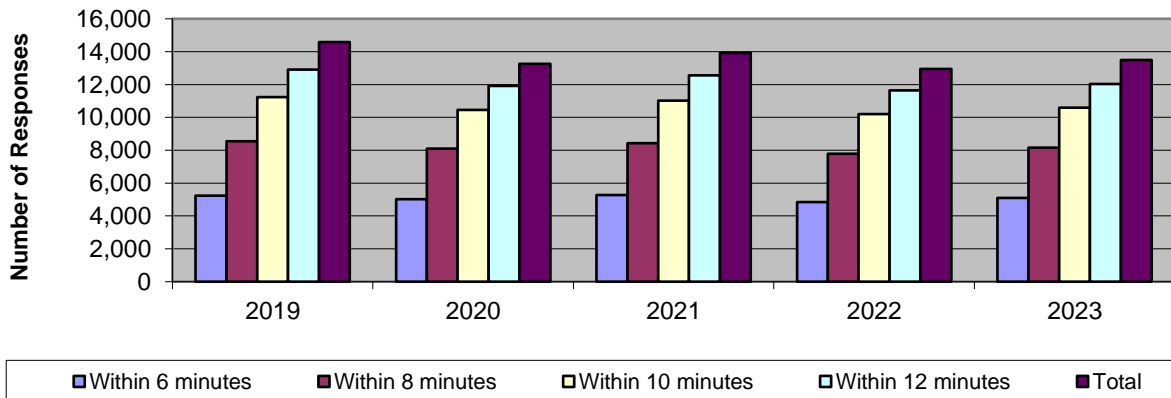
The continued aggressive recruitment and retention of paramedics is critical to our success. As we move forward it is our intention to run regular paramedic academies and simultaneously recruit quality certified paramedics. This will allow the Division to increase our staffing and place additional units in service to meet growing demand.



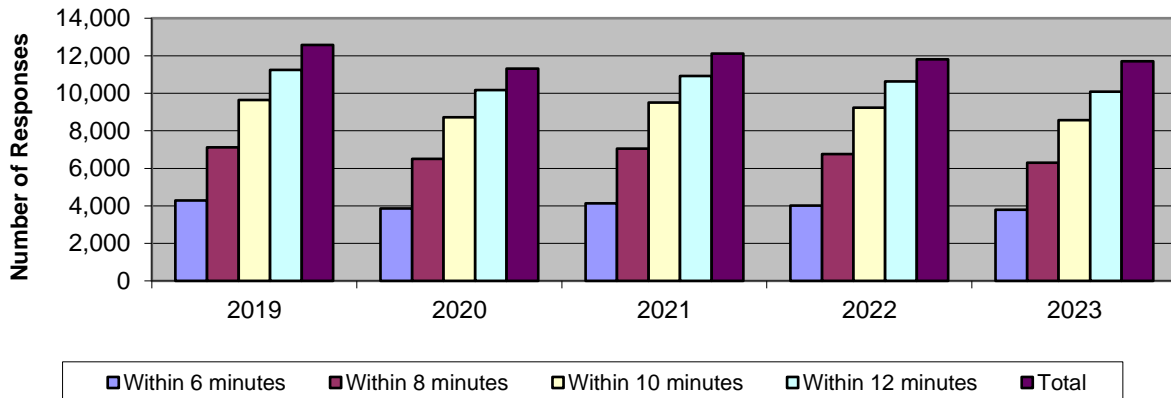
Echo Level Response, NCC EMS



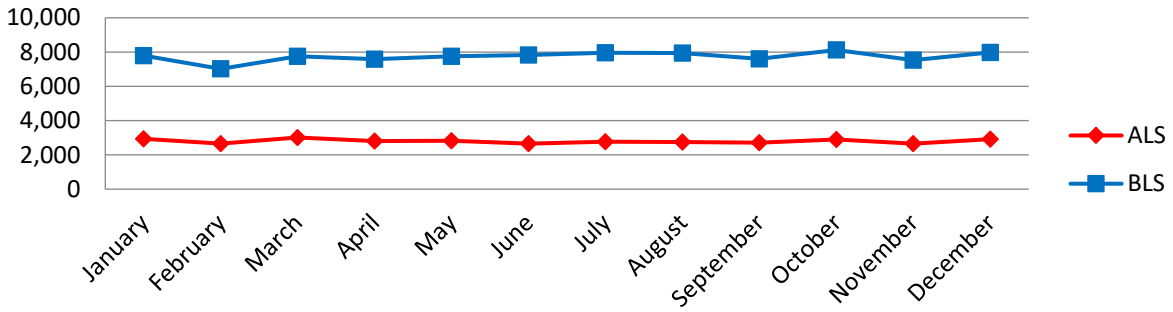
Delta Level Response, NCC EMS



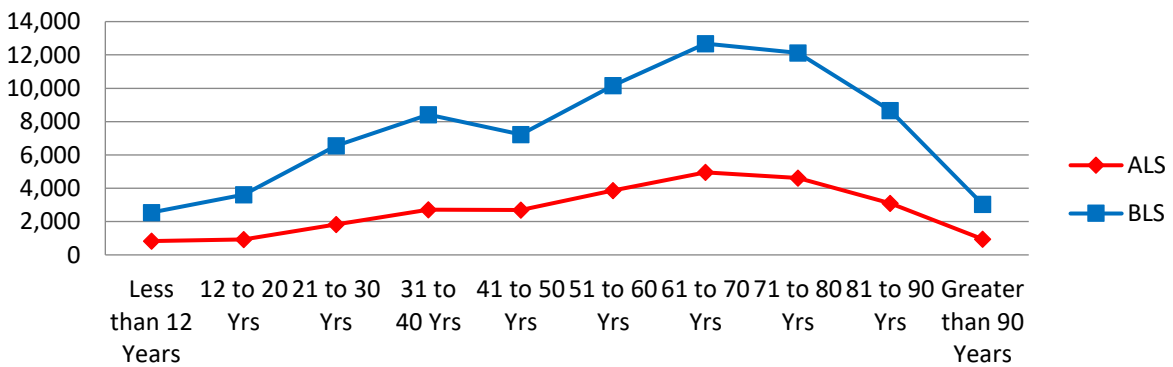
Charlie Level Response, NCC EMS



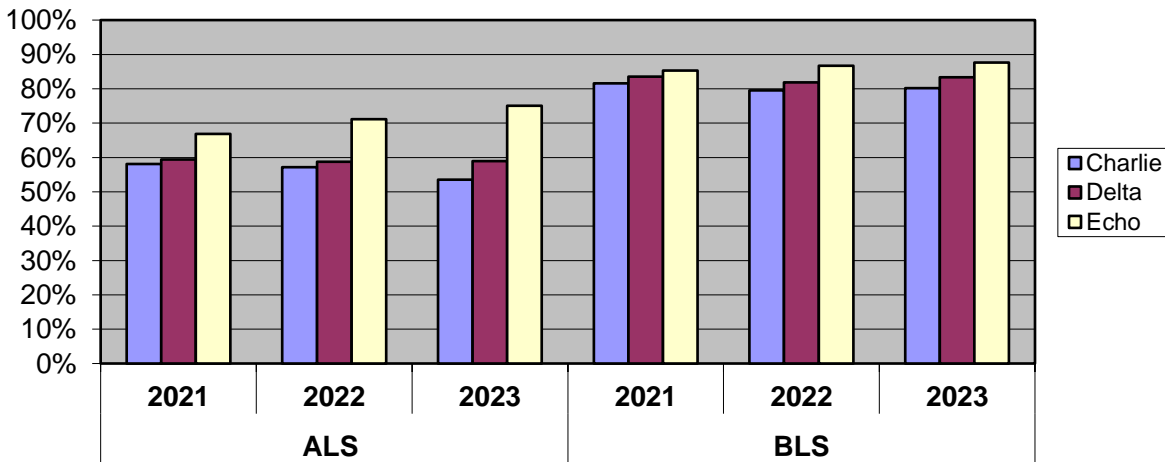
ALS/BLS Incidents by Month - 2023 New Castle County



ALS and BLS Patient Age Comparison - 2023 New Castle County



Percentage When New Castle County ALS/BLS Arrived On-Scene in 8 Minutes or Less on Delta/Echo/Charlie Level Incidents - 2023



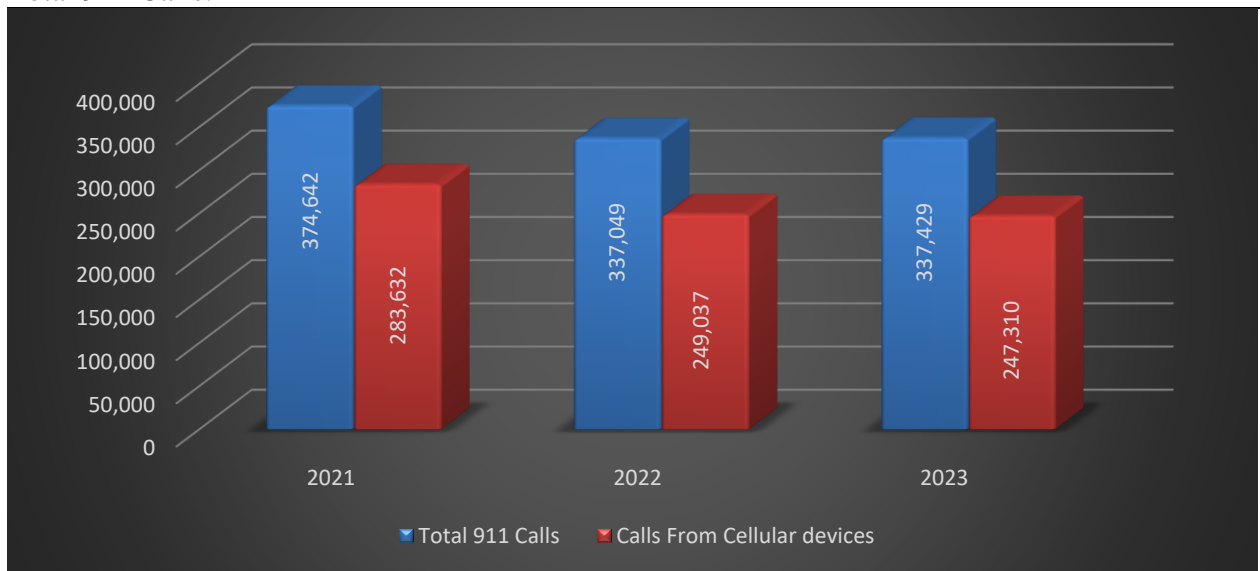
Communication Center New Castle County

Submitted by Chief Donald W. Holden



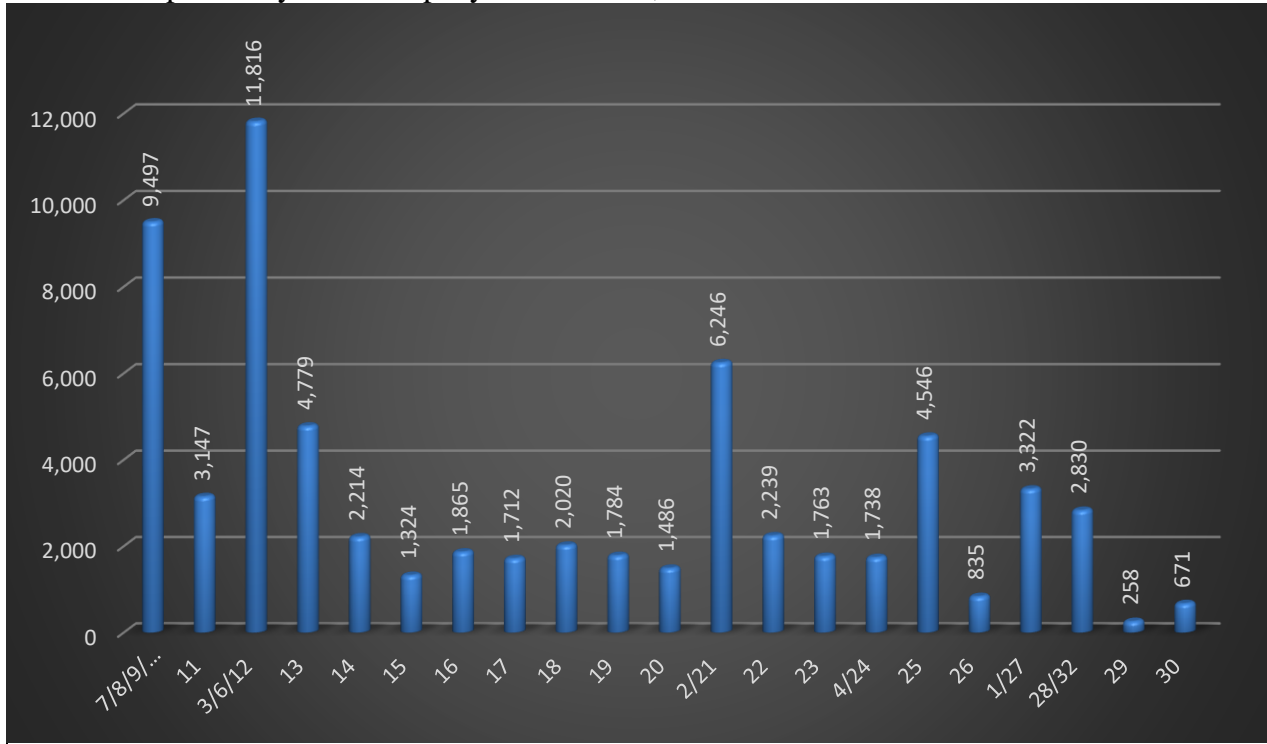
The New Castle County 9-1-1 Emergency Communications Center receives 911 calls through a variety of phone exchanges and numerous cell towers throughout New Castle County. The total number of 911 calls processed in year 2023 was 337,429. Another 106,028 non-emergency calls were also processed by our Public Safety Operators. The Center dispatched or processed a total of 161,248 fire/medical incidents and 239,306 police incidents in year 2023. The New Castle County Emergency Communications Center handled over 48.2% of the 700,386 total 911 calls in the State of Delaware for 2023.

Total 911 Calls:

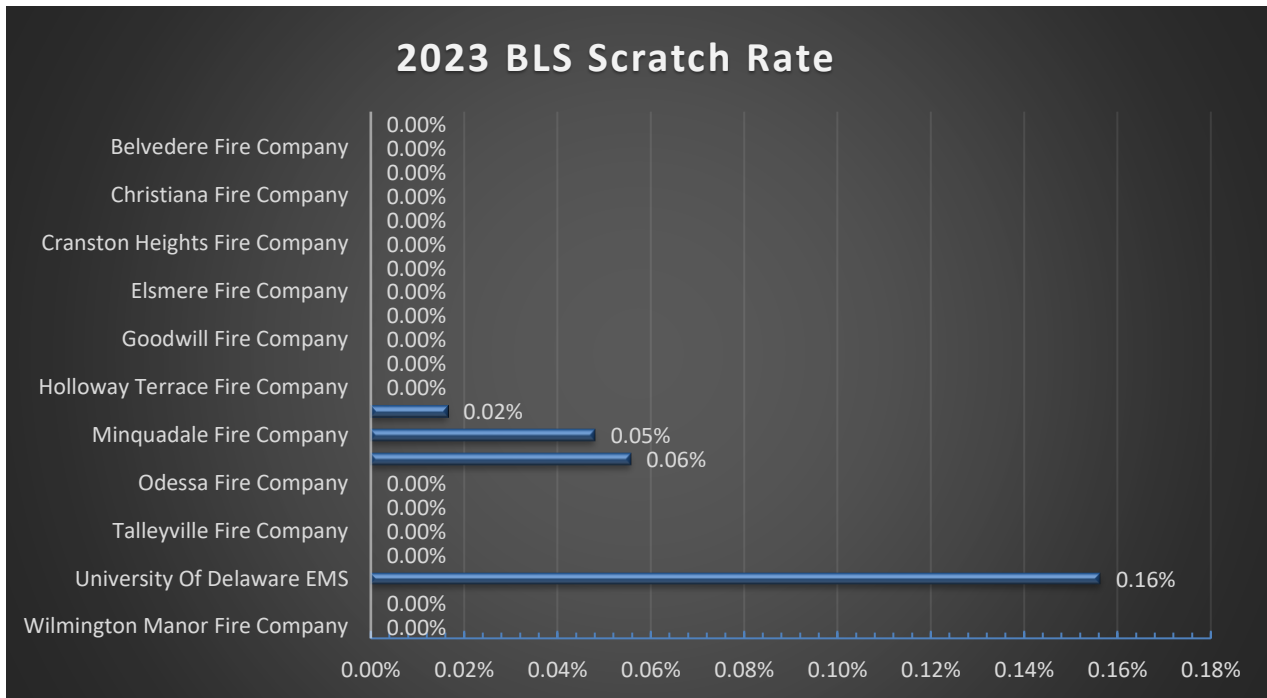


***This information is provided by Intrado.**

Medical Responses by Fire Company for 2023: 66,092

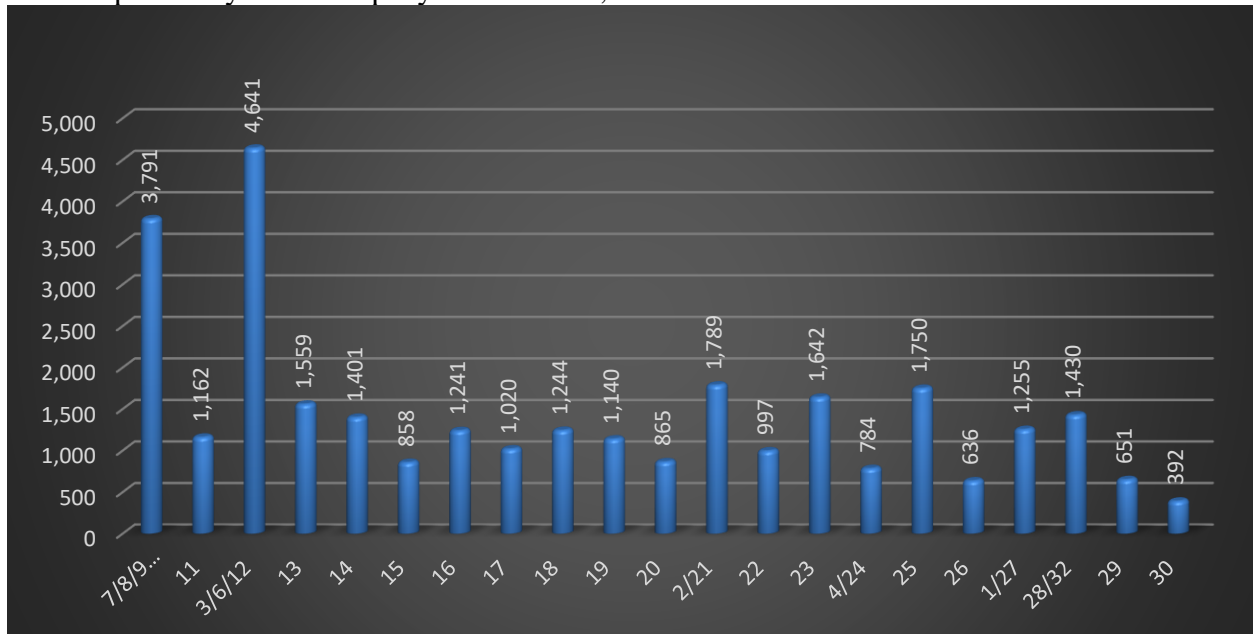


*This information is provided by Tyler Technologies.



