2023 Annual Report

Division of Healthcare Quality and Safety

Center for Emergency Medical Services

MAY 2024

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Executive Summary

In accordance with the *Emergency Medical Services Transportation Act*, R.I. Gen. Laws §23-4.1-3(e), the Rhode Island Department of Health's (RIDOH) Center for Emergency Medical Services (CEMS) is pleased to submit its 2023 Annual Report to Governor Daniel J. McKee, Senate President Dominic J. Ruggiero, and House Speaker K. Joseph Shekarchi.

CEMS was a previously located in RIDOH's Division of Preparedness, Response, Infectious Disease, and Emergency Medical Services (PRIDEMS). As of January 1, 2023, due to reorganization, it became a part of the Division of Healthcare Quality and Safety. The core functions of CEMS include:

- Licensure of emergency medical services (EMS) practitioners, ambulances, ambulance services and educational institutions;
- Inspection of ambulances;
- Development of protocols and standing orders for emergency medical treatment in the pre-hospital setting;
- Management and analysis of statewide EMS data;
- Establishment of educational requirements;
- Investigation and resolution of complaints; and
- Implementation and maintenance of several programs utilizing federal grant funding, including EMS for Children, First Responders program for naloxone administration and distribution (including law enforcement), mental health awareness training, and the health disparity mobile integrated health/community paramedicine (MIH-CP).

In 2023, the leadership and staff of CEMS remained focused on the future of EMS professionals in Rhode Island, engaging in strategic discussions guided by the *EMS Agenda 2050*[1]. This agenda emphasizes the creation of a people-centric EMS system, serving as a crucial component of regional healthcare by prioritizing the well-being of community members and visitors through data-driven, evidence-based, and safe practices in prevention, response, and clinical care. As a result, CEMS allocated funding to support several EMS agencies in the implementation of innovative Mobile Integrated Health – Community Paramedicine (MIH-CP) programs tailored to their respective communities.

In 2023, CEMS worked with internal and external partners to shape healthcare policy and improve the delivery of emergency care to all Rhode Islanders, and collaborated with multiple partners to achieve many successes:

- Maintained four internal programs that focus on hospital and pre-hospital readiness, overdose death prevention, mental health awareness training, and established MIH-CP programs across the State;
- Continuously supported staff on the ongoing initiative of the Governor's Overdose Prevention and Intervention Task Force;
- Received funding for the First Responder's Project to Combat Opioid Overdoses in Rhode Island, a federal grant under the *Comprehensive Addiction and Recovery Act* (CARA);
- Actively participated on the Rhode Island Stroke Task Force, the HeartSafe Communities Project, the Drug Overdose Prevention and Rescue Coalition, the Rhode Island Children's Cabinet, the Child Death Review Team, and the Overdose Fatality Review Team;
- Regularly attended meetings of the Department of Transportation's (DOT) Traffic Records Coordinating Committee, in its role of providing data for the Fatality Analysis Reporting System (FARS); and
- CEMS Chief Jason M. Rhodes served as the President-Elect of the National Association of State EMS Officials (NASEMSO) and on the organization's Executive Committee and Board of Directors, while representing NASEMSO on the FirstNet Public Safety Advisory Committee.

EMS Licensing

CEMS plans for, and oversees, licensing of emergency medical services in the State. Licensing is authorized by the *Rhode Island EMS Regulations* [216-RICR-20-10-2], which have been promulgated pursuant to the authority conferred under R.I. Gen. Laws s § 23-4.1-10(b), for the purpose of establishing minimum standards for EMS.

Per the regulations, EMS practitioners are licensed at the following levels:

- Emergency Medical Responder (EMR)
- Emergency Medical Technician (EMT)
- Advanced Emergency Medical Technician (AEMT)
- Advanced Emergency Medical Technician-Cardiac (AEMT-C)
- Paramedic

Ambulance services are licensed at the following levels:

- Class A: Advanced life support (ALS)
- Class B: Basic life support only (BLS**)**
- Class C: Emergency Medical Responder (EMR)

Ambulance vehicles are licensed at the following classifications:

- Class A-1C: Advanced Life Support transporting ambulance
- Class A-1P: Advanced Life Support transporting ambulance, paramedic level
- Class A-2C: Advanced Life Support non-transporting ambulance
- Class A-2P: Advanced Life Support non-transporting ambulance, paramedic level
- Class A-2A: Advanced Life Support non-transporting ambulance, advanced EMT level
- Class B-1: Basic Life Support transporting ambulance
- Class B-2: Basic Life Support non-transporting ambulance
- Class C: Advanced Life Support: Air Medical Service

EMS Licensing Statistics

In 2023, CEMS staff licensed one Emergency Medical Responder (EMR), 306 Emergency Medical Technicians (EMTs), one Advanced EMT, 111 Advanced EMT- Cardiacs, and 43 Paramedics (Figure 1). Therefore, there are now a total of 11 EMRs, 1,689 EMTs, 12 Advanced EMTs, 2,284 Advanced EMT- Cardiacs, and 580 Paramedics (Figure 2).

Figure 1: *Number of New Rhode Island EMS Practitioner Licenses Issued, By License Type, 2019 –2023*

