

SUSSEX COUNTY EMERGENCY MEDICAL SERVICES



2024 ANNUAL REPORT

"Caring People. Quality Service"



INTRODUCTION

2024 Sussex County EMS Goals & Accomplishments

- Improved hospital transfer of care times - 99.6% of dwell times are < 30 minutes (0.4% improvement)
- Airway management - First Pass Intubation success rate improved by 6%
- Integration into the Department of Public Safety
- Involvement of Communications personnel in some of the monthly Con Ed programs
- Support of DTCC's first year of the 12-month certificate program
- Substantial completion of Medic 103 station in Millsboro

Sussex County Emergency Medical Services (SCEMS) continued its tradition of excellence in pre-hospital care in a year with multiple achievements. A new modern station in central Sussex County (Medic 103) was nearly completed by the end of the year. The addition of this station continues Sussex County's commitment to transitioning the department to county owned and maintained facilities. The SCEMS competition team once again competed in 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 third summer season to support EMS responses along the Route One corridor. Medic 109 completed its first full year as a year-round daytime-only unit. 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.

THOMAS W. BERRY III

The 2024 year was not without great loss on the SCEMS family. On August 13, 2024, EMS Logistics Technician Thomas W. Berry III was first on the scene of a motor vehicle accident, and tragically, lost his life in the line of duty while assisting someone in need. Thomas was devoted to his family, proud of his role in the EMS department, the fire service and looked forward to furthering his role in emergency services. The loss of Thomas represents the second LODD in Sussex County EMS history.



COMPLETION OF THE NEW MEDIC 103 STATION ON HANDY ROAD IN MILLSBORO



Medic 103 (Source: Sussex County)

Sussex County officials continue to support the department's efforts to own and maintain stations. The construction of the new Medic 103 in the Millsboro area has been nearly completed and the station will go into service early 2025. The new location is anticipated to improve response times in the general area secondary to its improved access to DuPont Boulevard. The station continues to implement safety initiatives such as drive through bays and additional lighting to identify garage door opening and closing activities decreasing the potential for collisions.

CLINICAL EXCELLENCE

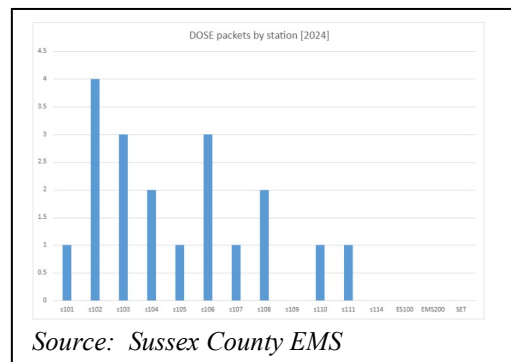
Whole Blood: In 2024, Sussex County EMS proudly continued its prehospital low titer whole blood program. Over the course of the year 34 patients in Sussex County have received blood, with eight patients receiving multiple units of blood products. Continuously striving for improvement, we are actively 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. This year our partnership has allowed for us to embark on a "zero waste" program where the Blood Bank of Delmarva has allowed for the return of unused blood product to protect the supply of this precious commodity.

COMMUNITY PROGRAMS

DOSE Program: Sussex County continues to pioneer the county-wide Direct On-Scene Education (D.O.S.E.) program that was established in 2015. In the previous nine years, Sussex County Paramedics have provided 242 families with potentially life-saving education to prevent infant sleep-related deaths. All EMS calls are quickly evaluated by Paramedics for potential educational or resource needs. When a child under the age of 12 months is identified by paramedics on the scene of an EMS or fire call, a D.O.S.E. packet is provided to the family. Each packet provides state resources and education on up-to-date safe-sleeping practices approved by the AAP. Additionally, if a dire situation is identified without a safe-sleeping space for each infant, a crib is immediately provided to the caregivers shortly after the 911 call. In total, eight cribs have been provided to Sussex County residents and visitors. The D.O.S.E. program continues to see success through



routine participation and the spread of both education and awareness to the public during interactions with EMS services.

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 2024, 112 kits were distributed, and 152 citizens were trained to manage an overdose.

PERSONNEL

Staffing: SCEMS entered 2024 with one vacancy. Six (6) new paramedics were hired throughout the year with two additional paramedics returning after seeking new employment opportunities. SCEMS ended the year with six vacancies. Twelve employees separated from the department throughout the year including six retirees. 2024 concluded with seven employees having more than 25 years of service and are eligible for retirement. SCEMS appreciated a turnover rate of about 10% (excluding retirees 5%) while the EMS industry often sees an annual rate of 20-30%.