*This information is provided by Tyler Technologies.

Fire Responses by Fire Company for 2023: 30,248



*This information is provided by Tyler Technologies.

Accomplishments

- Integrated video to 911 service. This tool will allow us to see incidents through our callers eyes, which will better prepare us in relaying pertinent information to our first responders.
- Retained our ACE (Accredited Center of Excellence) certification with the Academy of Emergency Medical Dispatch.
- Held our eighth Emergency Telecommunicator Courses for prospective new hires.
- Implemented software (Frontline) to integrate our Quality Assurance process along with our Daily Observation Reports of trainees.
- Held multiple job fairs and open houses for recruitment of potential new hires in the 911 Center.
- Continue to integrate into the communities we serve by educating them on how 911 works and how they can help us help them by signing up for Smart 9-1-1.
- Completed the required upgrades to our Fire, Medical and Police Priority Dispatch Protocols.
- Started the process to become an Accredited Center of Excellence for Fire Protocols.

2024 Challenges and Goals

- Continue to maintain staffing levels to allow us to continue to exceed NENA and APCO standards of all 911 calls being answered in ten (10) seconds or less.
- Enhance our current staffing levels to continue to provide the best service to our callers and first responders.

- Complete the Accredited Center of Excellence for Fire Protocols certification. Should be completed in the first quarter of 2024.
- Create a training program for each discipline (Police, Fire & EMS) to educate our first responders on the use of protocol.
- Maintain our current CAD System with the most updated software and next generation technology.

Summary

The New Castle County Emergency Communications Center is staffed by twenty-eight full time Public Safety Operators, twenty-two Police Communications personnel, twenty-six full-time Fire/Medical Communications personnel, and an administrative staff of seven personnel.



The New Castle County Emergency Communications Division utilizes the International Academies of Emergency Dispatch protocol system to triage incoming emergency calls to determine the appropriate level of service. All our Emergency Communications Division personnel are trained to provide pre-arrival instructions for all calls for service.

Each of our Emergency Communications personnel continue to participate in continuing education training to maintain their proficiency and certifications in each protocol.



Chief Kevin R. Sipple
Director
Department of Public Safety

Bryan Choi, MD
Medical Director
Division of Emergency Medical Services

John Tinger, Deputy
Asst. Director of Public Safety
Division of Emergency Medical Services
Robert Watts
Asst. Director of Public Safety
Division of Emergency Communications
Brandon Olenik
Asst. Director of Public Safety
Division of Emergency Management

Department of Public Safety

911 Public Safety Blvd. Dover,
DE 19901 (302) 735-2200
Fax (302) 735-2186

Executive Summary 2023 Annual DEMSOC Report

The Kent County Department of Public Safety oversees three crucial divisions: Communications, Emergency Medical Services (EMS), and Emergency Management with a focus on Homeland Security and Terrorism Preparedness. This report highlights the department's achievements, partnerships, and ongoing initiatives.

Accomplishments:

Division of Communications:

- Operates a state-of-the-art 911 Center adhering to national accreditation standards.
- Proudly maintains accreditation in Emergency Medical and Emergency Fire Dispatch as well as Police Protocols via Priority Dispatch.
- Joint Communication Center with the Delaware State Police ensures consistent interoperability and rapid response.
- Embraces emerging technologies such as Next Generation 911 and public programs like Pulse Point and Smart 911, Rave Facility and Rave Panic Button.
- Expanded Drone program launched for 24/7 support across all divisions and public safety partners.

Division of Emergency Medical Services:

- Deploys paramedics strategically throughout the county, supporting trauma care and special operations teams such as SWAT, High Angle Confined Space rescue, Maritime Response and Hazardous Materials/Decontamination.
- Actively participate in TECC (Tactical Emergency Casualty Care) and TCCC (Tactical Combat Casualty Care) as well as ALERRT (Advance Law Enforcement Rapid Response Training).
- Equipped to handle high-density mass gathering events with specialized response teams and equipment.
- Launched a new paramedic sub-station with 24/7 coverage in western Kent County to meet growing demand.
- Continues efforts in combating drug-related overdoses with balanced approaches.

Division of Emergency Management:

- Prioritizes readiness for terrorism and weapons of mass destruction events.
- Extensive training and equipment provided through local, county, state, and Homeland Security funding.
- Actively engages in national courses of study and provides training to other public safety agencies.
- Prepares for active shooter events with ALERRT and CRASE programs.

Challenges and Future Goals:

- Expects a 5-7% increase in dispatch/response volume next year.
- Challenges include funding and the recruitment of qualified paramedics.
- Invests in paramedic education through partnerships with Good Fellowship Paramedic Program and Delaware Technical and Community College.
- Continues collaboration with partner agencies at all levels of government and private sectors to ensure the highest level of service delivery and integration.

The Kent County Department of Public Safety remains committed to providing exceptional emergency response services while staying abreast of modern technologies and evolving threats. Through strategic partnerships, ongoing training, and proactive initiatives, the department is poised to address current and future challenges effectively.

Respectfully,

Chief Kevin R. Sipple
Director of Public Safety

Kent County Department of Public Safety Division of Emergency Medical Services 2023

*Submitted by: Deputy Chief John A. Tinger
All photos and data are submitted by Kent County EMS*

Overview

2023 marked the 32nd year of Operations for Kent County Department of Public Safety, Division of EMS. Our coverage area is approximately 798 Square miles. We proudly serve the citizens and visitors to Kent County with units in Dover, Frederica, Harrington, and Smyrna.

Mission

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

Values

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

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

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

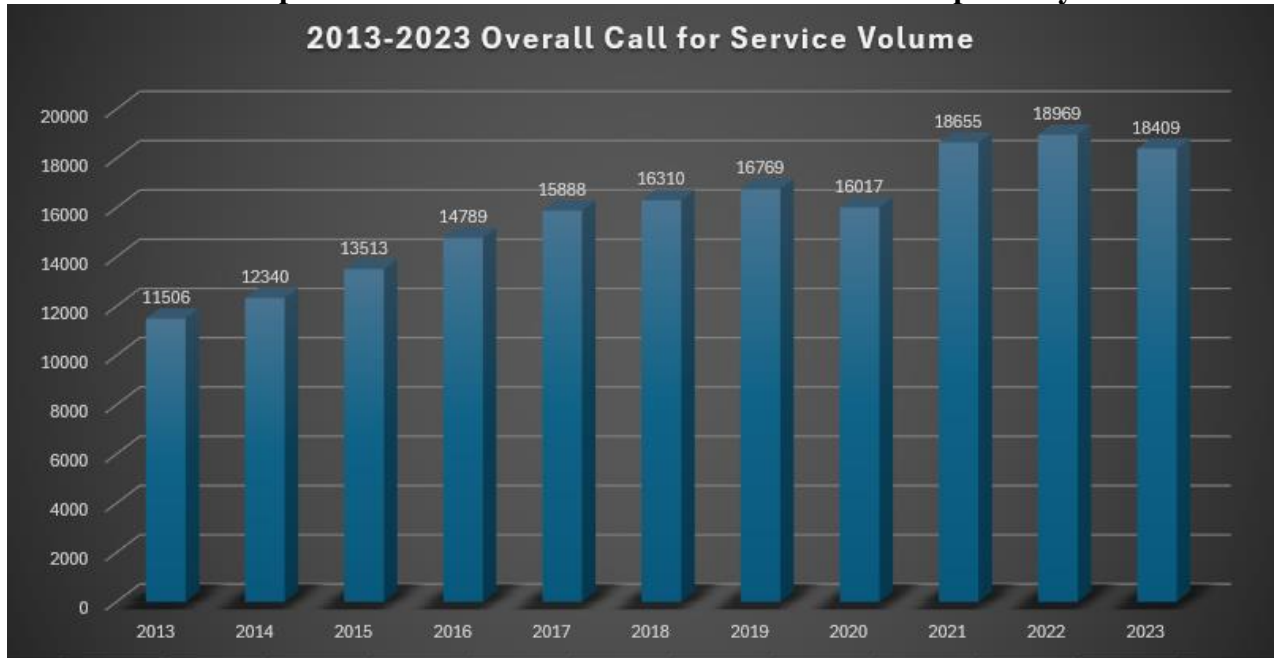
Stewardship: Fulfilling our mission requires that we use our resources wisely and with accountability to our public.

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

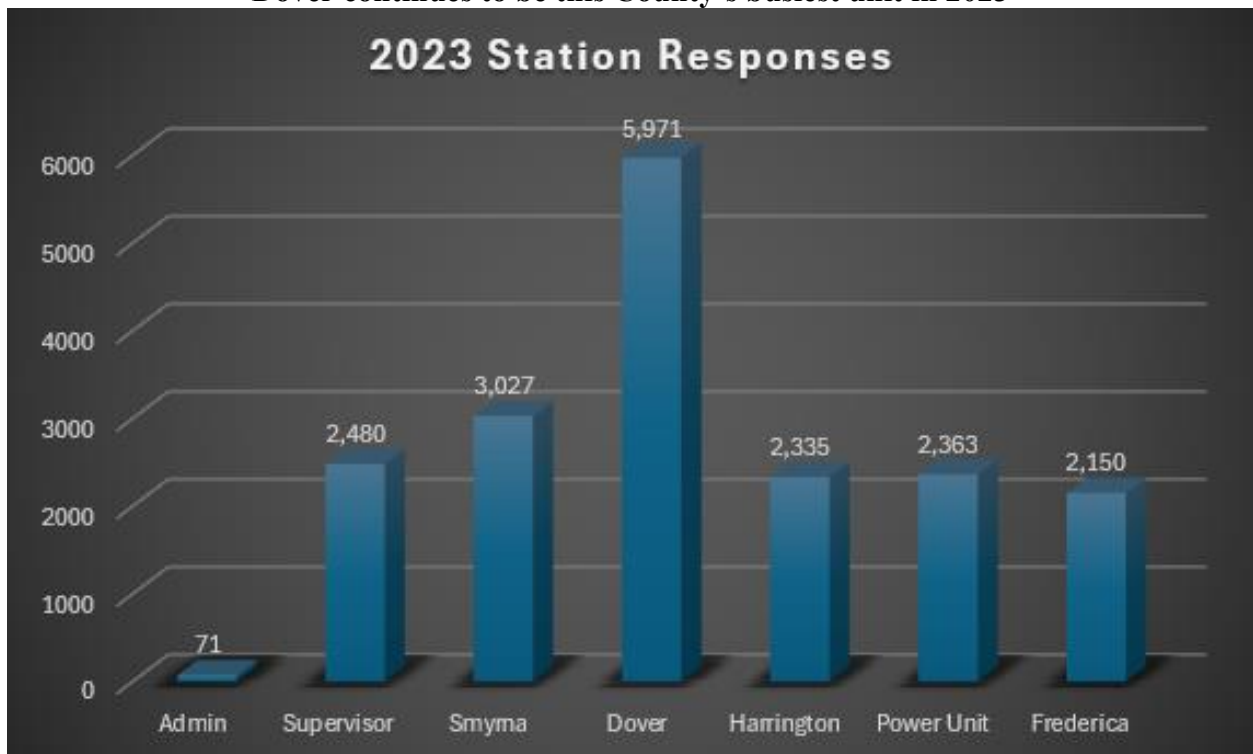


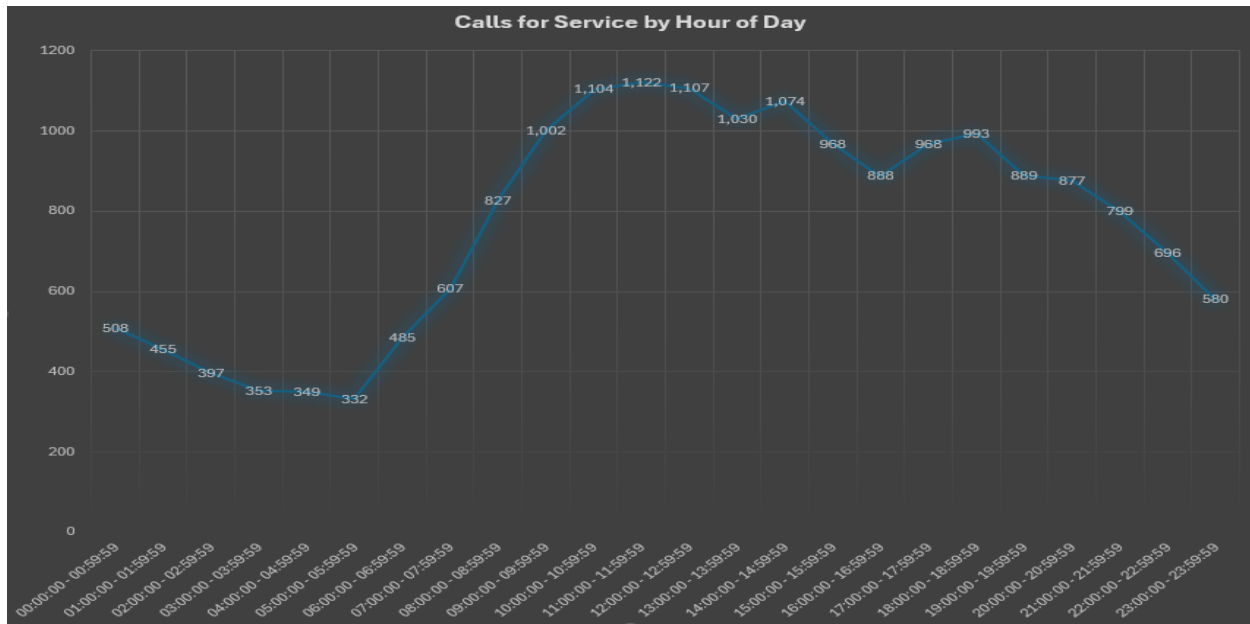
Operational Overview

We have experienced a 59% increase in call volume over the past 10 years.

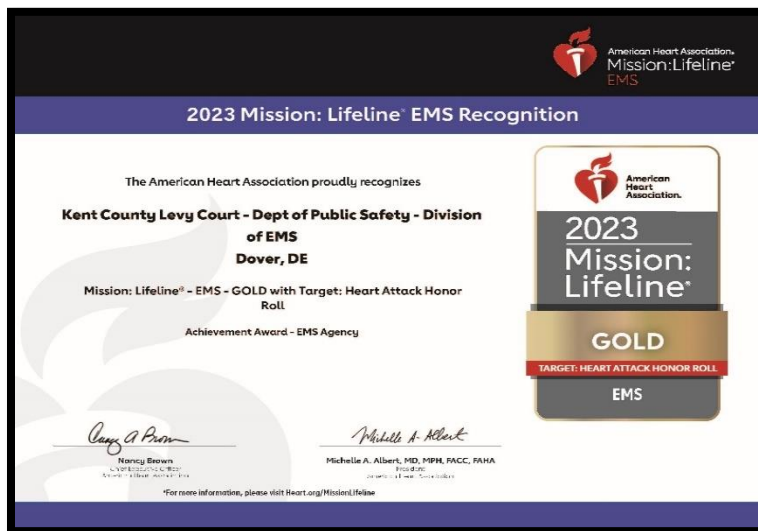


Dover continues to be this County's busiest unit in 2023





	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Total Number of Arrest	34	20	28	19	29	35	25	24	24	21	22	29	310
ROSC documented	6	1	4	4	8	6	6	4	1	2	2	5	49
Percent of ROSC	17.65%	5.00%	14.29%	21.05%	27.59%	17.14%	24.00%	16.67%	4.17%	9.52%	9.09%	17.24%	15.81%



We continue to report to the CARES registry in Kent County. Return of spontaneous Circulation after CPR was average 16% in 2023.

Kent County Levy Court Department of Public Safety - Division of Emergency Medical Services has achieved the Mission: Lifeline® EMS Gold Plus Level Recognition Award once again in 2023. The American Heart Association recognizes that Pre-hospital personnel are the first providers of care to patients

suffering from a STEMI heart attack and are an integral part of the STEMI system of care impacting the overall care and outcome of the patient. This achievement illustrates a commitment to providing guidelines-based care while meeting high standards of performance.

Mass Gatherings



The Division provides medical coverage at several Mass Gathering venues each year. Notably, the NASCAR race and Music Festivals at Dover Motor Speedway, the Delaware State Fair, the Bike-to-the-Bay, the DAFB Air Show and the Amish Country Bike Tour account for the venues with the largest populations. There are occasionally other events (VIP appearances, City of Dover events, etc.) which also require Mass Gathering preparations. 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.