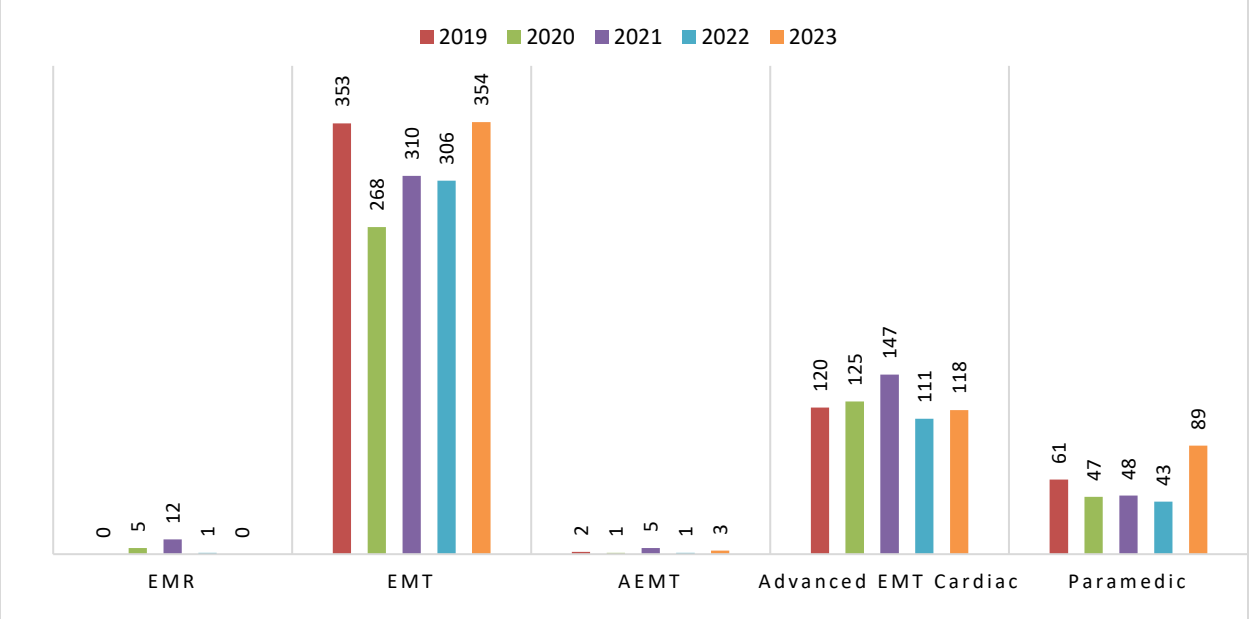
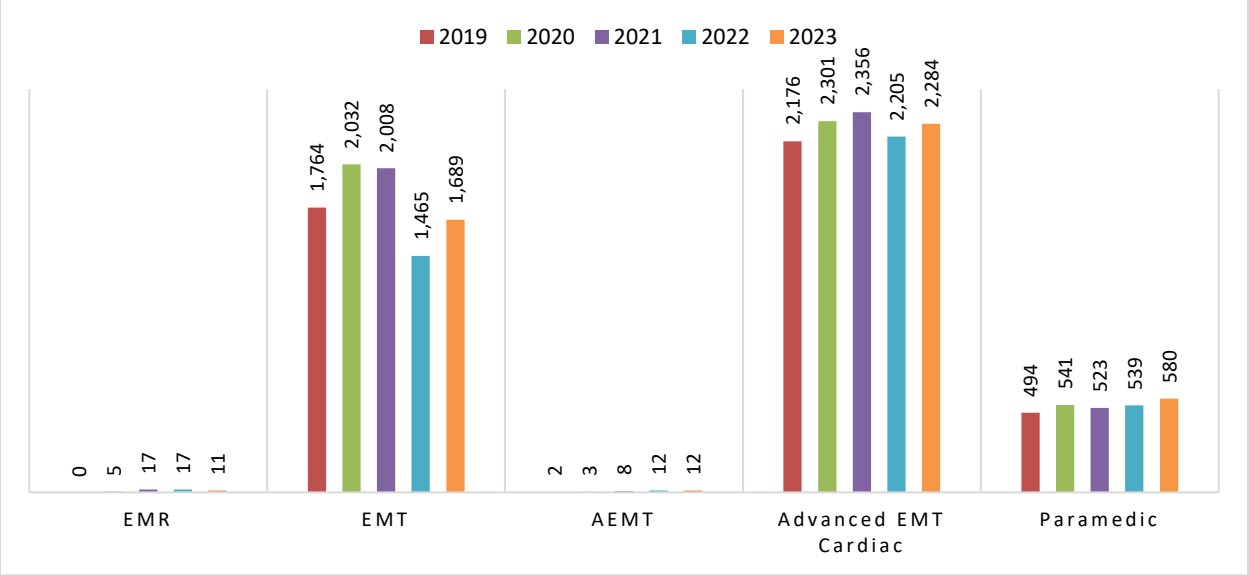


Figure 2: *Cumulative Number of Rhode Island EMS Practitioner Active Licenses, By License Type, 2019-2023*



EMS Ambulance Service License and Inspection

In 2023, 83 ambulance services were licensed by CEMS (Table 1). Additionally, ambulance services operate licensed vehicles, which must comply with equipment and supplies requirements, per the EMS regulations, and correct any deficiencies cited during an inspection. Each year, the EMS field technician is tasked with licensing and inspecting all ambulance vehicles licensed by the State. In 2023, 463 vehicles were active and licensed (Figure 3), and 428 ambulance vehicles were inspected (Figure 4).

Table 1: *Rhode Island Licensed Ambulance Services, By Category, 2023*

Category	Number
Municipal (total)	**62**
Fire department based	52
Independent EMS	10
Private service	**9**
College/University	**7**
Hospital-based	**1**
State assets, non-transporting	**1**
Industrial, private, non-transporting	**1**
ALS Air based EMS	**2**
Total licensed ambulance services	**83**