In addition to the paramedic candidates, SCEMS also brought on board six paramedic students. Currently, three of these students have successfully attained paramedic credentials. SCEMS plans to continue with additional students in future cohorts.

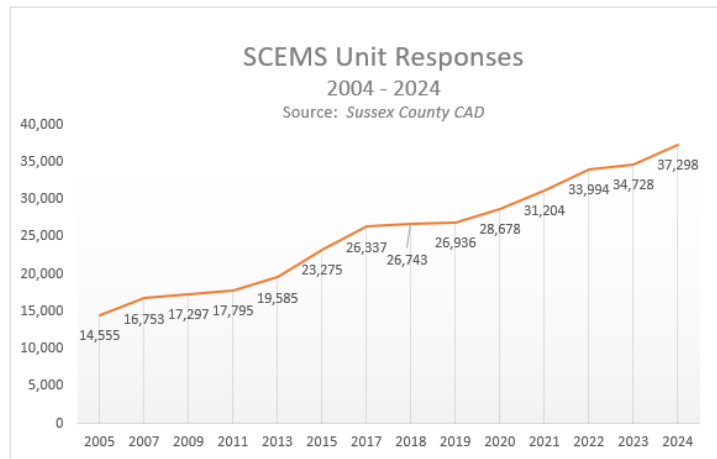
Employee Wellness: Employee mental health, wellness and resiliency remained a priority during 2024. All employees attend an appointment with a mental health professional as part of the biennial medical evaluation process. This provider in consultation with our occupational health medical provider will determine an employee's fitness for duty. As appropriate, the provider may be involved in return-to-work decisions.

2024 INCIDENTS

For 2024, SCEMS experienced a 7% 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 third 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.

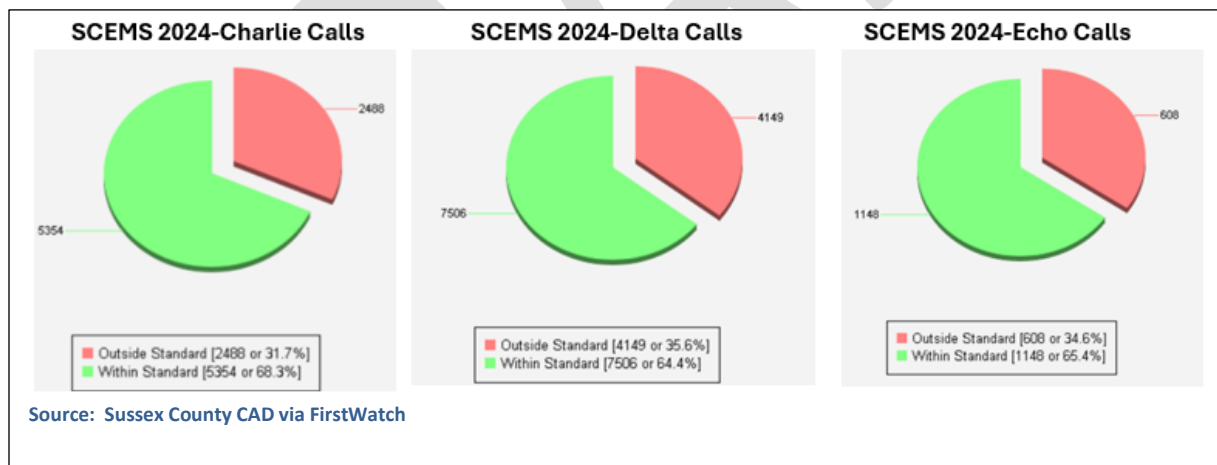
2024 Incident Responses		Δ Last Year
EMS 100 (Eastern Supervisor)	1,508	7%
EMS 200 (Western Supervisor)	1,220	-3%
Medic 101 (Lincoln)	3,198	1%
Medic 102 (Laurel)	2,864	3%
Medic 103 (Dagsboro)	3,639	3%
Medic 104 (Lewes)	5,024	13%
Medic 105 (Millville)	2,693	3%
Medic 106 (Long Neck)	3,837	13%
Medic 107 (Bridgeville)	1,524	-2%
Medic 108 (Georgetown)	3,234	4%
Medic 109 (Summer "Power Unit")	1,098	38%
Medic 110 (Seaford)	4,143	3%
Medic 111 (Milton "Power Unit")	2,015	22%
Medic 114 (Dewey "Power Unit")	633	19%
Special Operations	250	14%
Other (Administration)	418	55%
Total	37,298	7%

Incident Responses by Unit (Source: Sussex County CAD)



Medic 109: In 2024, Medic 109 had its first full year as 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.