Community Involvement

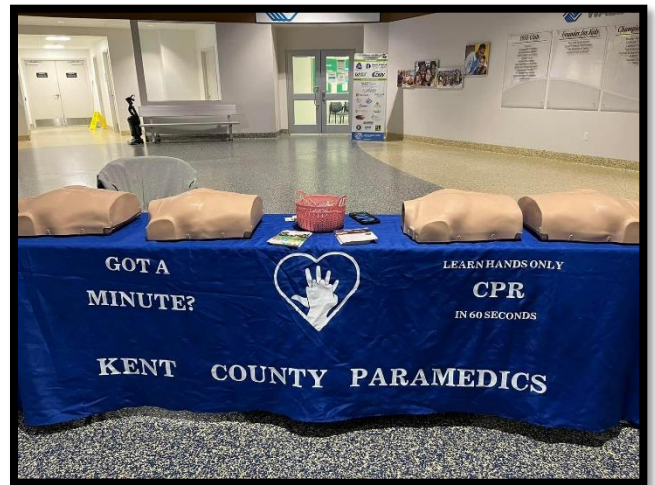
KC Paramedics were able to participate in several community training events in 2023:

AHA Heartsaver CPR/AED

13 classes - 79 students

Hands Only CPR : KC Paramedics have participated in various special events including local festivals, events and school programs. Since its inception at the end of summer 2019, we have taught over 900 people in Hands Only CPR.

Food Drive: We also conducted a Food drive for the Foodbank of Delaware and donated almost over a ton of food during the Thanksgiving Holiday Season.



KCEMS Special Operations

SWAT Paramedics



KC SWAT Paramedics have supported the Smyrna SWAT Team, Milford Police SOG Team, and Dover Police SORT Team on 27 missions.

- Training 531 hours
- We sent one paramedic to the Special Operations Medical Association conference and three paramedics to the ALERRT Conference.
- Over half of our division participated in Active Attack Integrated Response training hosted by DSP.
- We conducted two TECC classes.
- We trained numerous LE and DOC staff in naloxone administration.

All-Terrain Medical Response

The Bike Medic Team once again supported Dover International speedway at the annual NASCAR race and at the Dover Air Force Base Thunder Over Dover. The Specialized bikes and Medic-Gators are pre-deployed to many events each year. 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 trailers which require transport to the scene.



Our specially outfitted response gators and Bike Medic Team covered the Spring NASCAR race and Dover AFB Air Show. Additionally, the team was deployed at multiple events including Safe Summer Day, the Governor's Fall Festival, the Amish Country Bike Tour, and the Wyoming Peach festival.

Mental Health Resiliency / CISM

Kent Medics CISM team provides mental health support to our first responder community. Our medics go through specialized training to assist with critical stress management to those affected by a traumatic event. Each shift staffs a CISM certified paramedic, and we are in the process of adding dispatchers to our team, so we are ready to respond at any time. Our team also has an emotional support K9 named Lucy who patrols our HQ and responds to activations.



Technical Rescue

Our Technical Rescue Paramedics have responded to 17 call outs in 2023.



This included mutual aid assistance to New Castle and Sussex County. Call outs included vehicles into structures, large animal rescues, structural collapse from natural disasters, and confined spaced rescue operations.

Training included both monthly in-house training and joint training with the entire Kent County Special Operations Team.

We sent three technical rescue paramedics to Rope Rescue Operations/Technician course in Pennsylvania.

We had four team members trained in Trench Rescue – both at Operational and Technician levels.

Two paramedics participated in the FEMA Virginia Task Force 2 Structural Collapse Specialist Course.



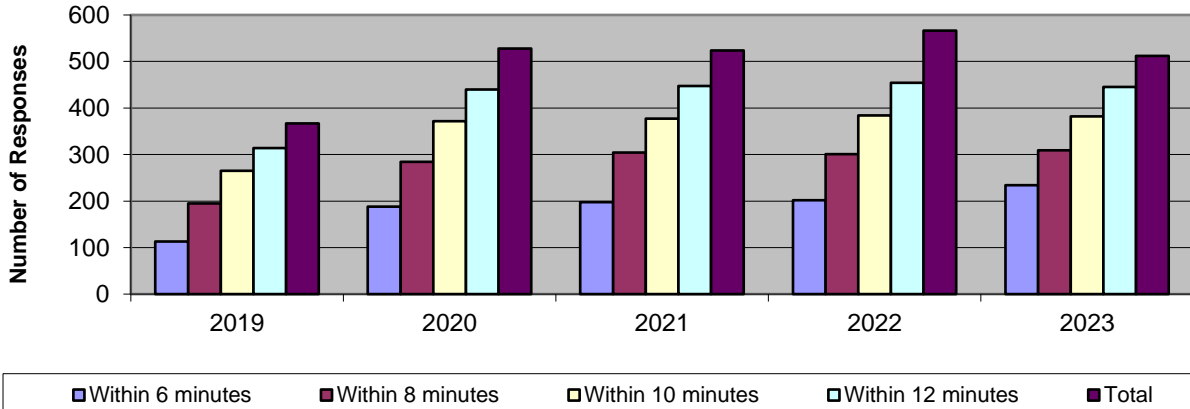
Accomplishments

- KCEMS held our 1st Annual Cardiac Arrest Survivors Reunion. We honored twelve Cardiac Arrest Survivors and the Emergency Personnel who responded to their emergencies.
- CPR training classes for the public.
- Continued to provide high quality refresher and Con Ed to our Paramedics.
- Achieved Gold Plus recognition from the American Heart Association for 2023 in the Mission Lifeline EMS STEMI Quality Achievement Award.
- Expanded our Academy for Paramedic Students

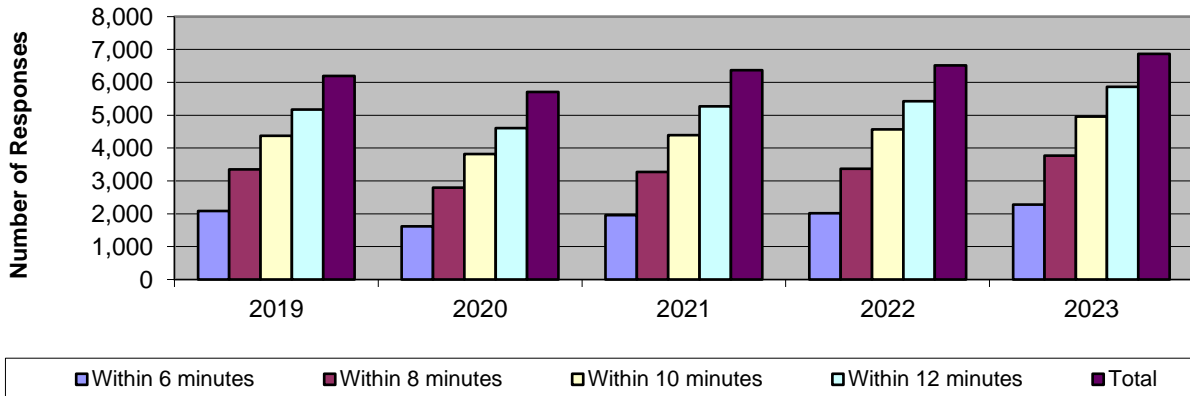
2024 Challenges

- Staffing remains a challenge. Finding qualified applicants of certified Paramedics is still difficult. We have risen to the challenge by implementing an academy program to train paramedics in partnership with Delaware Technical Community College and Good Fellowship Ambulance & EMS Training Institute.
- Maintaining operational tempo to sustain and support the increased call volume.

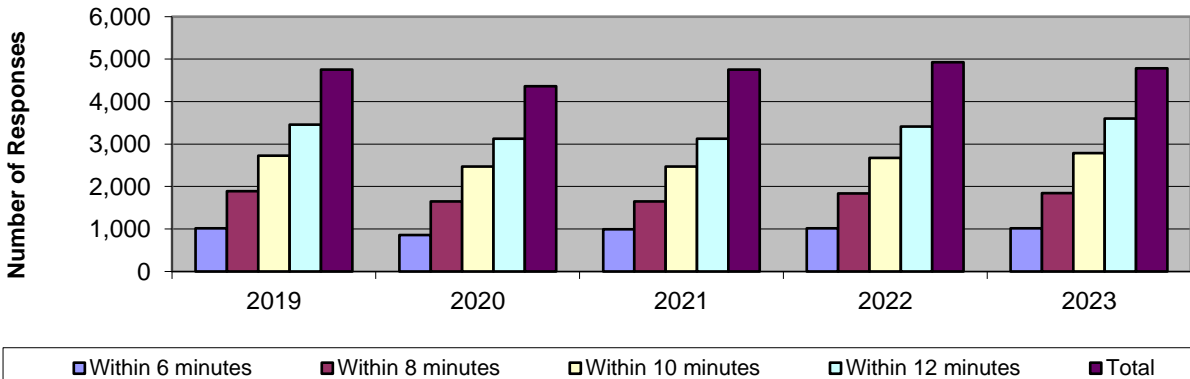
Echo Level Response, Kent County EMS



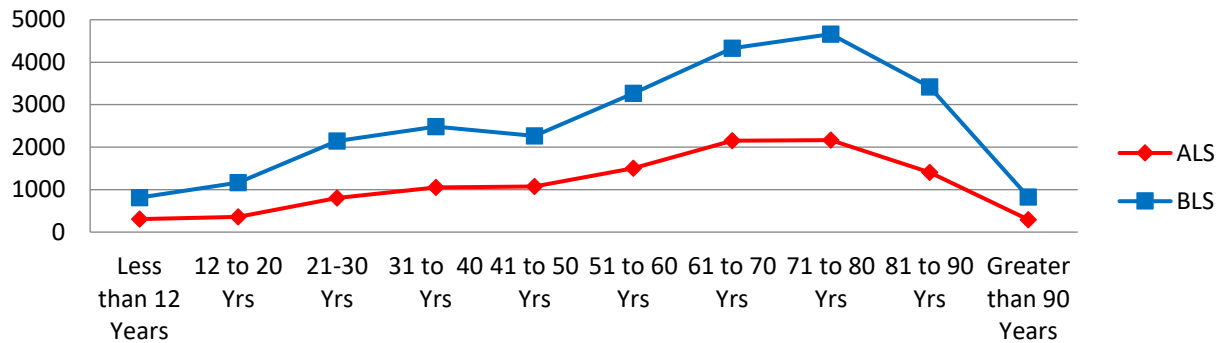
Delta Level Response, Kent County EMS



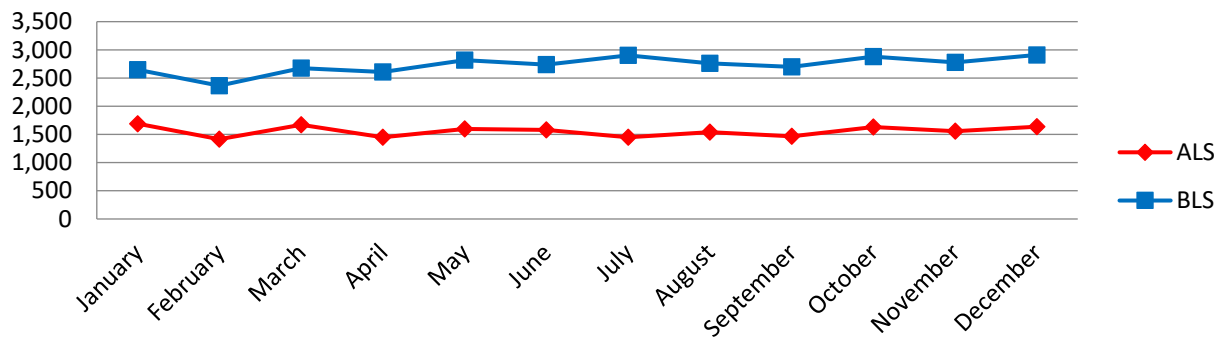
Charlie Level Response, Kent County EMS



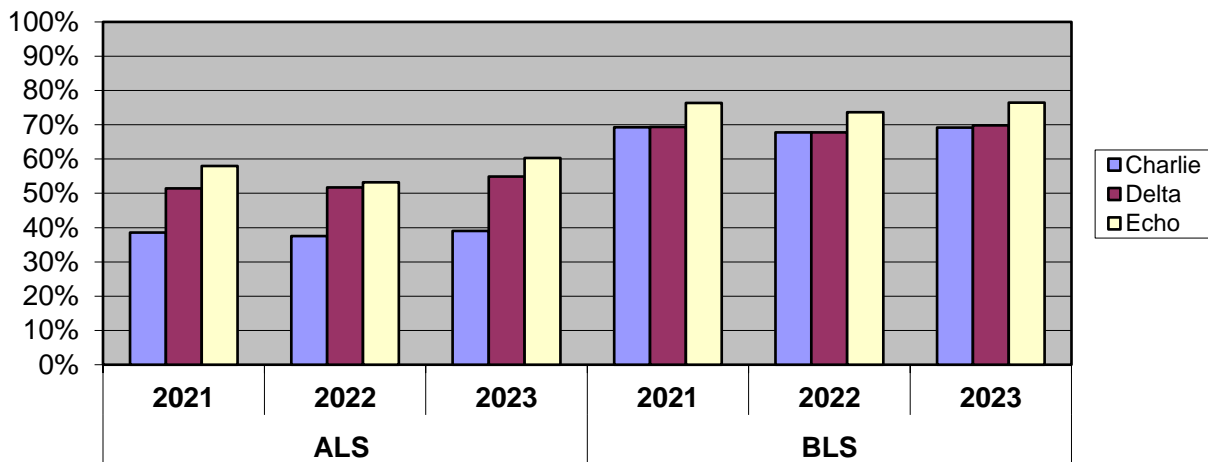
ALS and BLS Patient Age Comparison - 2023 Kent County



ALS/BLS Incidents by Month - 2023 Kent County



Percentage When Kent County ALS/BLS Arrived On-Scene in 8 Minutes or Less on Delta/Echo/Charlie Level Incidents - 2023

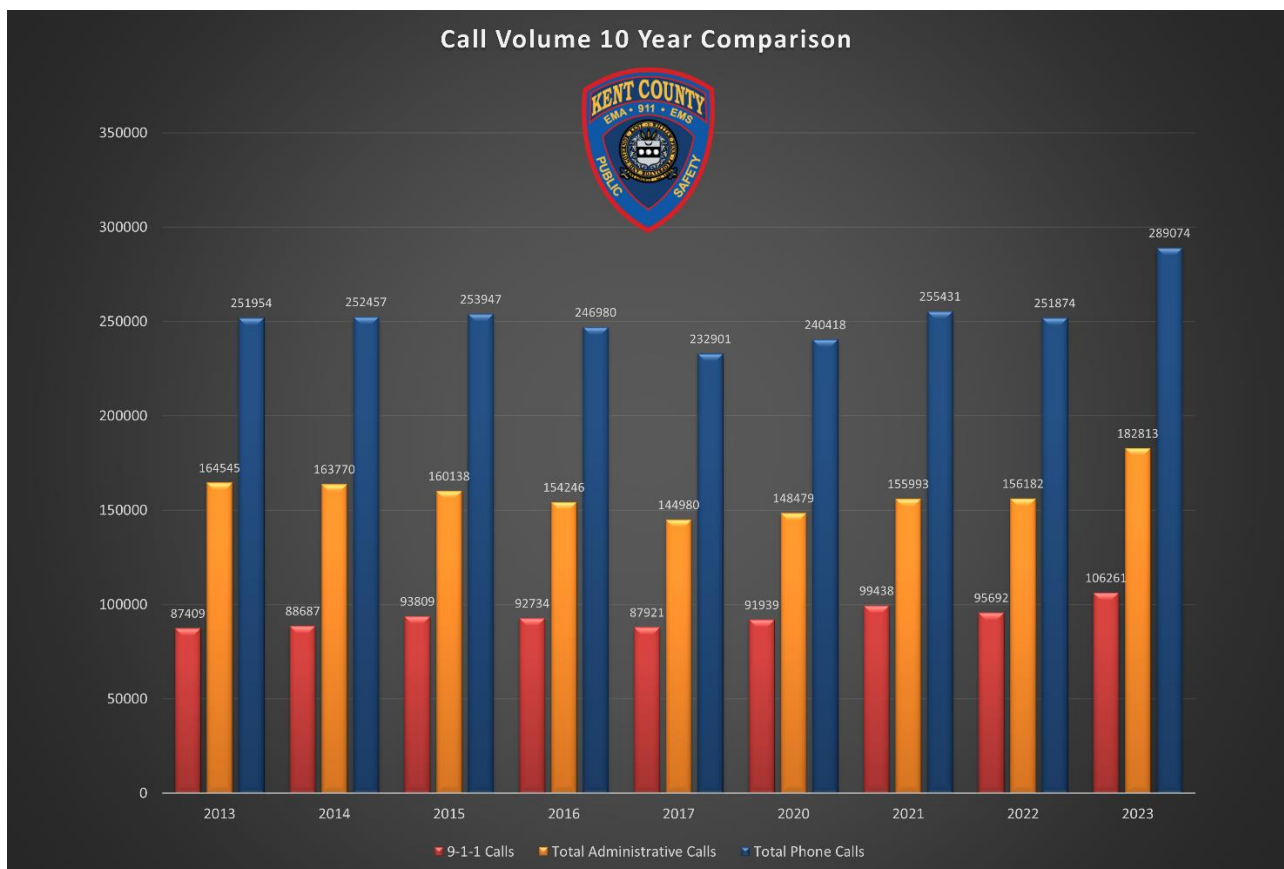


Kent County Department of Public Safety Division of Emergency Communications 2023 Overview

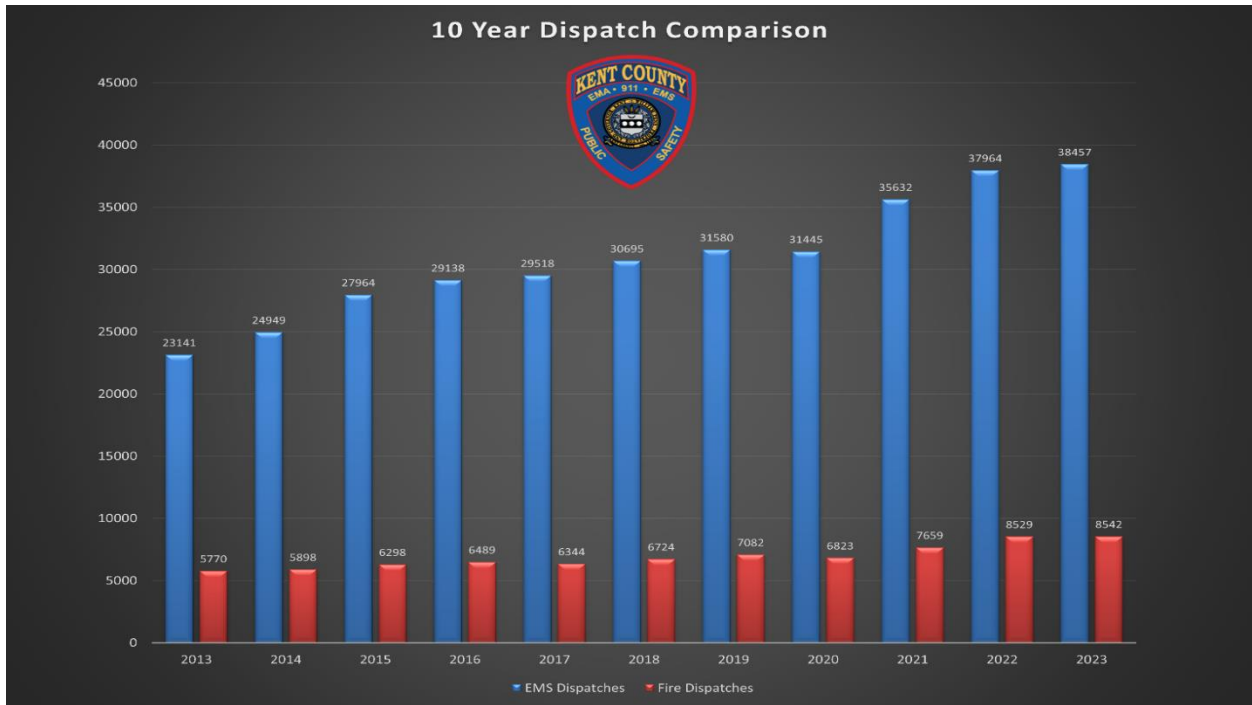
*Submitted by: Assistant Director Robert Watts
All photos and data submitted by Kent County 911

The Kent County Department of Public Safety, Division of Emergency Communications receives 911 calls through a variety of phone exchanges throughout Kent County, Southern New Castle County, and Northern Sussex County. The total number of 911 calls processed in year 2023 was 106,261. Another 56,450 non-emergency administrative calls were also processed by our dispatchers. The Center dispatched or processed 38,457 medical incidents, 8,542 fire incidents and 115,229 police incidents in year 2023.