Figure 3: *Rhode Island Licensed Ambulance Vehicles, By Category, 2023*

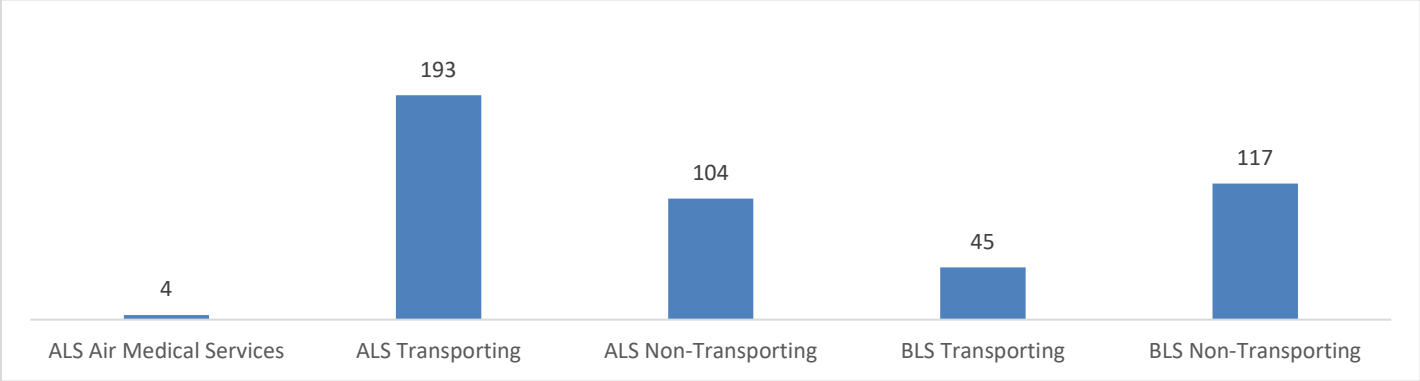
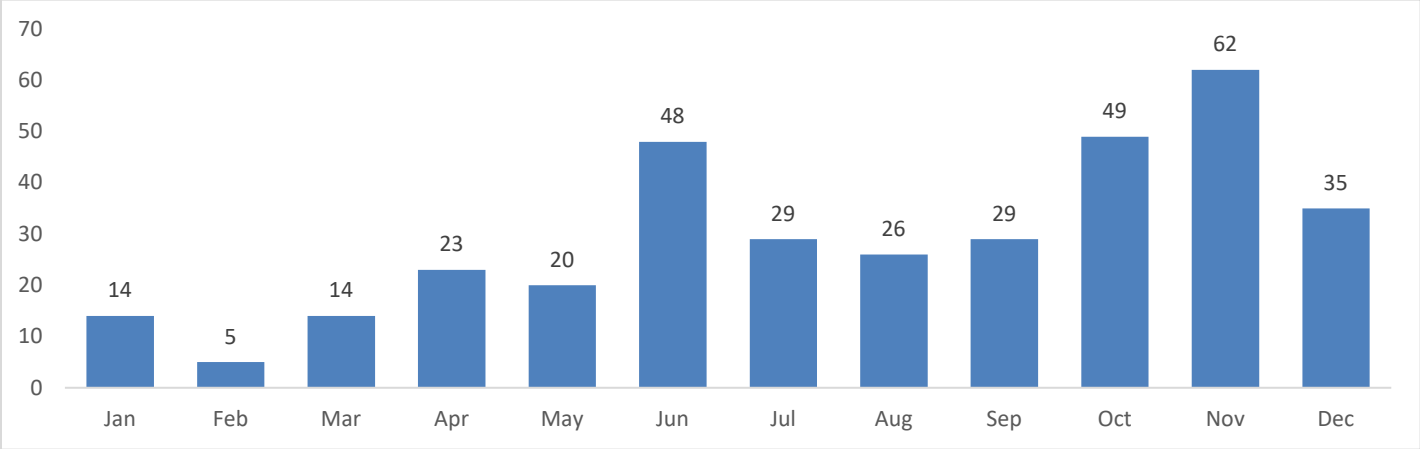


Figure 4: *Inspection of Rhode Island Licensed Ambulance Vehicles, By Month, 2023*



EMS Ambulance Deficiencies

Deficiencies occur when CEMS minimum requirements or standards are not fully satisfied. Equipment and supplies are not considered acceptable if they are damaged, expired, or the original packaging is compromised.

Categories of Deficiencies

Deficiencies fall into one of two categories:

- **Immediate failure:** those that preclude the vehicle's use as an ambulance until corrected *(e.g.*, lack of cardiac defibrillator or oxygen).
- **Correctable failure:** those for which a corrective action period is allowed; depending upon the failure, it may be corrected within 24 hours, two days, or 10 days following the inspection.

Note: If a vehicle is found to be deficient in three or more items from the Immediate (24-hour correction list), a complete re-inspection of the vehicle will be required, unless waived by the Chief of EMS.

Table 2: *Rhode Island Licensed Ambulance Deficiencies, By Month, 2023*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Immediate Deficiencies	0	0	0	0	2	0	0	0	0	6	2	0
24-hour Deficiencies	0	0	0	1	0	0	0	1	0	0	0	0
10+ day Deficiencies	25	7	0	4	31	60	20	28	11	60	21	11

Opportunities for Improvement

- **Challenge:** The inspection process is limited in that it is not online or automated. The inspection process of vehicles and services is very manual and can be improved. The EMS field technician has standardized processes and has worked to enhance the current deficiency management process.
  - *Recommendations:*
    - Implement a comprehensive license management solution that includes an inspection module. An inspection module allows the field technician to:
      - Create a library of checklists;
      - Schedule inspections;
      - Record deficiencies; and
      - Configure automated inspection workflow to add notes and alerts, update statuses, send correspondence, or set associated dates.

EMS Compliance and Investigations

A responsibility of CEMS is to investigate complaints which may result in disciplinary action. **In 2023, EMS investigated 20 complaints against licensed EMS practitioners, EMS services, or ambulances**. The overall goal of complaint investigations is to improve the patient care experience and it can be accomplished through disciplinary action or, more frequently, through remediation of the EMS practitioner.

Complaints originated from the public, patients and/or patients' families, other licensed healthcare providers, CEMS, and the Office of State Medical Examiners. CEMS investigated each complaint filed and any public actions that were taken against an EMS practitioner, an EMS vehicle, or an EMS service agency as a result of a complaint investigation posted on RIDOH's disciplinary actions website.

EMS Education and Training

In order to deliver optimal patient care, EMS continuing education needs to ensure that our EMS professionals are actually being taught the latest and most up-to-date evidence.
--EMS Agenda 2050

Throughout the years, CEMS has made continuing education a priority. In 2019, a grant allowed CEMS to hire an EMS Training Coordinator. The EMS training coordinator oversees training in all CEMS programs, including the:

- Rhode Island EMS Continued Competency Program;
- TRAIN learning management system (LMS); and
- Licensing of educational institutions.