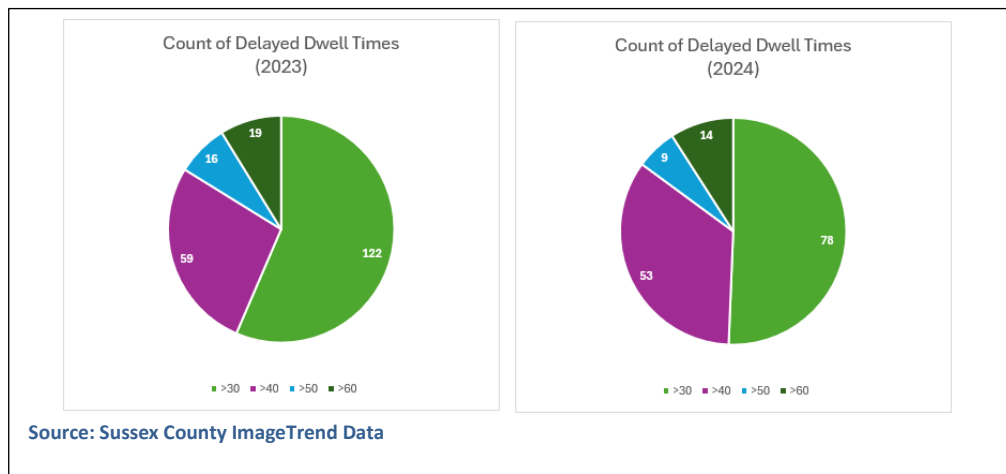
Response Times: Meeting the goal of an 8-minute response time continues to be a challenge in Sussex County. Our geography continues to be the greatest barrier. While response times are evaluated based on EMD code, compliance with an 8-minute standard is consistent between Charlie, Delta, and Echo responses.



Our Patients: Sussex County continued to welcome visitors throughout the year, approximately 8.7% of our patients for 2024 resided outside of Sussex County. This represents a decrease of 4.5% from 2023.

Dwell Times: An 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 2024, SCEMS arrived at a local hospital with a patient 17,936 times. Our dwell times vary due to a multitude of factors, with most patients being transferred in under twenty minutes. However, we did experience 154 times that required a unit to be at a hospital for greater than 30 minutes to facilitate a transfer of care. In fourteen 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. 2024 saw the implementation of a emergency transfer policy in partnership with area hospitals and the Office of EMS. In 2024 the policy did not have to be implemented.



AWARDS

SSH IMSH Conference: In 2024 Sussex County EMS leadership and simulation team leadership were invited to attend the Society for Simulation in Healthcare's (SSH) IMSH Conference in San Diego, California. At the Diamond Ball event, leadership accepted an award for conferment of accreditation and teaching/education along with 34 other award recipients. SCEMS continues to be the only prehospital simulation group that is accredited by the SSH.



SPECIAL OPERATIONS

Special Operations: SCEMS provided ALS coverage during 183 mass gatherings, public education events, Honor Guard duties, or Presidential visits over the course of 2024. These events were staffed by 367 paramedics, contributing more than 2,400 hours. The SCEMS Honor Guard has grown into an often-requested resource for training, serving at funerals, public events, and presenting the colors at the DVFA Conference. In 2024, it was a hazmat technician refresher year, with the team running multiple scenarios during the recertification training. SCEMS also participated in a full-scale Sea Witch exercise based on 2023's tabletop exercise, closing out the 2-year training.



SCEMS bike medics on a training exercise. Source: SCEMS



SCEMS Competition Team at the 2024 JEMS Games (Source: SCEMS).

JEMS Games: The SCEMS competition team returned to compete at the 2024 FDIC JEMS Games in Indianapolis, IN. This year the team served as the “run through” team for the final competition. The final scenario involved a house fire with multiple victims trapped. As the scene progressed there was a first responder victim that had been overcome by smoke and ultimately collapsed during the scenario. SCEMS participation allowed the remaining teams to have an enhanced experience in the final competition.

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. Quality staff attended Collaborate Live, a conference presented by FirstWatch, which focuses on FirstPass and shares best practices to improve and set up our CQI system. As we transition into FirstPass, the rules based system will require less field provider involvement, leverage the automation of the program, and direct a more focused approach by field training officers and administrative personnel in the CQI process.