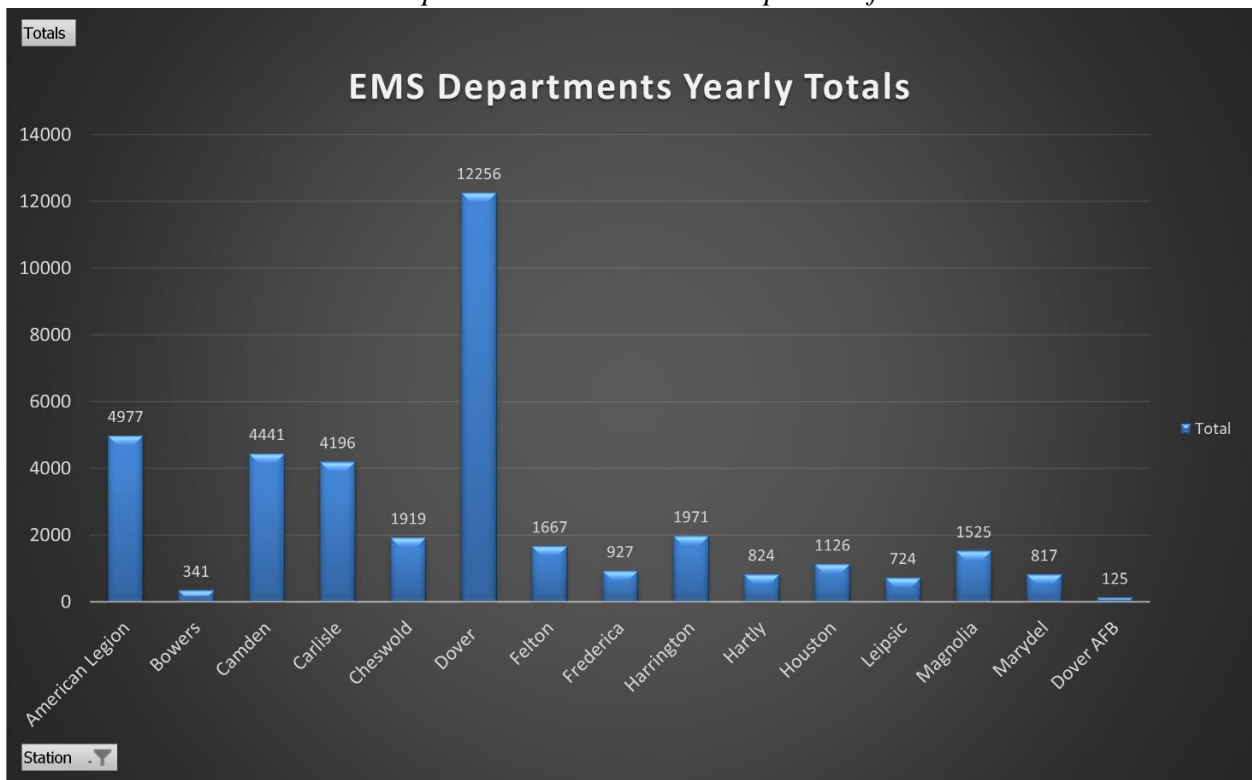
Operational Overview



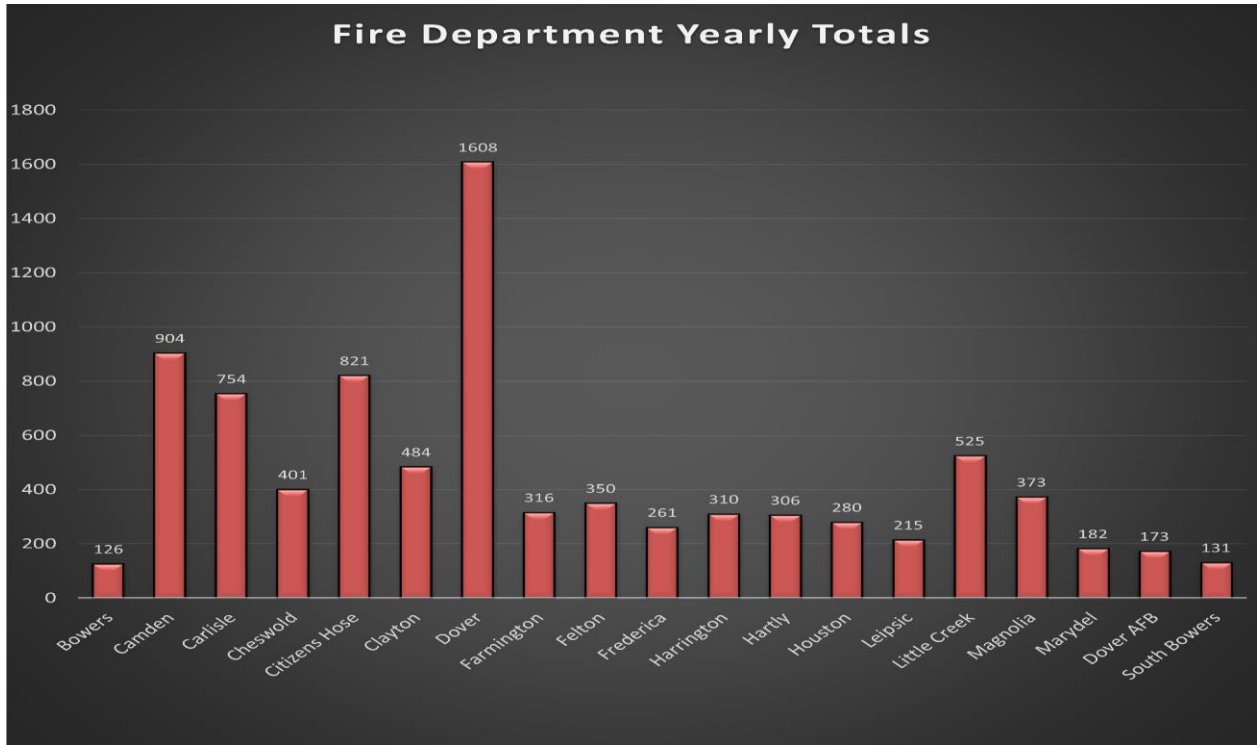
The above chart represents 911 calls, Administrative calls, and combined calls from 2013-2023



The above chart represents EMS and Fire dispatches from 2013-2023



The above chart represents BLS dispatches by Station in 2023



The above chart represents Fire dispatches by Station in 2023



Smart911™

Kent County Department of Public Safety continues to support and promote Smart911. Smart911 is a free service that allows citizens to create a Safety Profile for their household that can include any information they may want 9-1-1 call takers and first responders to have in the event of an emergency, then if they need to dial 9-1-1 their Safety Profile will immediately display on the call taker’s screen saving critical seconds and even minutes in response to the emergency. Our division has provided many demonstrations and sign-up events throughout the year promoting the use of the program.

Kent County Department of Public Safety continues to support and promote Smart911. Smart911 is a free service that allows citizens to create a Safety Profile for their



PulsePoint

Kent County Department of Public Safety continues to support and promote Pulse Point. Pulse Point is a smartphone application that runs in the background of a user’s phone and notifies citizens with registered CPR certification of a possible CPR event nearby. For citizen responders the app only activates if the incident is happening in a public place and does not activate for residential addresses. For verified responders the app activated in all locations.

Mass Gatherings

Each year we participate in multiple mass gathering, becoming part of a Joint Operations Center (JOC). These include a NASCAR race and Musical festival held at the Dover Motor



Speedway, Airshow at the DAFB, Delaware State Fair



in Harrington and several smaller events. The larger musical events bring over 100,000 people to our County mostly in the Dover area. The Delaware State Fairgrounds encompass over 300 acres and features



concerts, agricultural exhibits and other typical state fair demonstrations and events. During this 10-day event over 200,000 people visit the State Fair.

2023 Accomplishments

- Designed and ordered a new mobile command vehicle, expected to take delivery in 2025.
- Expanded our Drone Team consisting of Public Safety personnel from all divisions within our department.
- Experienced a network intrusion with our County network, adapted and overcame the challenges associated with this event.
- Yearly upgrades to our Computer Aided Dispatch/Mobile Data systems through funds from the State 911 Board.
- Maintain minimal staffing levels of five (5) Fire/EMS Dispatchers 24/7. This initiative will better serves our citizens of Kent County during shift change and peak hours.
- Answered all 911 calls 98.60% of the time in ten (10) seconds or less, once again exceeding the NENA and NFPA standard of all 911 calls being answered in (10) seconds or less 90% of the time.
- Expanded our GIS Analysis position to maintain GIS data for our Public Safety agencies and mapping updates for our computer aided dispatch system.



2024 Challenges and Goals

- Start the process to become an Accredited Center of Excellence for Police Protocols.
- Increase our staffing to include a power shift of an extra dispatcher during our busier periods of the day.
- 911 phone system upgrade from State provider Intrado.
- Continued to maintain our Medical and Fire Dispatch Accreditation through the International Academy of Emergency Dispatch.

- Continue upgrading our current computer aided dispatch system with next generation technology and software.
- Expand the footprint of the Communications Center to include 22 Dispatch Consoles.
- Dispatch Center Wall Fabric/Carpet Replacement, the 911 Center was built in 1998 and has had 24/7-foot traffic ever since.

Summary

The Kent County Emergency Communications Division provides Fire/EMS Communications to eighteen (18) Volunteer Fire Companies, two (2) EMS Companies and the Kent County Paramedics. The Center is staffed with twenty-five (25) Fire/EMS personnel and an administrative staff of four (4) personnel. The Delaware State Police (DSP) Communications “KentCom” is also located in the Center. DSP “ReCom” is also temporarily re-located in the same Center.



All dispatchers are certified in the use of Emergency Medical/Fire/Police Protocols and cross-trained to assist with any activity in the Center. Each of the personnel participate in numerous hours of continuing education training to maintain their certification in each protocol.

The Kent County Emergency Communications Division was recognized as an Accredited Center of Excellence in Emergency Medical Dispatch by the International Academy of Emergency Dispatch in November 2000. We were the 49th agency in the world to become accredited in the use of Medical Protocols and have met the requirements ever since. We also utilize the International Academy of Emergency Fire Dispatch protocols and received accreditation status in November 2007. We were the 6th agency in the world to become accredited in the use of Fire Protocols and have met the requirements every year since.

SUSSEX COUNTY EMERGENCY MEDICAL SERVICES



2023 ANNUAL REPORT

"Caring People, Quality Service"

All photos and data submitted by Sussex County EMS



INTRODUCTION

2023 Sussex County EMS Goals & Accomplishments

- Completion of the new EMS Administration and Education Complex.
- Relocation of EMS Administration, Logistics, and Education to the new complex
- Simulation program obtained accreditation by the Society for Simulation in Healthcare
- Maintaining a response ready fleet of vehicles
- Medic 111 (Milton) began night shift coverage ahead of anticipated schedule (August 2023 versus January 2024)
- Deployment of Medic 114 in Dewey Beach for a second summer season
- Deployment of Medic 109 as a daytime unit year round
- Implementation of a prehospital whole blood administration program
- Expansion of Employee Mental Health awareness and resources

Sussex County Emergency Medical Services (SCEMS) continued its tradition of excellence in pre-hospital care in a year with multiple achievements. A new modern training and administrative complex was completed. The new training and simulation facility was showcased during the site visit by accreditors from the Society for Simulation in Healthcare which resulted in SCEMS being the first EMS agency to receive this recognition. The SCEMS competition team once again brought home the gold medal from the annual JEMS Games. The American Heart Association again presented the GOLD Plus award to SCEMS for excellence in the care of cardiac and stroke patients.

Medic 114 returned to Dewey Beach for a second summer season to support EMS responses along the Route One corridor. Medic 109 began its summer day shift deployment with the intent to remain in service year-round. Our staff continues to be supervised by two District Supervisors and an administrator on call. Behind the scenes, all paramedics are supported by clerical, logistical, information systems, and administrative personnel to ensure a constant state of readiness.

EMERGENCY OPERATIONS COMPLEX & EDUCATION CENTER



October 10, 2023- Ribbon Cutting

Sussex County officials and other guests joined together Tuesday October 10, 2023, to cut the ribbon on a \$12 million expansion to the Sussex County Emergency Operations Complex near Georgetown. The facility, located at Delaware Coastal Airport, since 2008 has housed the County's 9-1-1 dispatch center and emergency management. With this nearly 20,000-square-foot addition to the newly minted Emergency Operations Complex (formerly Center), the County's Emergency Medical Services department joins their counterparts to create the first unified public safety complex.

The expansion, which began in the fall of 2021, nearly doubles the size of the operations complex, and will serve as the headquarters and training facility for the County’s paramedics. In addition to office space for the administrative staff and the logistics warehouse, the addition has a focus on paramedic education and training. It features a state-of-the-art 50-person classroom, and five medical simulation rooms, including an ambulance simulator.



Sussex County EMS New Administrative and Education Center (Source: SCEMS)

With a continued focus on employee wellness, the functional fitness analysis was reconfigured and revalidated to incorporate the new complex and new fitness center. This evaluation is used during pre-employment screening, biannual employee physical assessments, and return to work evaluations following injury or illness.

CLINICAL EXCELLENCE

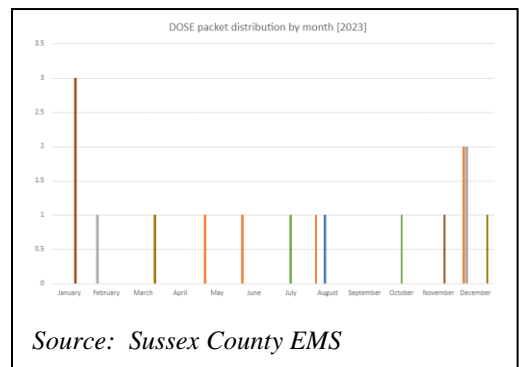
Whole Blood: In May of 2023, after nearly two years of hard work, Sussex County EMS proudly launched its prehospital low titer whole blood program. Since its implementation, more than 30 patients in Sussex County have received blood, with some requiring multiple units of blood products. Continuously striving for improvement, we are actively refining our strategies and best practices for the deployment and administration of this life-saving intervention.



Working collectively with the Delaware Office of EMS and the Blood Bank of Delmarva, we have leveraged collaborative efforts to enhance our program's effectiveness. In addition to our partnership, we have taken the initiative by hosting our own blood drives, further supporting our community's blood supply and reinforcing our commitment to saving lives through proactive measures.

COMMUNITY PROGRAMS

DOSE Program: The Sussex County EMS Direct On-Scene Education [DOSE] program continues to succeed in providing information to the frontlines during patient and paramedic interaction. The program aims to provide resources to individuals and families that have infants under the age of one in their care. Through direct interactions with on-scene Paramedics, crews are able to establish rapport with caretakers and bring a positive influence into their home through safe-sleeping education and resource access. Since 2015, SCEMS has provided 223 families with direct on-scene education and resource packets, seventeen of which were provided in 2023. A total of eight cribs have been provided to infants found in critical need of a safe-sleeping space. SCEMS also continues to provide educational updates to both new and tenured paramedics to ensure that all opportunities for sleep-related trauma prevention are utilized. The success of the program is observed through



Source: Sussex County EMS

first-responder interaction and education with the public and providing access to resources for those with infants in their care.

Narcan Leave Behind Program: The Delaware Opioid Rescue Kit program remains an important effort to put lifesaving therapy into the hands of vulnerable populations. The rescue kits are distributed in situations where a patient has been treated with naloxone but refuses transport to a hospital. These cases pose particular risk of relapse or recurrent respiratory depression.

In such cases, Sussex County Paramedics offer a Delaware Office of Emergency Medical Services supplied opioid rescue kit to the patient, their friends, or family members remaining on scene. Kits contain two doses of intranasal naloxone, an antidote to opioid exposure. Also inside each kit are instructions to provide additional patient care until the arrival of trained rescuers as well as additional information on drug abuse counseling and rehabilitation services.

Sussex County Paramedics have been participating in this important initiative since 2021. Each year has seen an increase in the number of rescue kits distributed and individuals trained by our paramedics. In 2023, 172 kits were distributed, and 269 citizens were trained to manage an overdose.