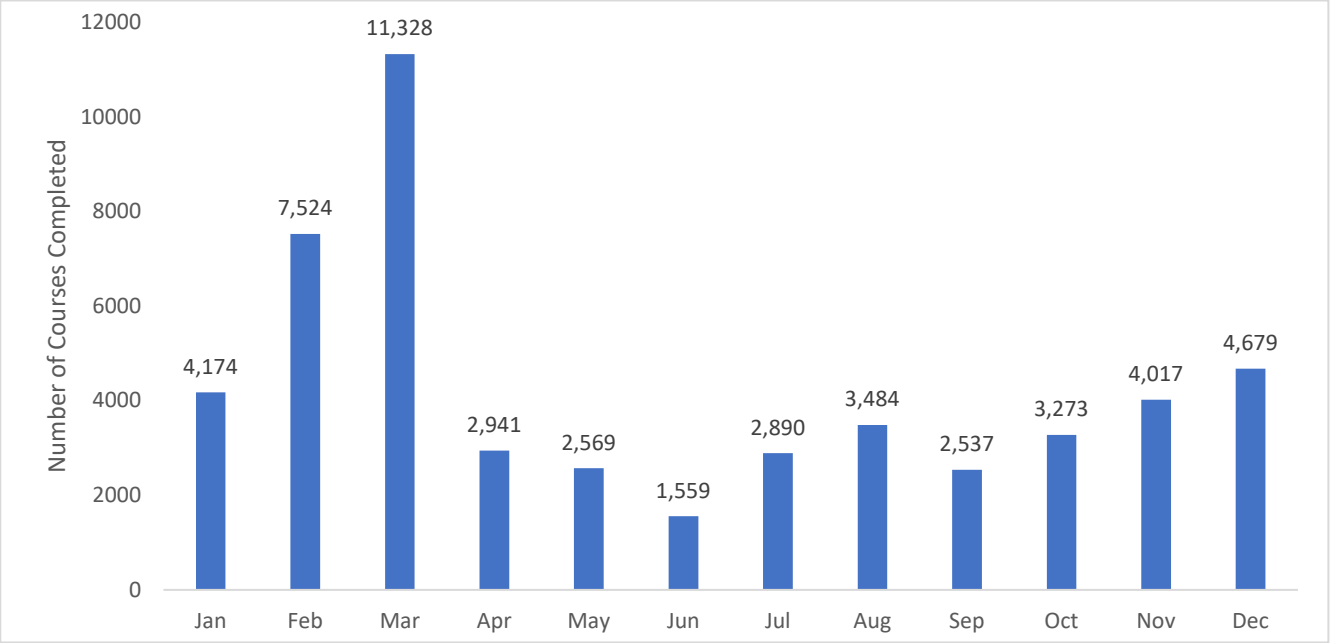
By 2030, CEMS aims to ensure that:

- EMS educational programs are led by qualified teams of EMS physicians and educators who have been carefully selected and educated to prepare future EMS practitioners to deliver people-centered care.
- National standards and certifications are used to form consistent baseline education and competency of all EMS personnel to assure communities, employers, and the public that every certified EMS professional is qualified and capable.
- Initial and ongoing education is tailored to the needs of patients, communities, and EMS professionals and leverages technology, evidence, and data to deliver education that supplements previous education and promotes continued competency and further growth.
- EMS professionals are prepared to collect, share, analyze, and use available data.
- Education of advanced EMS clinicians includes a comprehensive orientation to public health, social services, mental health, and social determinants of health in a way that empowers them to provide integrated care.

Rhode Island Continued Competency Program

From 2019 – 2023, EMS practitioners participated in the Rhode Island Continued Competency Program as part of the re-licensure process.

Figure 5: *Training Course Completion in 2023, By Month*



EMS Learning Management System (LMS)

In 2023, an additional 383 EMS users registered for TRAIN, bringing the total number of users to 5,716 by December 31, 2023 (Figure 6). In 2023, an additional 58 courses were approved, resulting in a total of 417 approvals by December 31, 2023 (Figure 7).

Figure 6: *TRAIN Learning Management System Enrollment for 2023, By Quarter*

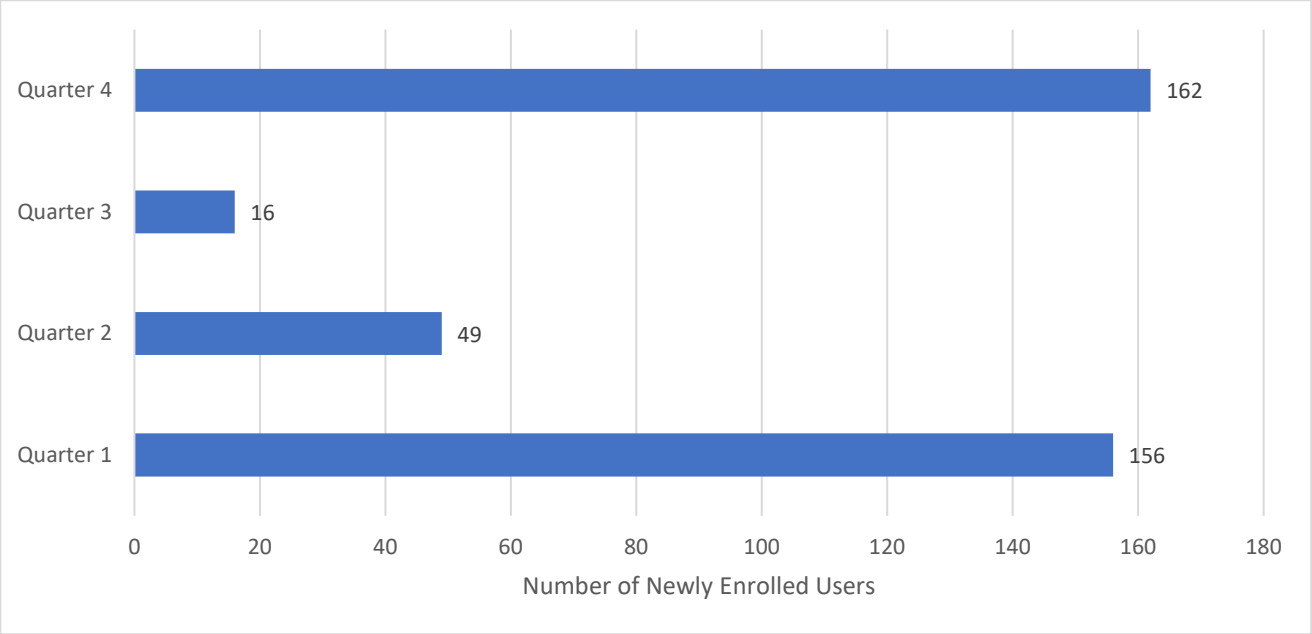
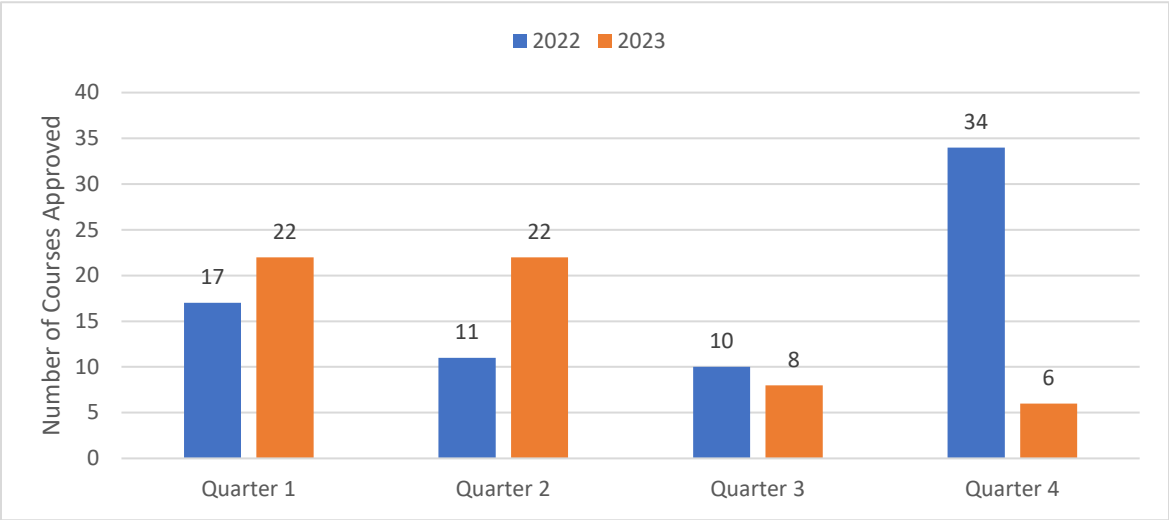