Continuing Education: In 2024, Sussex County EMS focused its monthly continuing education on enhancing paramedic performance. January marked a milestone with the completion of NAEMT's TECC course, certifying all paramedics in trauma and tactical emergency care. February introduced surgical cricothyrotomy, where staff completed individual signoffs on task trainers and pig tracheas. April maintained our commitment to inventory and EVOC training, while also welcoming new UTV instructors who provided hands-on training. October featured state Con Ed, introducing updated protocols alongside expert-led sessions



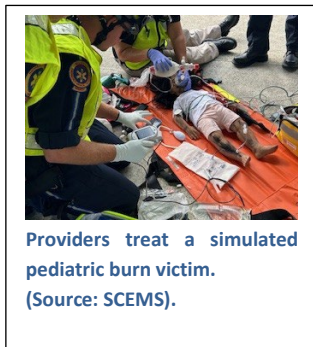
2024 State ALS Con ED in Dover (Source: SCEMS)

from the Blood Bank on transfusion therapy and Christiana Care on stroke care advancements. September's joint agency training was one of our largest to date, bringing together over 100 BLS providers from county fire departments, hospital staff, and communications. Participants rotated through four dynamic, hands-on scenarios: a structure fire with multiple entrapments and a mayday event, live vehicle extrication, MCI care for a 55-patient school bus incident, and critical care management of an ejected patient requiring air transport with Trooper 2. This collaborative training reinforced interagency teamwork and high-quality patient care in complex rescue environments.

Expansion of FTO Program: Increases to the workload and the departments commitment to train students required the reexamination of our field training program. To address the continued demands in the department the program was expanded from 16 total FTO's up to 20 FTO's. This equates to one additional Field Training Officer per shift.

NAEMSP Quality Course: To increase efficiency and standardize the processing of data, SCEMS committed to send all members of the quality and standards division, in addition to our medical director, through the National Association of EMS Physicians (NAEMSP) Year-long Quality & Safety Course. This course is set to conclude in June of 2025 and has a research-based presentation component.

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.



Providers treat a simulated pediatric burn victim.
(Source: SCEMS).

Simulation Program: In 2024, Sussex County EMS conducted 40 high-quality simulation sessions both on- and off-site, reinforcing critical skills and real-world preparedness. These sessions were also used to evaluate multiple ventilators for a planned 2025 purchase, ensuring the best fit for patient care. Two simulation sessions allowed staff to train on trauma and pediatric scenarios with Bayhealth and Tidalhealth at their facilities with our teams working together to better improve our teamwork, knowledge, and interactions. Simulation continues to be a key training tool, allowing paramedics to practice advanced procedures, refine decision-making, and improve teamwork in high-risk scenarios.

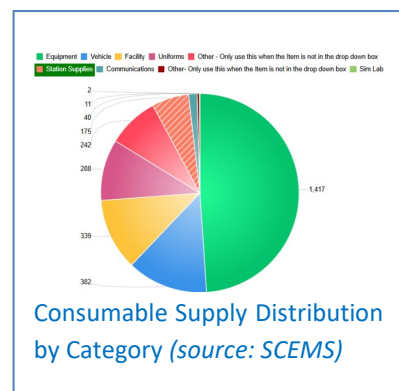
The team acquired and trained on a new GSW Tommanikin from North American Rescue that can be utilized in TECC, AAIR, and other trauma related classes and simulations. This hands-on approach enhances clinical performance and ensures our team is ready for complex emergencies.

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 2024, they handled 2,896 requests for service and repairs. Additionally, our Logistics Division purchased, processed, and distributed 41,233 requests for consumable medical supplies. This represents a 2.9% decrease compared to 2023 utilization.

Response Ready Fleet: Five ALS response Suburban's and one pickup truck for the Logistics Division was placed in service. Our fleet drove 591,597 miles, a 1 % increase using 46,792 gallons of fuel for an average of 12.73 miles per gallon.

Paramedic Station Updates: 2024 saw construction begin of a new Medic 103 station in Millsboro with anticipated occupancy in early 2025. 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 2025 GOALS

This past year was a milestone for Sussex County EMS. We upgraded our pre-hospital whole blood program to include a “no waste” process. Our simulation program was recognized with an award from the SSH. Sussex County EMS has worked with our hospital and OEMS partners to improve hospital delays. Increased communication and the development of an emergency transfer policy have resulted in improvements in dwell times at all facilities. All SCEMS activities are completed with our motto of “Caring People, Quality Service” in mind. As we look towards 2025, SCEMS will be looking to update some of the equipment that is used every day. Progress towards a new Medic 101 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 starts construction of a new town hall and police station. Plans for new Medic 111 (Milton) stations will follow.

2025 Goals and Initiatives

- Enhance employee safety with the addition of quantitative fit testing equipment
- Complete upgrade of cardiac monitors and transport ventilators
- Enhance training and simulation to improve proficiency with new upgraded cardiac monitors and ventilators
- CAAS Re-accreditation in CY2025 (current expires 12/2025)
- Adapt recruiting efforts to ensure steady flow of applications and just in time hiring
- Begin construction of Medic 101 station in Lincoln