PERSONNEL

Staffing: SCEMS entered 2023 with six vacancies. Thirteen (13) new paramedics were hired throughout the year. SCEMS ended the year with one vacancy. Five employees separated from the department throughout the year. 2023 concluded with five employees having more than 25 years of service and are eligible for retirement. SCEMS appreciated an attrition rate of about 4% while the EMS industry of ten sees an annual rate of 20-30%.

In addition to the paramedic candidates, SCEMS also brought on board five paramedic students. These students joined the department at different stages of their Delaware Technical and Community College paramedic program. Currently, three of these students have successfully attained paramedic credentials, while two students are still in the final phases of their paramedic training.

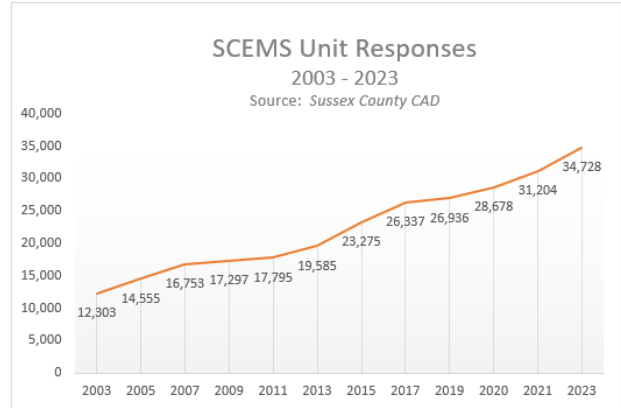
Employee Wellness: Employee mental health, wellness and resiliency remained a priority during 2023. Starting this year, all employees attend an appointment with a mental health professional as part of the biennial medical evaluation process. This provider in consultation with our occupational health medical provider will determine an employee's fitness for duty. As appropriate, the provider may be involved in return-to-work decisions.

2023 INCIDENTS

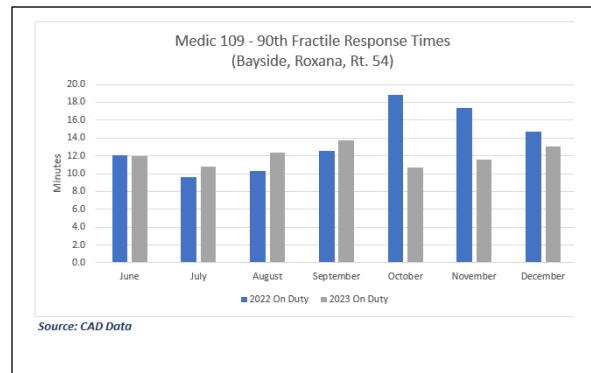
For 2023, SCEMS experienced a 2% increase in response volume compared to last year. Over the past ten years, a 77% increase in unit responses has been appreciated. This demand has continued to be met with eleven paramedic units, including two single medic 24-hour stations in Bridgeville and Milton, and a full-time day shift only single medic in the Roxana area. For the second year, these full-time units were supported by a summertime "power unit" in Dewey Beach to help address the call volume and difficulty navigating the Route 1 corridor between Memorial Day and Labor Day.

2023 Incident Responses		Δ Last Year
EMS 100 (Eastern Supervisor)	1,409	22%
EMS 200 (Western Supervisor)	1,260	18%
Medic 101 (Lincoln)	3,163	2%
Medic 102 (Laurel)	2,780	0%
Medic 103 (Dagsboro)	3,521	-3%
Medic 104 (Lewes)	4,449	-4%
Medic 105 (Millville)	2,609	0%
Medic 106 (Long Neck)	3,390	-4%
Medic 107 (Bridgeville)	1,550	1%
Medic 108 (Georgetown)	3,098	0%
Medic 109 (Roxana Day Shift Unit)	794	108%
Medic 110 (Seaford)	4,023	-2%
Medic 111 (Milton "Power Unit")	1,658	24%
Medic 114 (Dewey "Power Unit")	534	-3%
Special Operations	220	-6%
Other (Administration)	270	21%
Total	34,728	2%

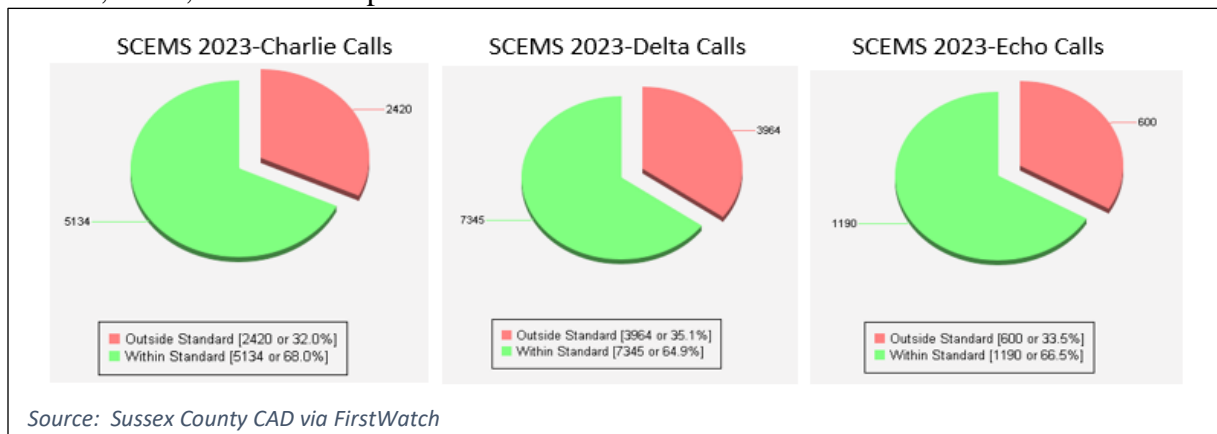
Incident Responses by Unit (Source: Sussex County CAD)



Medic 109: This traditional summer power unit was again placed in service over the busy summer months. In 2023, Medic 109 transitioned over to a full-time day shift unit stationed in the Southeastern portion of Sussex County along Lighthouse Road in Roxana. Medic 109 provides a valuable resource to an area that continues to grow and expand. Medic 109’s response volume increased as expected with the year-round deployment.



Response Times: Meeting the goal of an 8-minute response time continues to be a challenge in Sussex County. Our geography continues to be the greatest barrier. While response times are evaluated based on EMD code, compliance with an 8-minute standard is consistent between Charlie, Delta, and Echo responses.

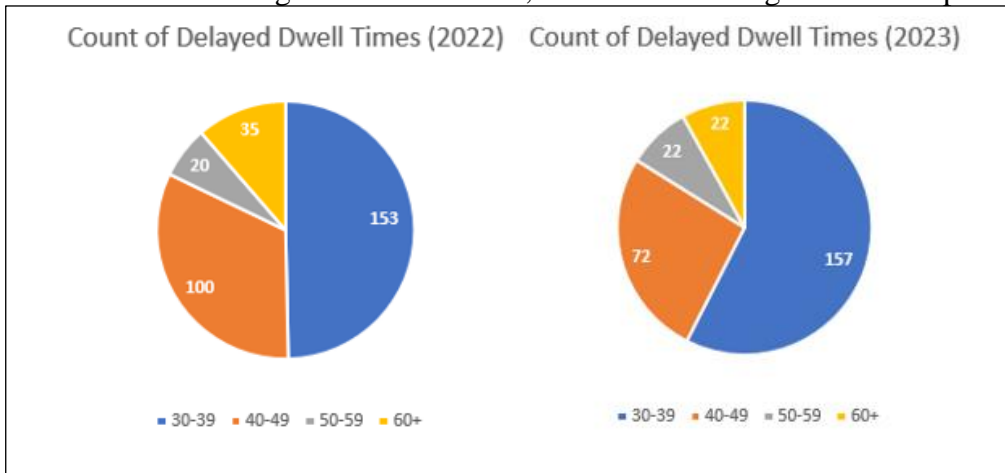


Our Patients: Sussex County continued to welcome visitors throughout the year, approximately 9.1% of our patients for 2023 resided outside of Sussex County. This represents an increase of 2.2% from 2022. The increase in out-of-county residents is not surprising, considering the increased response volume.

Dwell Times: An ongoing issue in Sussex County is the time it takes to transfer patient care to hospital staff after a patient arrives to the emergency department. This has been termed our Dwell Time. Hospitals often refer to this as *wall time*. In 2023, SCEMS arrived at a local hospital with a patient 16,106 times. Our dwell times vary due to a multitude of factors, with most patients being transferred in under twenty minutes. However, we did experience 273 times that required a unit to be at a hospital for greater than 30 minutes to facilitate a transfer of care. In twenty-two cases, a SCEMS unit had a dwell time exceeding one hour.

The dwell time issue really began during the COVID pandemic when hospitals were at maximum capacity. The challenge today is that when EMS is busy, hospitals are also busy. However, our paramedics need to transfer care in a reasonable timeframe so that they may return to service and be available for the next incident. Looking forward into 2024, we will be working with our hospital

partners and the Office of EMS to develop a plan to allow for a transfer of care to take place in a safe but non-traditional manner while ensuring the needs of the patient are met.



AWARDS

SSH Accreditation: As a leader in prehospital medicine, SCEMS made history in 2023 by achieving the long, sought-after goal of accrediting its simulation and education programs. As the first EMS agency in the world to achieve this full accreditation through the Society for Simulation in Healthcare (SSH), the SCEMS simulation team and field training officer programs demonstrated that they either met or exceeded international standards in simulation, teaching, and education.



The simulation program formally began in 2008 and the accreditation process was initiated in 2018. The process was overseen by the quality and standards division and involved many tasks such as: formal documentation, data collection, assembly of our new simulation labs, presentation preparations, confirmation of standards, and an arduous one-day site evaluation involving multiple facets of leadership within Sussex County government. Witnessing a five-year project and long-term goal come to fruition has been exciting and humbling for the now dual accredited department while confirming the great work that our paramedics do every day.



SCEMS Competition Team in action at the 2023 JEMS Games

JEMS Games: The SCEMS competition team returned to the stage at the 2023 FDIC JEMS Games in Indianapolis, IN. After successfully finishing among the top three teams in the preliminary competition, the SCEMS team advanced to the final round of the games. The final scenario presented a realistic scenario that challenged the teams with multiple patients with various injuries following a vehicle accident. SCEMS paramedics finished in a well-earned first place following a solid performance and providing quality care to all patients.

SPECIAL OPERATIONS

Special Operations: Throughout 2023, SCEMS continued to provide ALS coverage for mass gathering events, Presidential visits, and public educational opportunities. The 220 events were covered by more than 120 medics totaling more than 2,100 personnel hours. The SCEMS active assailant committee members were part of a statewide cadre that taught the Active Assailant Integrated Response (AAIR) course to emergency responders throughout the state. The hazmat team had four responses including a six-hour sand bin rescue in Dagsboro. SCEMS assisted in developing and participated in the DEMA sponsored Sea Witch Festival tabletop exercise.



SCEMS bike medics on a training exercise. Source:

EDUCATION AND QUALITY MANAGEMENT

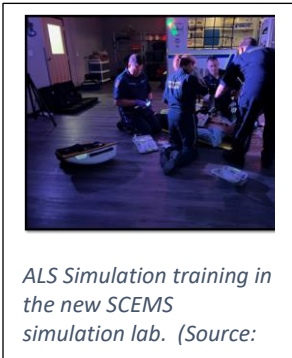
Continuous Quality Improvement (CQI): The SCEMS CQI program remains a robust process and a contributing factor to our clinical success. The process is demanding, time consuming, and incredibly valuable to the quality of care delivered by SCEMS paramedics. Just as we are continuously improving our care, we are improving the CQI process. The addition of FirstPass in the CQI process will help improve the overall program effectiveness. FirstPass will conduct an initial automated review of all patient care reports and then route them to the appropriate next level of review. The system also provides near real time alerts to critical calls or procedures performed.

Continuing Education: Education remains the foundation for the care provided by SCEMS. The year started off with scenario-based recertification in Pediatric Advanced Life Support (PALS) and Basic Cardiac Life Support (BCLS) which incorporated simulation-based scenarios allowing for realistic learning. We welcomed Dr. Carol from Cooper Medical Center in New Jersey for a presentation on Buprenorphine and its impact on his EMS system. This provided our staff with an increased awareness and introductory education to our newest medication and entry pathway for opioid addiction.

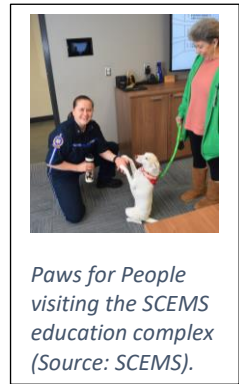


Continuing Education in the new EMS Classroom. (Source:

October was a joint session with paramedics from all three counties and the Delaware State Police Aviation division. The morning featured EMS medical directors from across the state in an organized expert “panel of blue hens” where they addressed provider concerns, highlighted clinical initiatives, and provided lectures on topics requested by Delaware’s paramedics. The afternoon was led by guest speaker, Dr. Melissa Kohn from Thomas Jefferson University. Dr. Kohn spoke on her experiences during the Boston marathon bombing and the Philadelphia train car derailment.



Paws for People: During each Con Ed day, SCEMS welcomes several visitors from the Paws for People program. The pups make their rounds visiting paramedics and dispatchers. Looking at the smiles on faces and wagging of tails, it is hard to tell who is happier- the medics or the dogs! This program has been well received and has been a high point of the day and contributes to employee happiness.

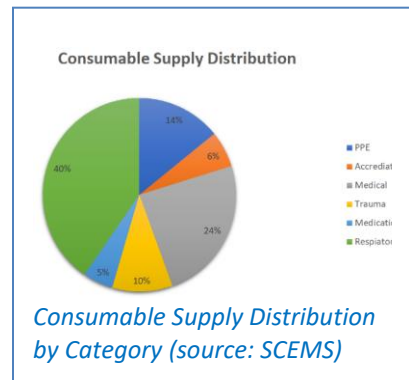


Simulation Program: Leading up the accreditation site visit, the simulation team was busy offering training and education sessions to both ALS and BLS providers.

Throughout the year, the simulation program was incorporated into employee interviews, new employee training academies and credentialing, airway education, BLS education, committee training, and so much more. As SCEMS looks to update transport ventilators, simulation will be the first step in the evaluation process.

LOGISTICS AND CAPITAL IMPROVEMENT

Logistics: SCEMS continues to be supported by a five-person Logistics Division that oversees and coordinates station, equipment, vehicle purchasing, maintenance, and employee uniforms. In 2023, they handled 2472 requests for service and repairs. Additionally, our Logistics Division purchased, processed, and distributed 42,392 requests for consumable medical supplies. This represents a 49% decrease compared to 2022 utilization. This has been attributed to the normalization of PPE consumable supplies post COVID.



Response Ready Fleet: One ALS response Suburban and one pickup truck for the Logistics Division was placed in service. Our fleet drove 588, 000 miles, a 9.5 % increase using 45,891 gallons of fuel for an average of 12.82 miles per gallon.

Paramedic Station Updates: No new paramedic stations were built in 2023. As previously noted, the focus for the year was on the new administrative and education complex. Looking forward to 2024, construction of a new Medic 103 station in Millsboro is anticipated to begin in early 2024. Future construction plans are in the works for Medic 101 in Lincoln and Medic 111 in Milton. Sussex County has entered into an agreement to support housing a seasonal paramedic unit within the planned Dewey Beach municipal complex.

SUMMARY AND A LOOK AT 2024 GOALS

This past year was a milestone year for Sussex County EMS. We moved into a new, state of the art education and administrative complex. We began a pre-hospital whole blood program. Our simulation team achieved a level of accreditation that no other EMS system has accomplished. The year also presented challenges. Our EMS system has been busy. Hospitals have been busy. This has led to extended delays in transferring care in the emergency department. As a result, ALS crews have been delayed getting back in service and available for the next call. Looking into next year, this will be an area of focus as we need to ensure optimal readiness to meet the needs of Sussex County residents and visitors.

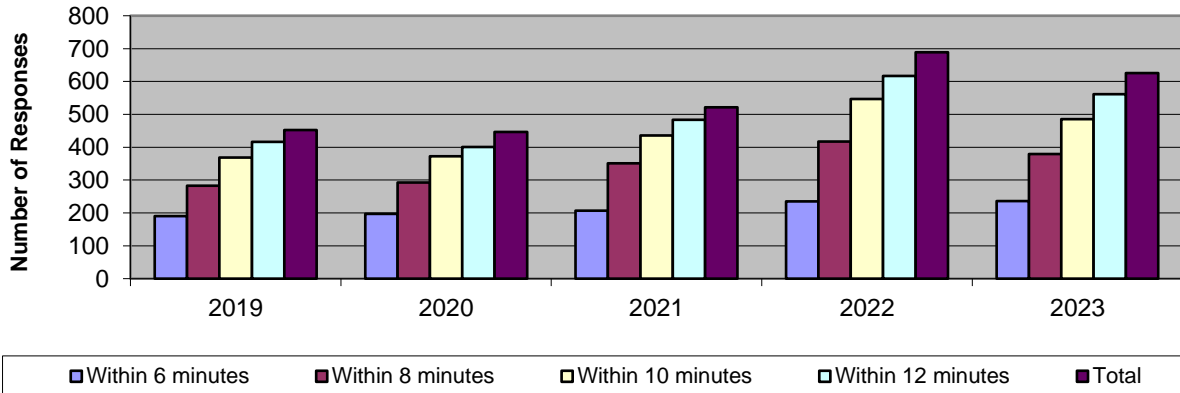
All SCEMS activities are completed with our motto of “Caring People, Quality Service” in mind. As we look towards 2024, SCEMS will be looking to update some of the equipment that is used every day. Progress towards a new Medic 103 station should be substantially completed by the end of next year. A new home for Medic 114 in Dewey Beach will begin as the town begins construction of a new town hall and police station. Plans for new Medic 101 (Lincoln) and Medic 111 (Milton) stations will follow.