Figure 7: *Course Approvals by Year and by Quarter, 2022 and 2023*



Licensing of EMS Training Institutions

Per the EMS regulations, EMS training institutions are licensed at one of five levels and can conduct training courses at the level of licensure or below:

- Paramedic
- Advanced Emergency Medical Technician-Cardiac (AEMT-C)
- Advanced Emergency Medical Technician (AEMT)
- Emergency Medical Technician (EMT)
- Emergency Medical Responder (EMR)

As of December 31, 2023, there were 16 licensed educational institutions in Rhode Island, of which six were licensed to teach at the EMT level or below, seven licensed to teach at the AEMT-C level or below, and three are licensed to teach at the paramedic level (Figure 8). Furthermore, EMS training institutions must perform annual self-evaluation and submit their corresponding National Registry of Emergency Medical Technicians (NREMT) pass rates to CEMS (Figure 9).

Figure 8: *Number of Licensed Institutions, By Training Level, 2023*

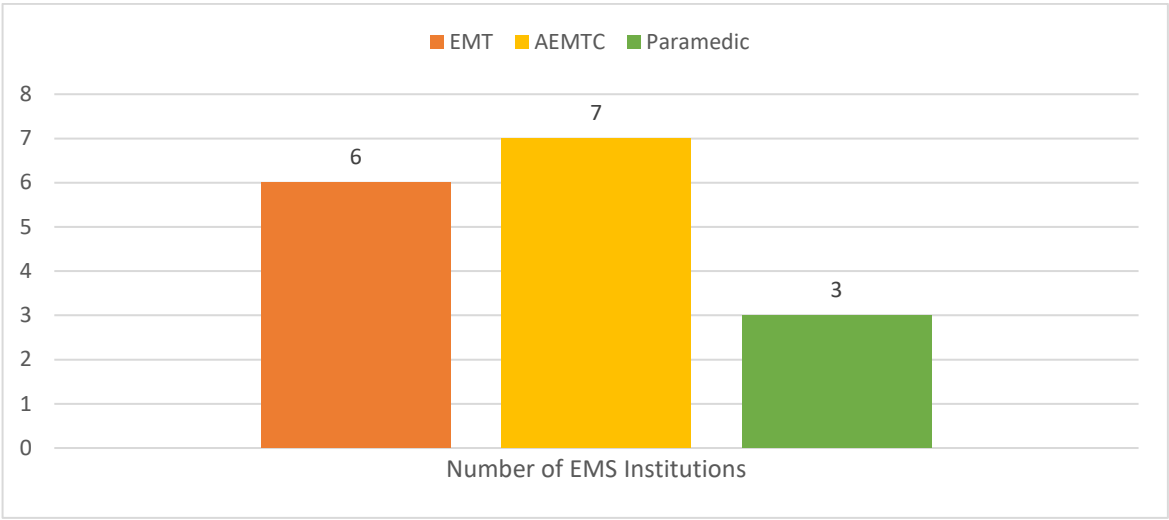
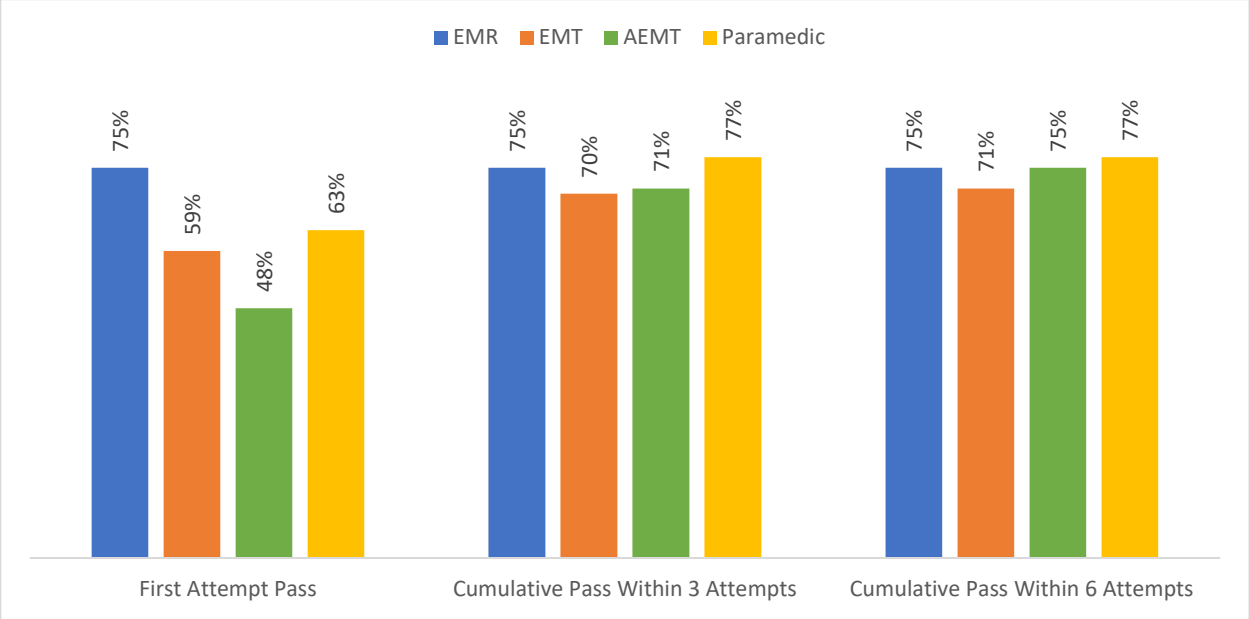


Figure 9: *NREMT Cognitive Exam Pass Rate, By License Type, 2023*



Challenges and Opportunities for Improvement

- **Challenge:** The current TRAIN LMS system is not EMS specific. It is a product of the Centers for Disease Control and Prevention that is used by a variety of public health professionals. Navigating the system can be challenging for EMS practitioners when completing their continuing education. To achieve the EMS education goals of the future, CEMS would benefit from developing an LMS system that fits the needs of Rhode Island EMS practitioners.
    - **Recommendation:** Explore funding options for an EMS-specific LMS system. The ideal EMS system would allow CEMS and instructors to:
        - Document the details of conducted training courses, including covered subjects, test specifics, and course approvals;
        - Create a course from templates, or just-in-time, according to agency needs which can be built either by administrators or through the public portal; and
        - Track continuing education credits and trainings to ensure EMS practitioners are meeting the requirements to renew their license and to foster a life-long learning model of education.

- **Challenge:** For many years, the Rhode Island EMS culture has been to teach EMS practitioners in-house, at their affiliated ambulance service. Excellent leaders and instructors have identified the needs of their EMS practitioners and have developed plans to teach these classes. However, recent changes in license renewal policies require EMS practitioners to document and track their training. Furthermore, EMS training officers and EMS instructor-coordinators are required to work together to submit approval for all continuing education courses.
    - **Recommendation:** The CEMS training coordinator is working to develop resources that allow EMS practitioners, training coordinators, and instructor-coordinators the ability to participate in a streamlined continuing education experience. The process can be improved with the implementation of a new LMS system that includes the requirements presented above.

EMS Data Management

Information collected and shared in EMS data systems informs decisions made related to healthcare operations, public health and interventions related to social determinants of health and injury and illness prevention. EMS and public health data are integrated in ways that aid in the monitoring and identification of emerging outbreaks or demographic trends in injury and illness patterns.

--EMS Agenda 2050

In 2023, the primary objectives of CEMS's data management were to enhance efficiency in extracting and cleaning data, broaden analytical capabilities, and share research findings with the EMS community and other stakeholders.

Rhode Island EMS Information System

The Rhode Island Emergency Medical Services Information System (RI-EMSIS) is the pre-hospital electronic patient care reporting (ePCR) system for CEMS, managed via the ImageTrend Elite platform. It is available at no cost to Rhode Island EMS agencies and allows for the submission of a patient care report for each patient encounter. Upon accepting a report into the State repository, data is exported via live feeds to the National EMS Information System (NEMSIS) and biospatial, Inc. The transition from the NEMSIS v.3.4 data standard in v.3.5 was started in 2023 Q4 and continued into 2024.

In this annual report, we present data analysis, challenges, and success stories in the following categories:

- Ground-level falls in EMS;
- EMS response to respiratory emergencies;
- EMS response to the opioid epidemic;
- Behavioral health EMS runs; and
- Motor vehicle crashes.

Ground-Level Falls in EMS

According to the World Health Organization (WHO), falls are the second most common cause of accidental-injury fatalities worldwide, contributing to an estimated 680,000 deaths.[2] Falls, particularly ground-level falls, are most common for people older than 60 and can result in increased morbidity and mortality.[2,3] These falls frequently require hospitalization and can lead to health complications, both physical and psychological.[4] Ground-level falls continue to be a major cause of injury in Rhode Island and generate a substantial number of EMS calls throughout the state.

In 2023, a total of 35,690 EMS runs met the criteria for a fall from ground level. An additional 3,428 EMS runs met the criteria for a fall from height. However, falls from ground level accounted for more than nine out of every 10 (92%) falls.

Frequency and Time Trends

In 2023, falls from ground level were more likely to happen during the second half of the year and peaked in July, with 3,634 incidents. Most calls for ground-level falls occurred during the day, and peaked from 11 a.m. to 6 p.m.

Figure 10: *Number of EMS Runs for Ground-Level Falls in Rhode Island, By Month, 2023*