2024 Goals and Initiatives

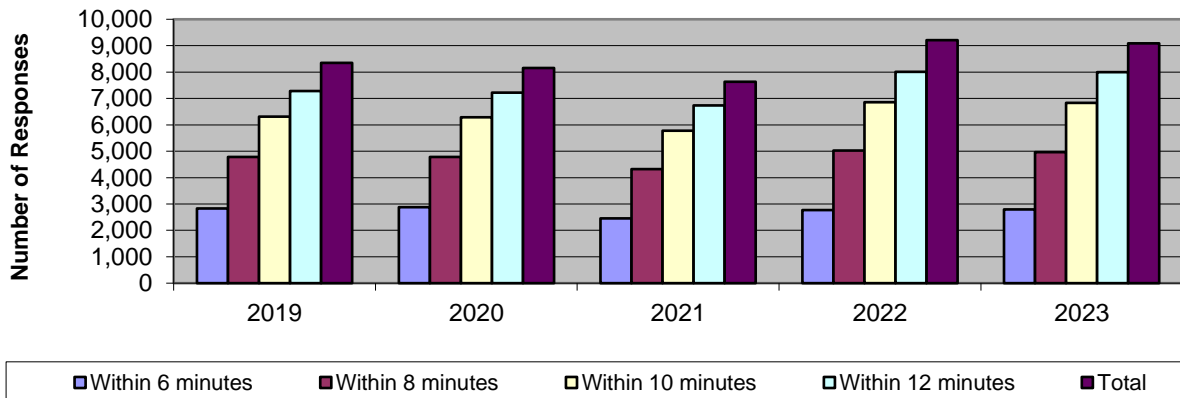
- Begin construction of a new Medic 103 station in Millsboro with a completion goal of January 2025
- Address the challenges of extended transfer of care and emergency department dwell times
- Review options for prehospital ventilators to replace those currently in use
- Review options for new cardiac monitors to replace those currently in use
- Maintain a response ready fleet
- Continuation of the paramedic student program to augment the hiring of out of state paramedics
- Continue our focus on employee health, wellness, and resiliency
- Identify property for a Medic 109 station in the Roxana areas
- Maximize opportunities with FirstWatch and FirstPass to enhance the quality improvement process

As submitted by Robert Mauch, Deputy Director, Sussex County EMS

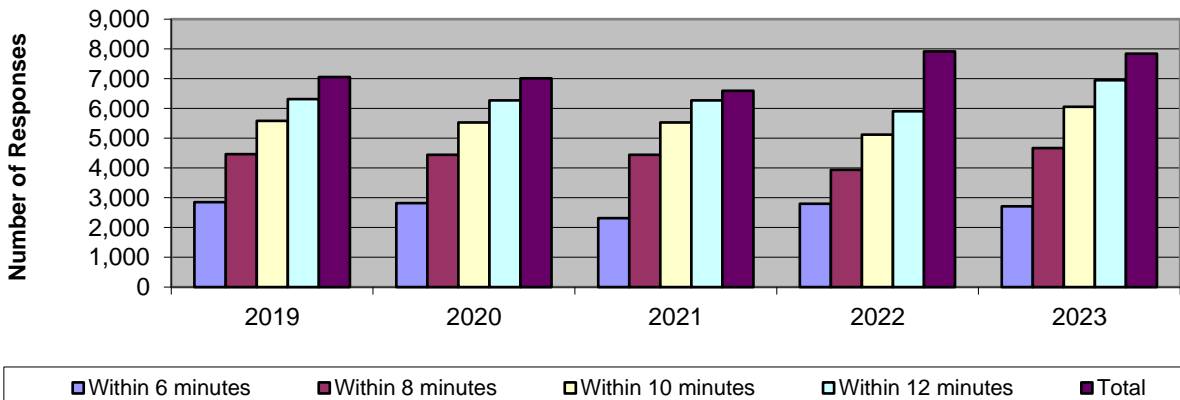
Echo Level Response, Sussex County EMS



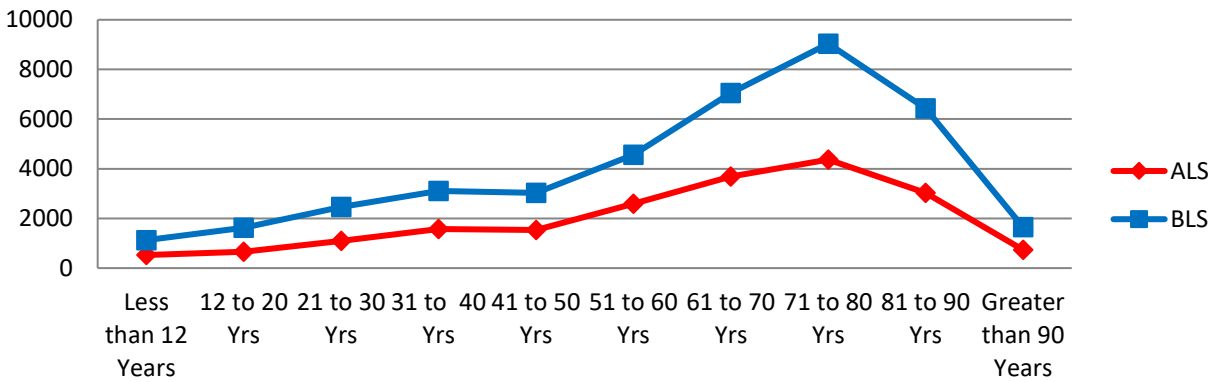
Delta Level Response, Sussex County EMS



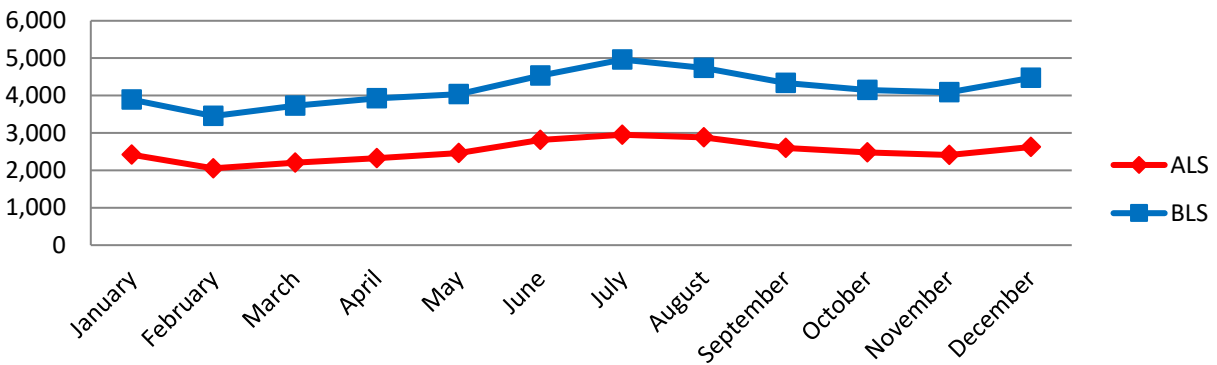
Charlie Level Response, Sussex County EMS



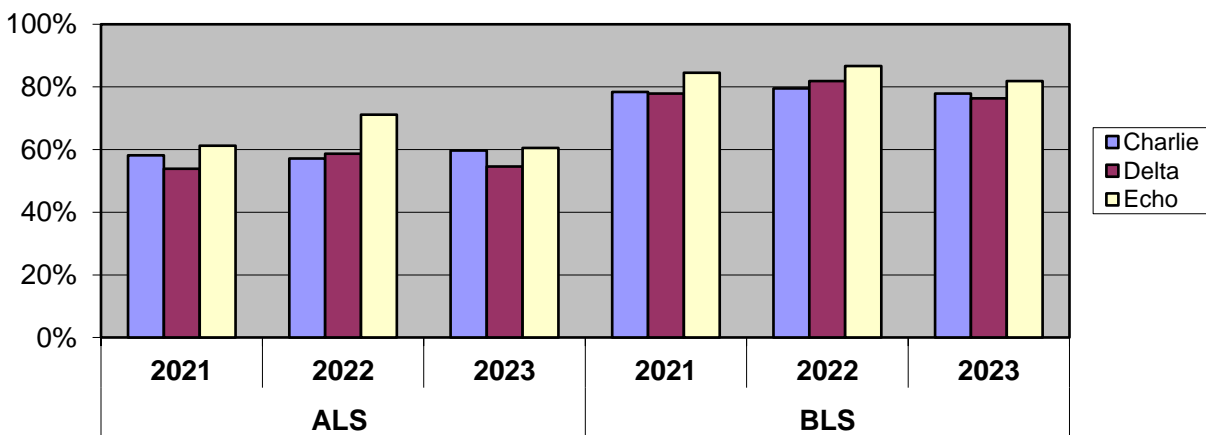
ALS and BLS Patient Age Comparison - 2023 Sussex County



ALS/BLS Incidents by Month - 2023 Sussex County



Percentage When Sussex County ALS/BLS Arrived On-Scene in 8 Minutes or Less on Delta/Echo/Charlie Level Incidents - 2023



Sussex County Emergency Operations

Submitted by Joseph Thomas

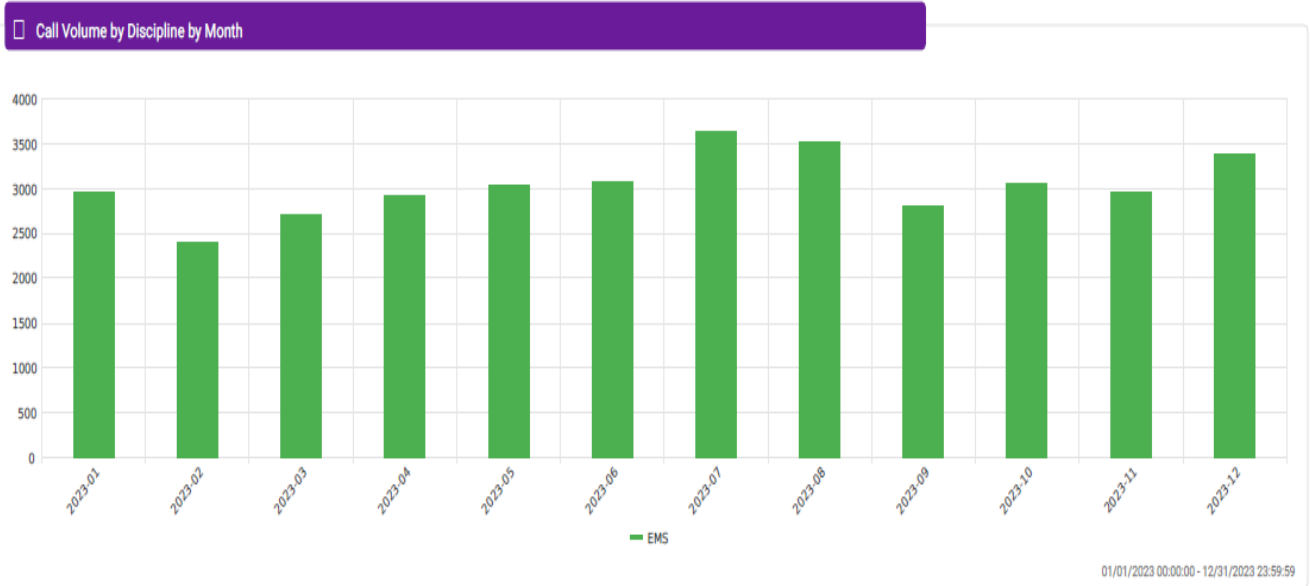
Introduction:

Sussex County Emergency Operations provides the citizens and visitors of Sussex County with quality and timely emergency services, which includes 9-1-1 law enforcement call taking, Fire and EMS dispatching as well as Emergency Management to prevent, prepare, respond, and recover from natural and man-made disasters that threaten Sussex County. The 9-1-1 Dispatch Center strives to provide the most effective emergency communications possible by meeting established professional standards, promoting efficiency and professionalism.



Operational Overview and Yearly Totals for EMS-FIRE-Police Incidents

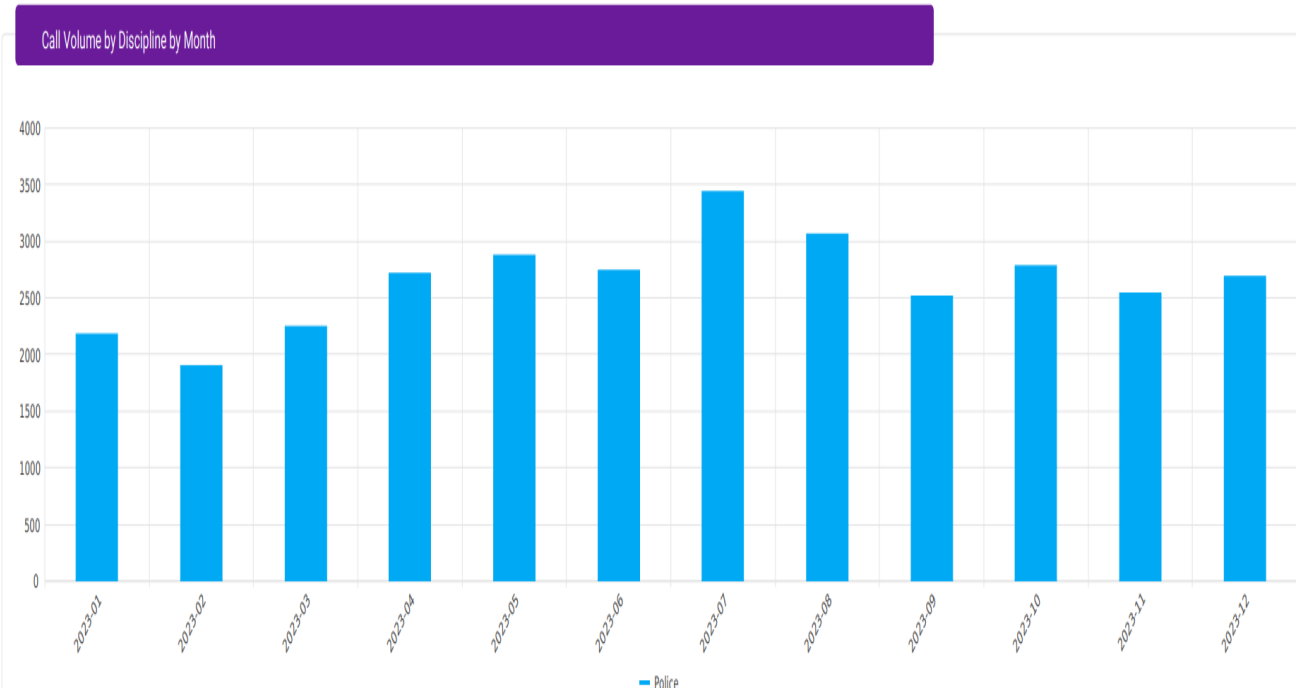
EMS



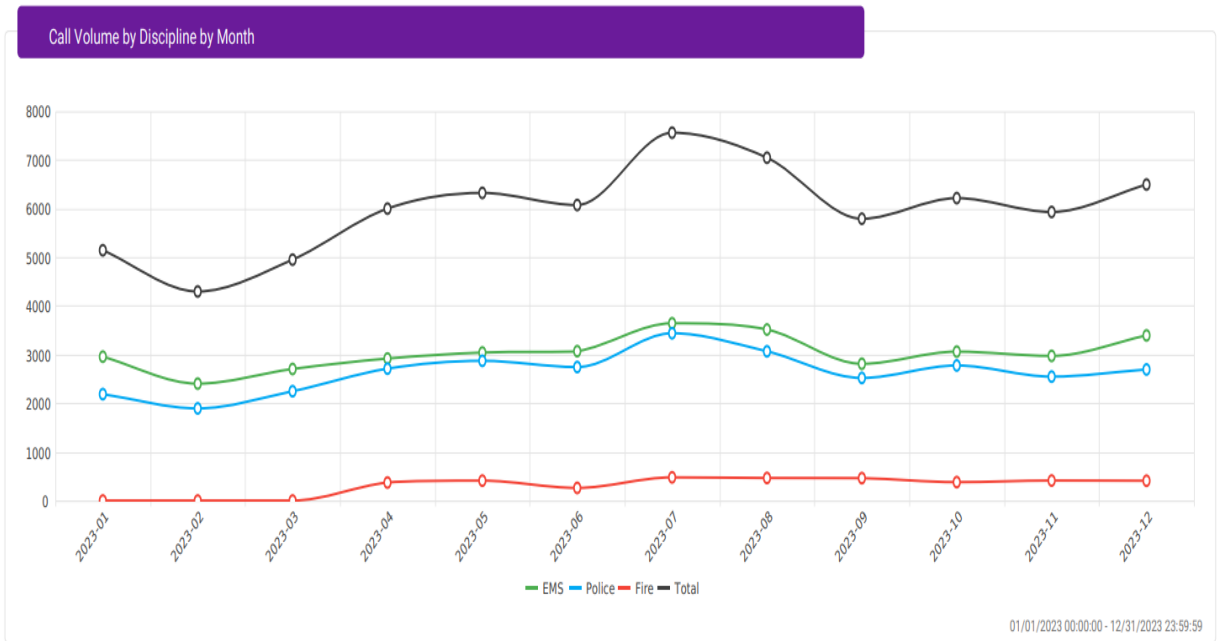
FIRE



POLICE



Total Combined Call Volume



2023 Initiatives



Sussex County Emergency Operations Events and Community Programs

- 23 Command Post Events and Exercises
- 16 Smart 911 Displays and Community Outreach
- 2 Fire Department Trainings at their Respective Stations
- 2 Command Post Callouts for Emergency Incidents

2023 Accomplishments

- Staffing Levels Increasing to 100% of the 40 dispatchers needed
- Submitting Re-Accreditation for Medical with Priority Dispatch
- Receiving ACE Accreditation for Police with Priority Dispatch
- Reaching 8 CTO Trainers, 2 for every shift
- Implementation of the Sussex County Emergency Operation Center's first Telecommunicators Incident Stress Management (T.I.S.M) Team
- Receiving the TRI-ACE Accreditation for MEDICAL-FIRE-POLICE and making us the 24th in the world
- Annual Sussex County 911 Day at the Emergency Operations Center
- First Place Team Award with APCO for 911 mitigation for the Tornadic Event

2024 Goals/Challenges

- Working on Recruitment initiatives and sustaining retention of our 40 Dispatchers
- into Automatic Call Distribution for the call takers
- ASAP to PSAP: Future this allows the alarm company to transfer alarm data directly into the CAD. This minimizes the phone calls into the 911 center and update to that alarms are real time.