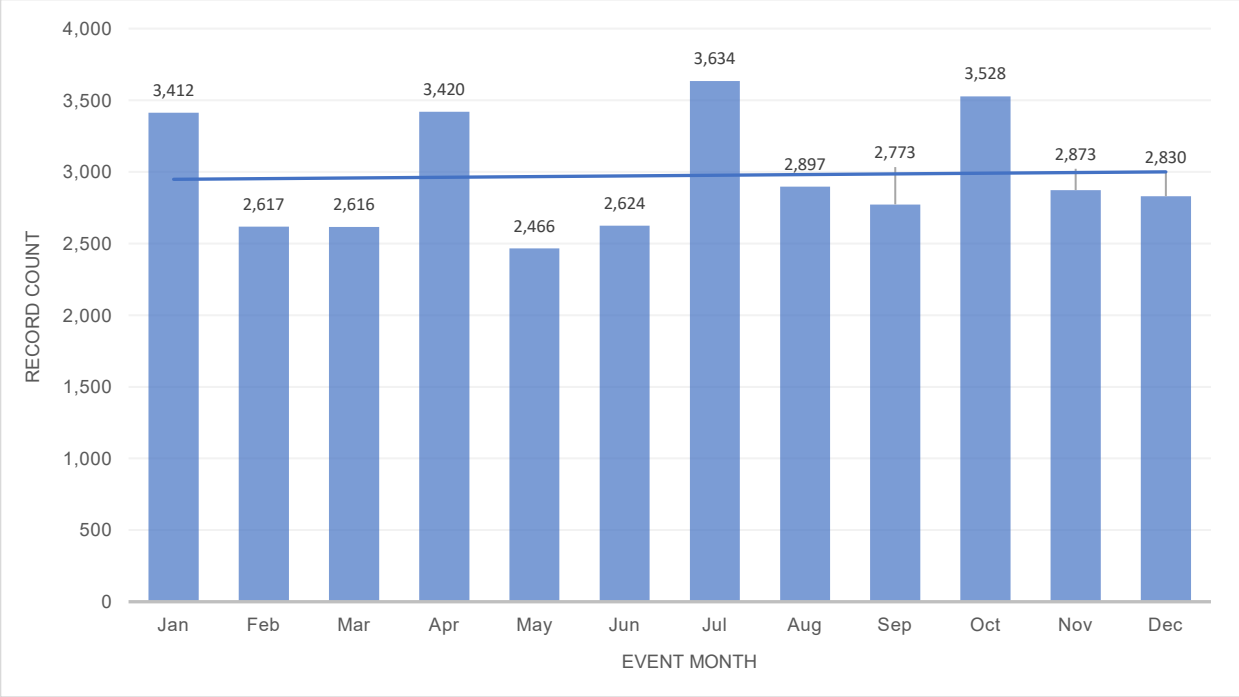
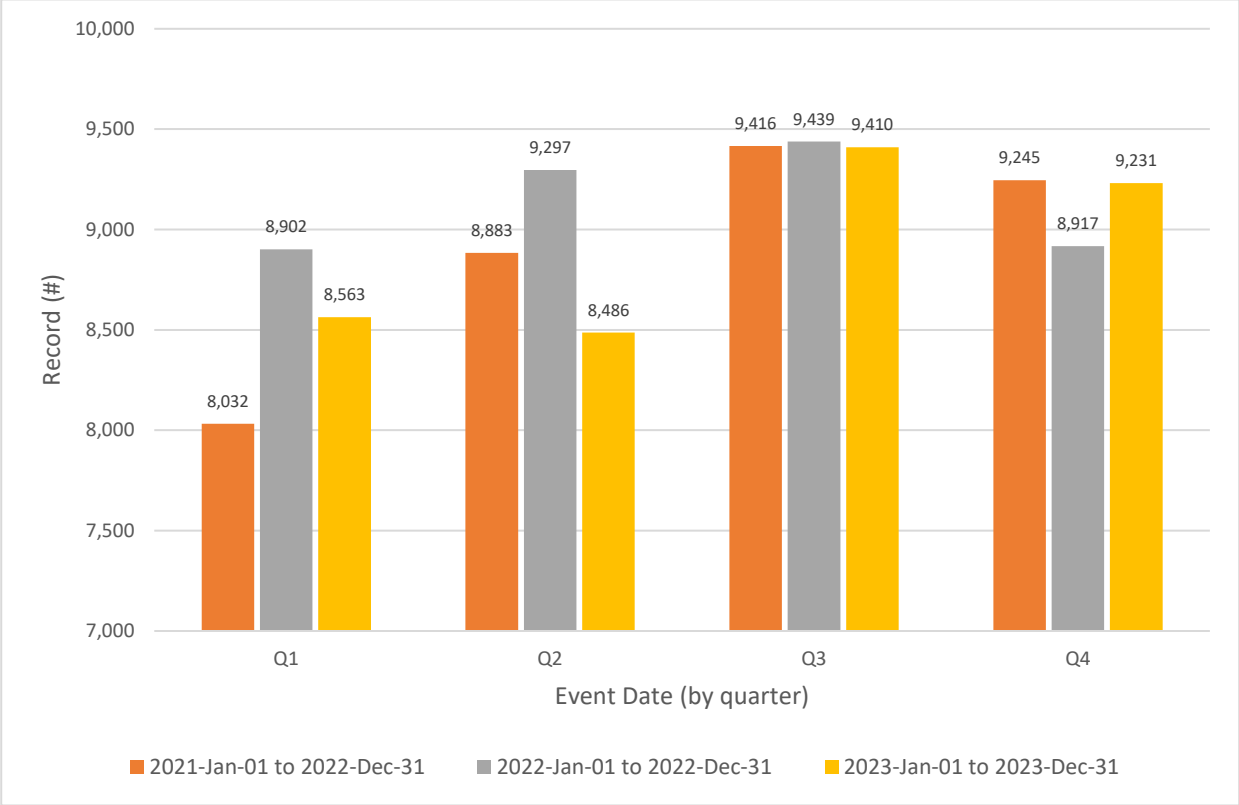


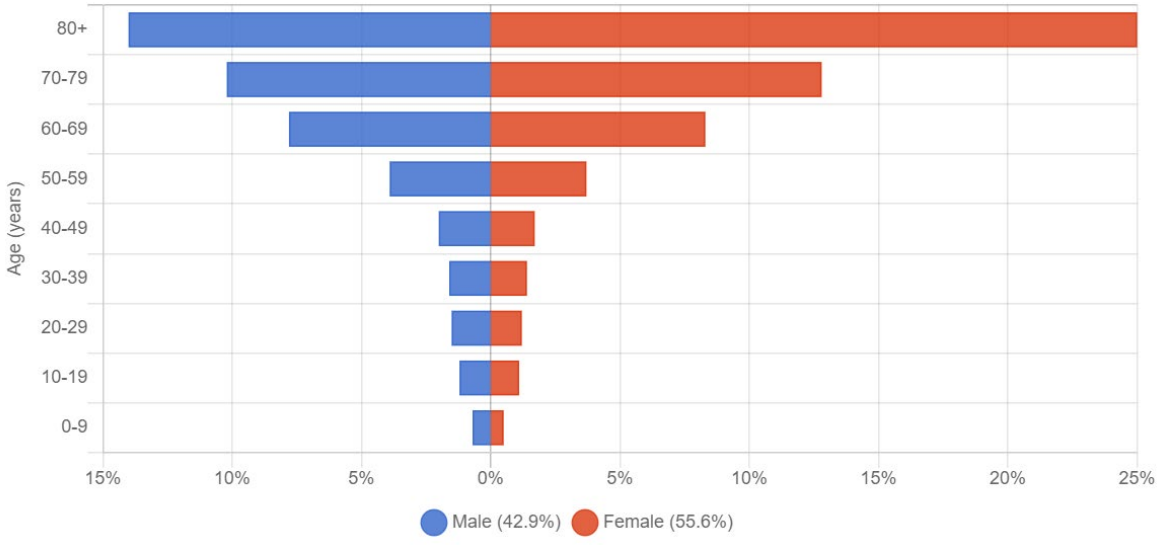
Figure 11: *Number of EMS Runs for Ground-Level Falls in Rhode Island, By Quarter, 2021-2023*



Gender/Age

As previously stated, adults older than 60 have a higher risk of ground-level falls. In 2023, individuals aged 60 or older accounted for nearly 78% of EMS calls. Females were more likely to experience ground-level falls, with approximately 56% of calls coming from females.