Rehoboth Beach 9-1-1 Communications Center

Submitted by Chief Keith Banks

The Rehoboth Beach 9-1-1 Communications Center provides 24/7 9-1-1 and emergency communications services to the City of Rehoboth Beach Police and the surrounding area encompassing the 21 square mile Rehoboth Beach Volunteer Fire Company jurisdiction. Serving a total population of 21,700 residents and over 10,000,000 visitors each year.

To accomplish this the Rehoboth Beach 9-1-1 Communications Center operates within the Rehoboth Beach Police Department building under the direction of the Chief of the Rehoboth Beach Police Department and a Communications Supervisor. Utilizing the INTRADO 9-1-1 phone system, Verint recording software, Ring Central VOIP administrative lines, Motorola Centracom Elite Radio System, and Tyler Technologies Enterprise CAD.

The 9-1-1 center is currently approved for twelve full-time employees and two part-time employees consisting of two Communications Specialist Is, four Communications Specialist Trainees, four Communications Specialist IIs which act as shift supervisors, and one Communications Supervisor that oversees all 9-1-1 center operations. There are currently two Communication Specialist vacancies.

The Rehoboth Beach 9-1-1 Communications Center was recognized by the International Academy of Emergency Dispatch as the 79th Emergency Medical Accredited Center of Excellence in the world on April 1, 2003. In 2019 the communication center received accreditation in both Emergency Police and Fire Dispatch and was recognized as the 17th Tri-ACE in the world, and the first in the State of Delaware.

Call Volume

In 2023 the Rehoboth Beach 9-1-1 Communications Center processed 10,707 incoming 911 calls, and 17,888 non-emergency incoming calls. The communications center processed and/or dispatched 2,712 police incidents, 1,671 traffic stops, and 2,067 9-1-1 Disconnects for a total of 6,558 police type complaints. The communications center processed and/or dispatched 4,212 EMS incidents of which 56 were ECHO level cardiac arrests. The communications center also processed and/or dispatched 757 fire incidents during the year.

2023 Accomplishments

In 2023 the Rehoboth Beach 9-1-1 Communications Center accomplished several major goals. The communications center received approval from the City Manager and Commissioners to raise the starting pay to a more competitive level.

After losing several Communications Specialist and dropping down to 60% staffing of only seven full-time Communications Specialists, we successfully hired four new dispatchers starting in September and a fifth is scheduled to begin in January 2024.



Data provided by DE ECATs.

With the increase in new Communications Specialists a need to review and update our training program became necessary. This review and updated was completed by the training officers in the department and has been successfully put into place for our new personnel.



Left to right, back row: Nicholas Priddy, Steve Watson, Todd Reilly, Brian Wendt. Front row; Gregory Tietmeyer, Katie Stachowski, Ky’Ajah Anderson, Cynthia Peters, Noah Tuohey. Photo Provided by Rehoboth Beach Police Department.

2023 Goals

In 2023 the Rehoboth Beach 9-1-1 Communications Center has set goals to further the efficiency and effectiveness of the communications center. These goals include continuing the process for updating and reviewing policies and procedures by the Communications Specialist IIs. Upgrading the center with a fourth console that will be used to train new personnel and act as an overflow position for high call volume times. Obtain two laptop systems to operate during special events and act as back up work stations in the event a loss of connection there is a need to evacuate the center. Lastly the communications center will continue as always to provide continuing education and advanced training opportunities to the Communications Specialists to meet the needs of certification and recertification as well as the expansion of their individual knowledge of emergency communications.

Summary

The Rehoboth Beach 9-1-1 Communications Center seeks to provide the most effective access to the 9-1-1 system and emergency communications possible to the citizens, visitors, and emergency agencies in Rehoboth Beach. To achieve this the communications center continually invests in the Communications Specialists and equipment operating in the 9-1-1 Communications Center. As well as setting and achieving goals based on the operational needs of the center and the agencies we support to protect lives and safety, stabilize emergency and non-emergency incidents, and conserve property.



Air Medical Transport Certification

The Systems of Care Office oversees Delaware's Air Medical Transport Certification Program. Air medical transportation plays a key part in the Trauma and Stroke Systems of Care, to get the right patient to the right facility in the quickest amount of time.

Delaware's Division of Public Health first promulgated regulations for Air Medical Ambulance Services in 1993 and are scheduled to be updated. 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.

Air medical services may apply for any of three levels of State of Delaware interfacility transport certification and/or prehospital certification. The initial certification period is three years, with recertification required every three years subsequently.

911 Scene Response Certification:

Approval granted following satisfactory completion of the application process to an air medical 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.

- Delaware State Police, Middletown & Georgetown, DE
- ChristianaCare LifeNET, Newark & Georgetown, DE

Full Interfacility 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.

- ChristianaCare LifeNET, Newark & Georgetown, DE
- JeffSTAT, Media, PA
- MedSTAR, Baltimore, MD
- PHI ExpressCare, Baltimore, MD
- STAT Medevac, Baltimore, MD

Limited Interfacility 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.

- Cooper Air Medical, Millville, NJ
- PennSTAR, Philadelphia
- Temple MedFlight, Doylestown, PA

Delaware State Police Aviation Section

Submitted by Sgt. Ted Stipa



Mission Statement

To enhance the service provided by the Delaware State Police with effective and efficient aviation resources, to safely support the delivery of law enforcement, emergency medical services, and search and rescue operations, while enhancing the quality of life for all Delaware citizens and visitors.

Core Values

Honor, Integrity, Courage, Loyalty, Attituded, Discipline, and Service

DSP Aviation Section



Introduction

The Aviation Section's primary missions are to provide rapid transport of critically sick or injured persons to medical facilities and to support law enforcement ground personnel in the apprehension of criminal suspects. In addition, the Section conducts search and rescue operations, airborne security for visiting dignitaries, homeland security operations, photographic missions, narcotics interdiction, pursuit support, and maritime security missions.

The Section consists of 25 pilots and medics providing 24-hour coverage from two locations, Georgetown and Middletown. Additionally, there are 2 medics and 1 pilot in training. The aircraft fleet consists of three (3) Bell 429 helicopters and one (1) fixed-wing Cessna 182 aircraft.



2023 Accomplishments

Law Enforcement Profile

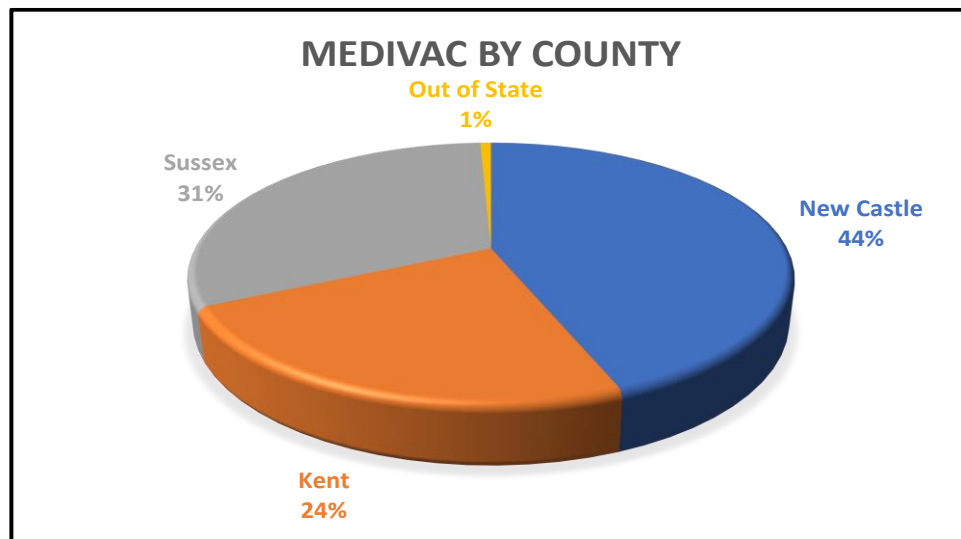
The Aviation Section supports State, Federal, and Local law enforcement by providing aerial assistance in several areas:

- Aerial Law Enforcement Support
- Tactical Medic Support
- Homeland Security Operations
- VIP Transport and Security
- Marijuana Eradication
- Aerial Photo Evidence

2023, the Aviation Section continued to support the community accumulating 1,493 flight hours.

	2022	2023
Total Missions	2,334	4,074
Total Support & Training	302	628
Total Flight Hours	1,408	1,493

The Aviation Section provides air medical transport and advanced life support backup for ground transport of seriously injured and/or ill persons. In 2023, the Aviation Section had 2,177 requests for medivac service.



In 2023 the Aviation Section conducted 742 Criminal Searches resulting in 63 apprehensions. There were 40 Pursuits in 2023 resulting in 35 apprehensions. Additionally, there were 314 non-criminal searches concluding with 89 locations of persons on land or a boat.

	2022	2023
Criminal Activation	577	742
Criminal Apprehensions	61	63
Pursuit	59	40
Pursuit Apprehensions	11	35
Non-Criminal Searches	149	314
Located (Non-Criminal)	39	89

Delaware State Police Aviation Tactical EMS Missions

The Delaware State Police Tactical Medic Mission is comprised of four (4) Trooper medics who have received specialized training and equipment to provide medical support for the Delaware State Police Training Academy, Delaware State Police Special Operation Response Team, FBI Special Weapons Tactical Team, Wilmington Police Department Special Weapons Tactical Team, Delaware State Police Explosive Ordinance Disposal Unit, and the Delaware State Police SCUBA Team during high-risk operations. In 2023, the DSP Tactical Medics had a total of 115 activations.



President of the United States (POTUS) Missions

Delaware State Police Aviation Section has been supporting the United States Secret Service during POTUS movements in the State of Delaware by providing aerial overwatch. Since 2021 the Aviation Unit has been engaged in 178 missions supporting this effort including 67 in 2023.

Medic Training

In 2023, the medics attended training at the University of Maryland Baltimore County to satisfy their continuing education credits needed to maintain their paramedic certifications. Trooper medics also participated in continued education with New Castle County ALS, and Sussex County ALS. The Delaware State Police Trooper medics provide CPR training for all sworn Troopers. Law enforcement medical response training, a 40-hour class, is taught to all recruit Troopers and Municipal recruits.

Delaware State Police Aviation Section hired a civilian paramedic trainer in 2021. This trainer provides all of the Divisional CPR and LEMR training. The civilian trainer also trains our section members for medical and tactical flying officer.

Automated External Defibrillator (AED) and Narcan Deployments

In addition to supervising day-to-day operations, the Paramedic Commander is responsible for overseeing the training, maintenance, deployment, and reporting for AED use, Narcan administration, and investigating potential infectious disease exposures for the entire Delaware State Police workforce.

There are 460 Boxes (or 920 Doses) of Narcan that were available to be deployed in the field for 2023. In 2023 Troopers deployed their Automated External Defibrillator (AED) 27 times and Narcan 49 times.

Infectious Disease Exposures

During the 2023 calendar year, the Delaware State Police had a total of 24 confirmed infectious disease exposures. While in 2022 there were a total of 11 confirmed infectious disease exposures compared to a total of 46 confirmed infectious disease exposures in 2021 and 113 in 2020.

2024 Challenges and Goals

Staffing

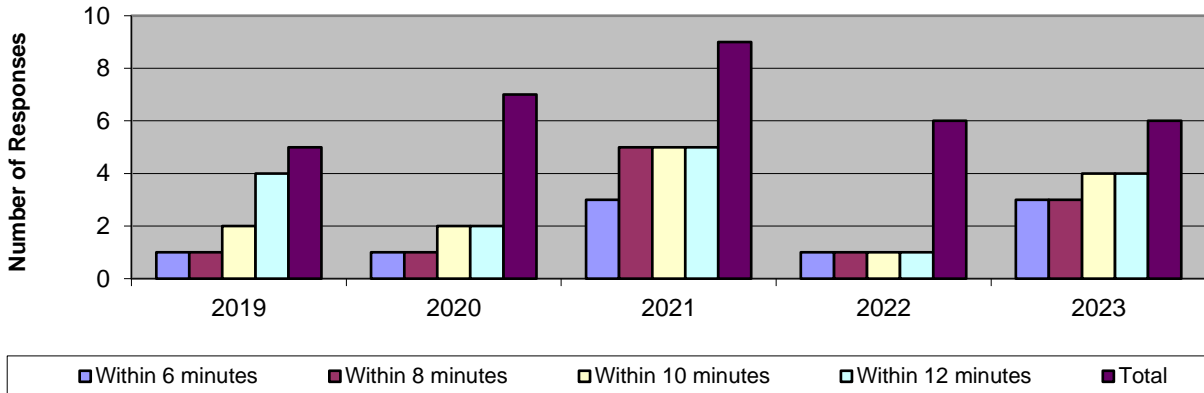
Our new Trooper Medic will continue to attend the Good Fellowship Paramedic Program with a targeted graduation in 2024. In 2023, one (1) Trooper Pilot retired from the Delaware State Police, and one (1) Trooper Pilot returned from active duty with the Delaware Army National Guard.

Training

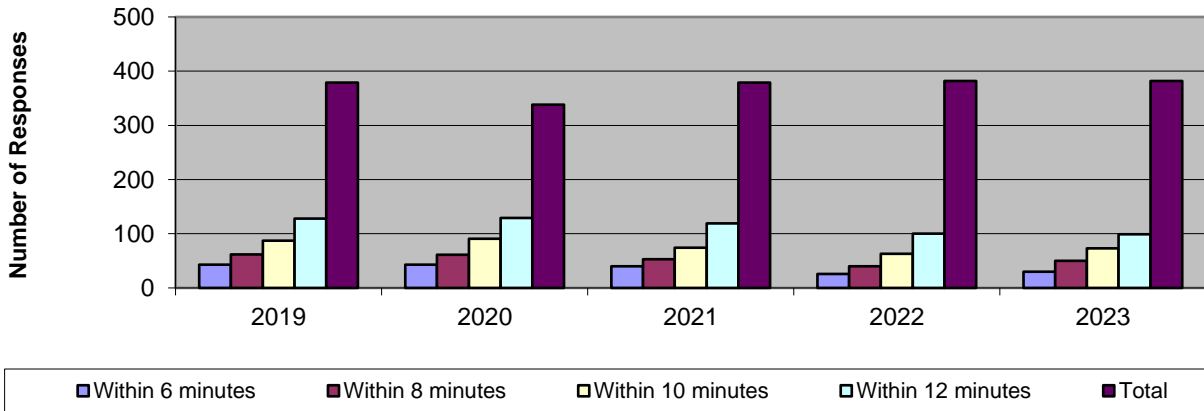
The goal for 2023 is to increase training and proficiency by incorporating training with all three ALS agencies, riding with ground ALS agencies, and attending nationally recognized Paramedic Conferences. The Delaware Aviation Tactical medics will continue to train monthly with the tactical paramedics from New Castle County ALS. This tactical medical training is personally overseen by the Delaware State Police Medical Director / New Castle County Paramedic Medical Director Dr. Justin Eisenman, DO.



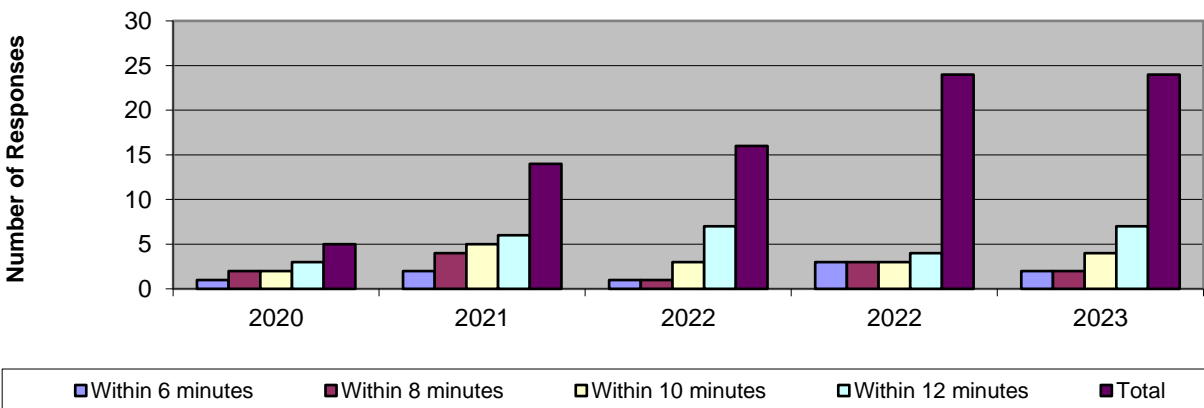
Echo Level Response, DSP



Delta Level Response, DSP



Charlie Level Response, DSP EMS





ChristianaCare LifeNet DEMSOC Report 2023

Submitted by Jeffrey Cox BS, CEMSO, FP-C
Clinical Base Lead/Critical Care Flight Paramedic

INTRODUCTION



LifeNet 6-4 Landing

ChristianaCare LifeNet has been an integral part of pre-hospital and critical care interfacility transport since the spring of 2001. With bases in New Castle and Sussex Counties, the LifeNet aircrafts are available to support not only the hospital and EMS agencies in Delaware, but also Pennsylvania, New Jersey, Maryland and Virginia.

Our highly skilled and critical care trained flight team is equipped to maintain or adjust life sustaining treatments initiated on scene or at referring hospitals. Our staff are not only Registered Nurses and Paramedics, they hold specialty critical care

certifications demonstrating competence and advanced skillsets well beyond standard certifications. Most of our staff have over twenty years of experience as health care providers. Extensive protocols with liberal standing orders, expanded scope medications, and advanced invasive monitoring capabilities allow the crew to deliver uninterrupted quality critical care during transport.

Critical Care Capabilities

BLOOD PRODUCTS

EXPANDED MEDICATION FORMULARY

CRITICAL CARE VENTILATORS

EXTRA CORPORAL MEMBRANE OXYGENATION (ECMO)

HIGH-FLOW NASAL CANNULA OXYGENTATION

CARDIAC BALLOON PUMP

IMPELLA AND LEFT VENTRICULAR ASSIST DEVICE (LVAD) MANAGEMENT

CARDIAC AND CEREBRAL INVASIVE PRESSURE MONITORING

CHEST TUBE MANAGEMENT

CAMTS

Accreditation:

ChristianaCare LifeNet is proud to have been awarded and maintained accreditation by the Commission on Accreditation of Medical Transport



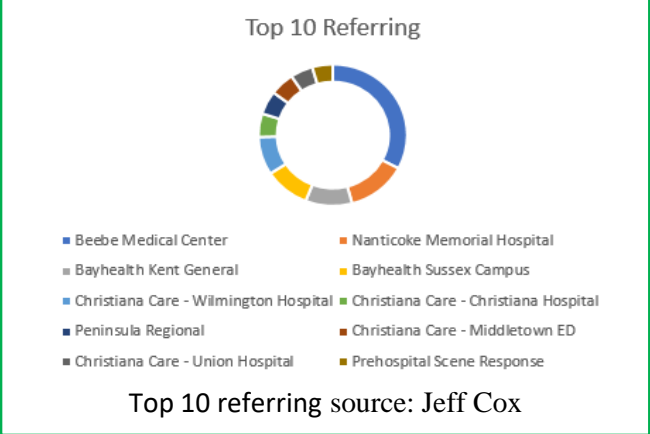
LifeNet 6-1 at Hospital University of Pennsylvania source: Jeff Cox

Systems (CAMTS) since April of 2006. This certification indicates that our aviation and patient care systems have completed multiple rigorous site surveys and have been found to meet or exceed the nationally established standards for critical care transport programs. The Team is due for re-accreditation in early 2024 and have been preparing for the site visit and preparing our rigorous assessment.

2,110 flight requests resulted in 1002 missions being completed in 2023 with referrals from 34 area hospitals across 6 states and received by 40 major specialty centers in Delaware, Pennsylvania, Maryland, the District of Columbia, New Jersey, New York and Virginia. In comparison, the reduction in flight volume due to the Covid pandemic was dramatic, appreciating a decrease in volume to 385 patients transported by our flight team in 2020. 2021, 2022 and 2023 saw a resurgence of volume resulting in a 238% increase in volume over the same time 2021. This can be attributed to increased use of the EZ-Button, autolaunch and increased utilization by our sending facilities.

LifeNet also provided support to EMS agencies in New Castle, Kent and Sussex Counties and transported 23 scene patients to area trauma centers. All graphs are sourced from ChristianaCare EMSCharts and Transfer Center data.

2023 ACCOMPLISHMENTS



IFR patient transfer on foggy day source: Jeff Cox

Instrument Flight Rules (IFR): During our initial year of IFR capability in 2022, the Georgetown base completed 19 IFR flights. For 2023, we completed 62 IFR missions, logging 2418 minutes of IFR flight time for the Georgetown Base on patients that would have been transported by an already stressed ground transport system. IFR has remained a standing item on the safety committee agenda and is reported to the TQM committee. Check-in's with the flight crews demonstrate a high level of confidence with our IFR flights and the pilots. Crews have verbalized that they prefer IFR

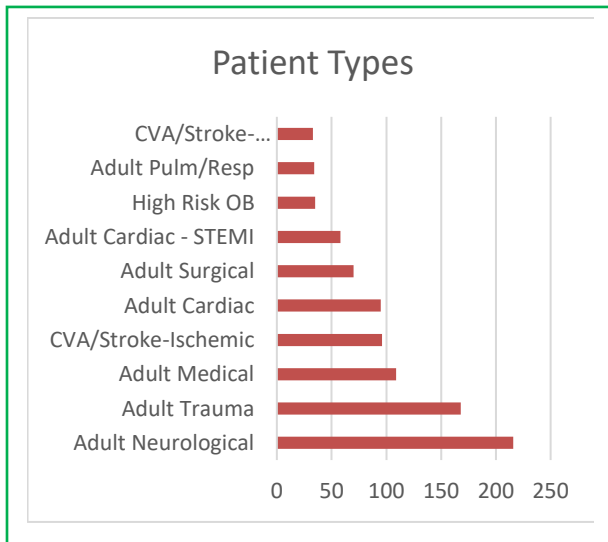
because it is "safer". We have completed two IFR scene requests with Sussex County EMS. We transported a stroke and a pediatric trauma patient directly to Specialty Care Centers during weather that would have precluded a visual flight north and we were able to safety transport the patient to the appropriate care.

Rapid Response Improvement Program: LifeNet has implemented a system of EZ-Buttons throughout our referring hospitals. All the requestor has to do is hit the button and the autolaunch process is started. The crews are immediately dispatched and start the process of launching to the requested location while the AirCom dispatchers gather further information about the patient. This has dramatically reduced our time to reach the patient bedside and reducing the overall time it takes to move the patient to definitive care. The EZ-Button is primarily used by the Southern Delaware hospitals, with 339 EZ-Button requests (32% of all requests). ChristianaCare facilities (Wilmington, Union, Middletown) have adopted a "standby" approach for time-sensitive patients (stroke, STEMI and Trauma). When EMS

requests an alert of this type, or a walk-in patient arrives, the helicopter is immediately placed on standby. This has shortened our response times once the standby is upgraded to a response. Last year our northern helicopter was placed on standby 411 times, with 14% (56) converting to a patient flight.

New Leadership: 2021 saw the arrival of our new Director of Prehospital Services. He brings years of Helicopter and Ground EMS leadership experience and has initiated many new programs that can be attributed to our over 200% increase in flight volume. ChristianaCare is increasing the services provided by ground and air and streamlining the acceptance flow through our transfer center. We are working on implementing TraumaSoft patient coordination/dispatch software to further streamline and improve the ease of acceptance of patients into the ChristianaCare system and provide real-time decision-making data for our Transfer Center and administrative staff. This will also provide data for the Quality, Safety, Education and administrative teams to review.

Performance Metrics: We continue to monitor and report our clinical benchmarks at each staff/CQI meeting. In addition, the benchmarks and current performance are available to all staff on TEAMS for review. A sample graph of year-end 2023 tracking benchmarks are below. These benchmarks are reviewed at our Total Quality Management meetings and any that are not meeting goals are discussed and direction given on how to fix (education, policy).



Patient Care & Documentation	Mean	Goals
Cardiac Monitor Application	100%	85%
Documentation of Hands-Free Defib Pads	91%	85%
Med Infusion Documentation (rate/dose/dilution)	94%	85%
Treating Pain (When Level Documented)	92%	90%
Treating Cardiac Chest Pain	95%	90%
Transport ventilator applied at the bedside by the flight crew	100%	90%
Ventilator Settings Documented X2 (PTA and crew set)	99%	85%
Head of Bed Elevated 30 Degrees for Stroke Patients	99%	85%
Radiology Findings (pertinent to diagnosis)	96%	85%
Charting Receiving Hospital MRN	99%	85%
Cabin Temperature Documented (during the patient transport)	98%	85%
Cabin Temperature Interventions (if <50° or >95° F)	99%	85%
Dr's Orders Documented Correctly	89%	85%
Capnography monitored with advanced airway	100%	90%
ETCO2 Waveform Documentation (Intubated Pt's)	100%	85%
Patient Hearing Protection	99%	85%
Reason for Transfer in HPI	100%	85%
Follow-Up Letter Completed	88%	85%
Documentation of Time of Injury on Trauma Patients	87%	85%
Last Documented Time Well in Stroke Patients	94%	85%
Appropriate BP Management in Hemorrhagic Stroke	100%	90%
Blood Glucose Charted with Patient's GCS <15	96%	85%
Temperature documented (when appropriate) for pediatric patients	99%	85%
Interfacility pts transferred bedside to bedside by the med crew	100%	85%

LifeNet 6-4 post-flight at ChristianaCare Hospital
source: Jeff Cox



LifeNet 61 EC145 D3

New EC145 D3: AirMethods has approved and painted our new helicopter for the Newark base. Unfortunately, there has been a significant amount of FAA red tape for approval of one of the first PowerLoad stretchers in a helicopter. It has been placed in dry storage until this is sorted out. We hope to have delivery at some point in 2024.

CLINICAL EDUCATION

In 2022 we lost our volunteer clinical education committee chair. We have been unable to get a team member to agree to volunteer chair the education committee through 2023. Our Pre-Hospital Services administration identified this as a major priority item on our 2023 agenda. Hard work and marketing to ChristianaCare executive leadership finally saw us able to convince them that a clinical educator was a priority for the transport team, and it was approved. The position is now open for application and our team looks forward to a full-time clinical educator to keep our mandatory certifications on-track, and to facilitate high-quality continuing critical care education for our team members.

2023-2024 CHALLENGES

LifeNet has experienced similar challenges to those experienced by the county 911 services such as staffing, funding and increased volume. It has become increasingly difficult to attract and hire new staff to keep up with the increased demand. A large portion of our increased demand is downstate hospitals are unable to obtain timely ground transport for their non-flight patients and they are utilizing the helicopter to transport these patients due to 6-12 hour or longer ETAs from the private ambulance services, or there is not an ALS interfacility provider available. During inclement weather, our flight crews are routinely staffing both ChristianaCare and private interfacility ambulances and completing flight-requested transports by ground ambulances. It is also well documented that many tertiary and community hospitals are at capacity, causing a backlog of transports and patients waiting for beds to become available. We have experienced transports to very distant and non-common destinations as sending facilities attempt to find an open bed anywhere possible. Our Critical Care Ground Transport Team completed 4,500 patient transports in 2023. We continue to show rapid linear growth in our requests for transfers and our patient volume that we do transfer by ground and air. Another challenge we are facing is that ambulances ordered over a year ago still have no build date determined.



LifeNet 64 at University of Maryland source: Jeff Cox

LOOKING FORWARD



LifeNet 6-4 at University of Pennsylvania source: Jeff Cox

For the first time in our program history, we completed over 1,000 flight missions in a year. This is a huge milestone for our team as two years ago our flight volume was incredibly low. Current flight volume is dramatically increasing, and we intend to increase staffing to meet the increased demand. We have been approved for a full paint application on our existing LifeNet 6-4 to match the new ChristianaCare branding. We look forward to the hiring of a clinical educator and we will have an educational leader that can coordinate not only our many mandatory certifications and multi-state licenses while also organizing and conducting high-level critical care education for our orientees and veteran staff. We continue to place effort into

implementing multiple modules from TraumaSoft which will streamline our operations and provide metrics for discussion in Quality, Safety and Administrative meetings. We are eagerly anticipating the arrival of our new EC-145 D3 aircraft in 2024. This state-of-the-art helicopter has been made possible due to the hard work of the flight crews and administration resulting in a major increase in our flight volume. We await delivery of our 3 new ground Critical Care ambulances. AirMethods and ChristianaCare LifeNet's medical crew, pilots, mechanics, medical leadership, and program director will continue to provide aeromedical services to our community by being prepared to deliver high quality critical care when our patients need it most.



LifeNet 6-4 ready for dispatch source: Jeff Cox



Delaware Coalition for Injury Prevention

Submitted by Injury Prevention Coalition of Delaware

A key component of the Trauma System is the Delaware Coalition for Injury Prevention. This coalition is overseen by the Office of EMS. Injury prevention is vital work. Prevention has been proven to save lives and healthcare dollars.

The concept of the injury prevention program was introduced in 2000 with a vision that Delaware's culturally diverse population would be empowered to reduce their risks for injuries by making safe choices. Since 2004, the Coalition has been meeting on a quarterly basis.

The first and most obvious challenge to injury prevention efforts is to be successful - to get the message to the public, especially under-represented groups, in such a way that injuries and injury-related deaths actually decrease.

The Delaware Coalition for Injury Prevention began and continues to develop and support public education injury prevention programs. Through these efforts, the Coalition's goal of safe communities throughout Delaware will be realized, as measured by fewer injuries, fewer risk-taking behaviors, safer environments, and reduced incidence of injury-related disabilities.

Approximately 40 agencies from all areas of the state are currently Coalition members. Through effective surveillance, partnerships, interventions, training, and evaluation the Coalition's individual members and their agencies strive to teach all Delawareans that injuries are preventable.

Members of this coalition form focus teams in the areas of:

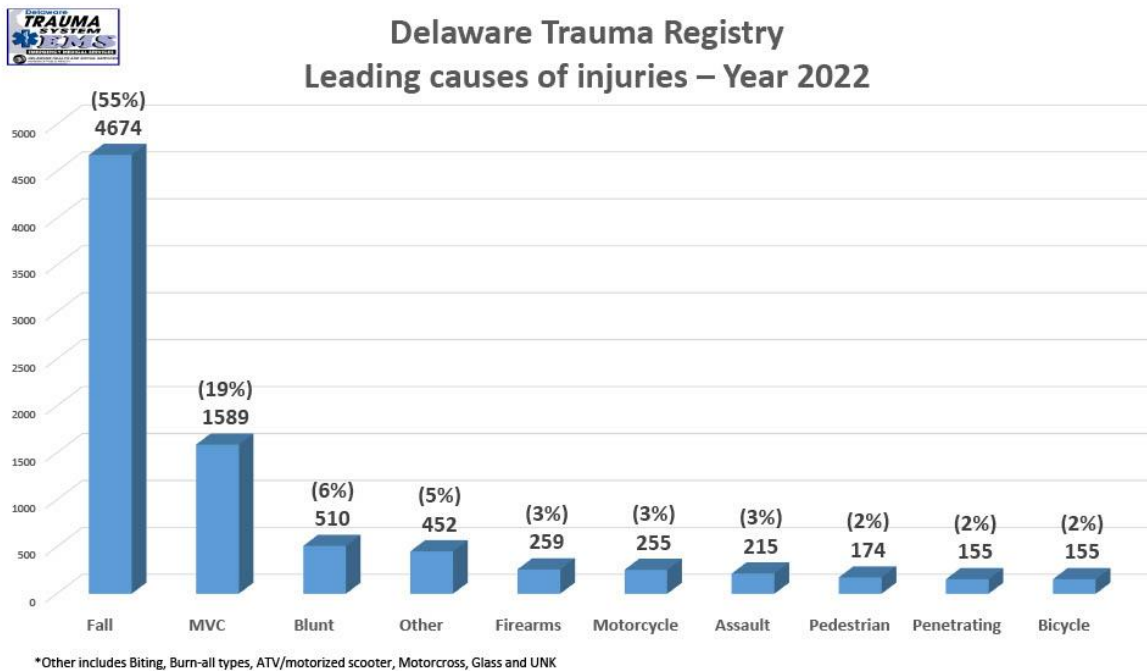
- Falls
- Gun Violence/Violent Injuries
- Poisoning
- Dog/Animal bites
- Fires/Burns/Smoke Inhalation
- Motor Vehicle/Motorcycle
- Traumatic Brain Injury
- Pedestrian
- Sexual Assault/Gender-Based violence

Per the Delaware Trauma Registry, falls make up over 55% of all preventable injuries, with 69% of those occurring in patients over 60. The primary subgroup of the Coalition—the Fall Prevention Team—is concentrating heavily on reaching out to Delaware's senior citizens to reduce the number of injured people through public education and awareness.

The latest available Delaware Vital Statistics Annual Report 2020 (page 166) lists accidents (unintentional injury) as the fourth leading cause of death overall in the state.

- Of the 720 deaths due to unintentional injury in 2020 (6.7% of all deaths), 15 percent were due to motor vehicle accidents and 84 percent were due to non-transport accidents. More than two thirds (71%) of the 431 non-transport accidents were caused by unintentional poisonings; the majority (98%) of unintentional poisonings were drug-induced poisonings.

- Unintentional poisonings surpassed motor vehicle injuries as the leading cause of unintentional injury death in 2020.
 - Poisonings caused the most unintentional injuries for non-Hispanic white and non-Hispanic black decedents. Motor vehicle traffic accidents were the second highest unintentional injuries for both non-Hispanic black males and females whereas falls were the second highest unintentional injuries for both non-Hispanic white males and females.
- In 2016-2020, accidents were the number one cause of deaths for people 1-44 years of age, and they were responsible for 45 percent of all deaths of people 15-24 years of age. For decedents ages 15-24, accidents, homicides, and suicides were the three most frequent causes of death and accounted for 82% of total deaths for that age group.



Delaware Trauma Registry – 2022 Data (latest year with complete data)



Delaware Pediatric System of Care (Safe Kids Delaware)

Submitted by Safe Kids of Delaware

Unintentional injuries are a leading cause of death and hospitalization for children. The leading causes of injury hospitalizations in this age group are falls and highway incidents. Violent injuries such as those involving firearms lead to longer hospital stays, and motor vehicle crashes are responsible for a higher number of severe injuries.

Led by Delaware’s Division of Public Health, Office of Emergency Medical Services, Safe Kids Delaware is a member of Safe Kids Worldwide, the nation’s leading organization dedicated solely to prevention of childhood injuries. Safe Kids Delaware was established in 1992 to educate the public on a variety of child injury prevention topics. Each of Delaware’s three counties has their own chapter under the Safe Kids Delaware umbrella.

Safe Kids Delaware subcommittees (injury focus groups), include Kids at Home, Kids in Cars and On the Road, Kids in Sports and Play, Consumer Product Safety, and Child Passenger Safety.

In 2023, Safe Kids Delaware has increased its partnerships with civic and state organizations, providing educational programs to further their goal of reducing the number of childhood injuries across the state.

Safe Kids Delaware Accomplishments

	Number of Events	People Reached	Car Seats Distributed
2019	939	113749	52
2020	121	6000	10
2021	235 (including 194 virtual)	10546	9
2022	346	33252	38
2023	76*	69586	63

**Calculated differently than previous years/co-branding now required*

Child Passenger Safety is a core programming area and includes the Car Seat Assistance Program, which provides car seats to Delawareans using a voucher system. In 2023, 63 car seats were provided at a discounted rate to persons in need. This is a 165% increase from the previous year.

Safe Kids Delaware uses social media platform through DHSS and DPH to increase education and awareness about childhood injury prevention.

Thank You

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

Office of EMS, Office of Preparedness, Department of Safety and Homeland Security, SFPC, DSFS, State Fire Marshal's Office, Delaware Technical and Community College, New Castle County EMS, Kent County EMS, Sussex County EMS, Delaware State Police, Delaware Healthcare Association, Emergency Medical Services for Children, Safe Kids Delaware, Delaware Coalition for Injury Prevention, DE Trauma Committee, DE Overdose Committee, DE Stroke Committee, NCC Dispatch, KC Dispatch, SC Dispatch, Rehoboth Dispatch.