Figure 12: *Number of EMS Runs for Ground-Level Falls in Rhode Island, By Age, 2023*



NEMSIS v3: Labeled as a ground-level fall if **one or more** of the following are true:

- Narrative (eNarrative.01) or chief/secondary complaint (eSituation.04) contains "fall", "falling", "fell", "slip", "slipping", "slipped", "trip", "tripping", "tripped", and variants. Certain phrases are excluded, for example: "fall risk", "risk of fall", "risk of falling", "danger of fall", "almost fell", "fall precaution", "leads fell", "port slipped", "slipped disc", "rise and fall", "rise/fall", "fell asleep", "remainder of the trip", "alarm trip(ped)".
- Provider primary/secondary impression (eSituation.11/eSituation.12) or cause of injury (eInjury.01) indicate any of the following ICD-10-CM codes (sub-codes included): V00.111, V00.121, V00.131, V00.141, V00.151, V00.181, V00.211, V00.221, V00.281, V00.311, V00.321, V00.381, V00.811, V00.821, V00.831, V00.891, W00.0, W00.9, W01, W03-W05, W07, W16.2, W18.0-W18.3, W19, E88X.0, R29.6

Patient falls resulting from intentional injury are excluded.

Calls that are canceled prior to arrival at scene, canceled on scene (no patient contact or found), or are on standby (no services or support provided) are also excluded.

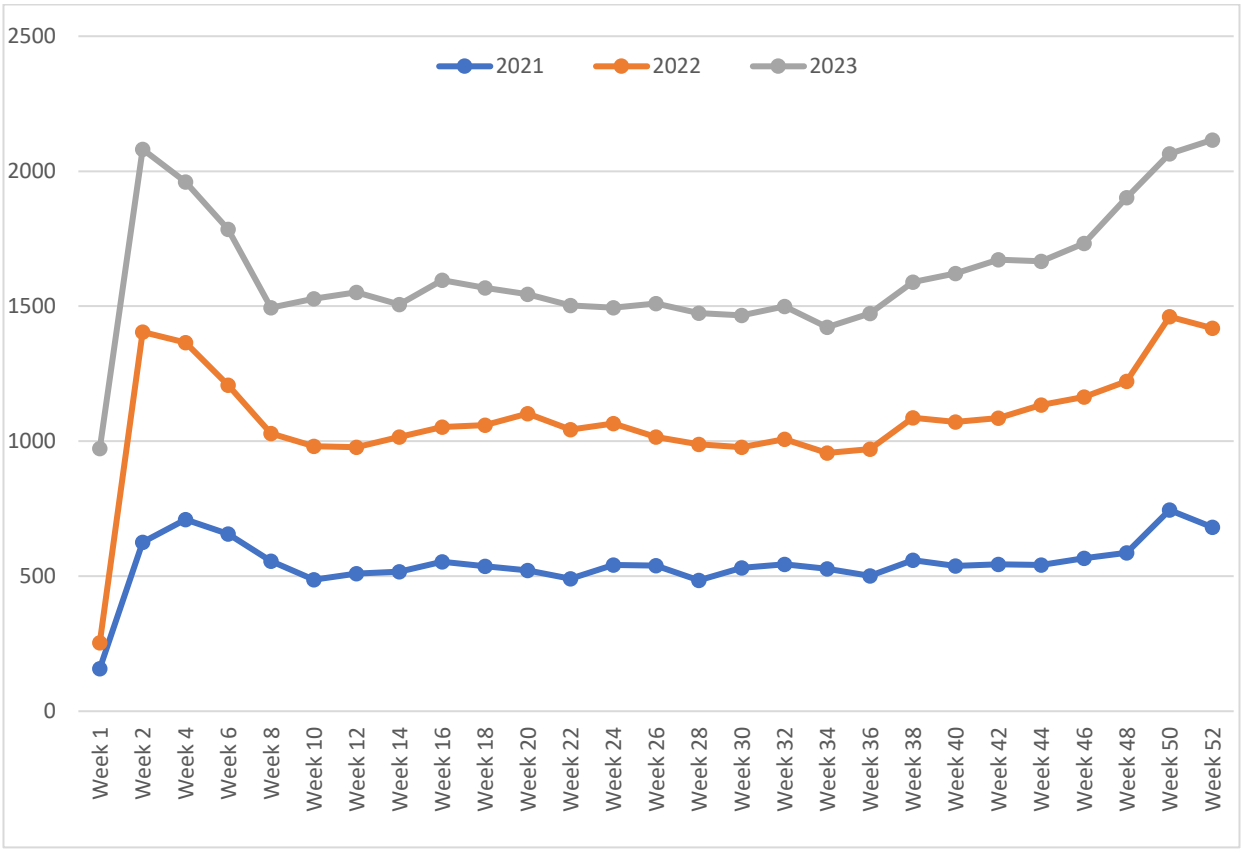
EMS Response to Respiratory Emergencies

In the United States, more than 3.7 million emergency department (ED) visits occur each year due to respiratory distress, making it a prevalent cause for engaging the emergency healthcare system.[5] Respiratory emergencies may result from a variety of problems including chronic obstructive pulmonary disease (COPD), asthma, COVID-19, pneumonia, or congestive heart failure (CHF) and can generally be defined as respiratory demand exceeding respiratory capacity.[6]

The number of COVID-19-related calls continued to decrease throughout 2023 as vaccination reduced the disease burden. Owing to advances in vaccines that bolstered both population and individual immunity, COVID-19 symptoms were generally less acute and resulted in fewer fatalities compared to cases in previous years.[7] In 2023, there were 3,161 EMS runs related to COVID-19, a decline from the 5,170 runs recorded in 2022. Despite enormous public health interventions, experts believe COVID-19 will persist in an endemic state.

In 2023, EMS responded to a total of 27,703 calls related to respiratory illness, compared to 28,785 respiratory-related calls in 2022.

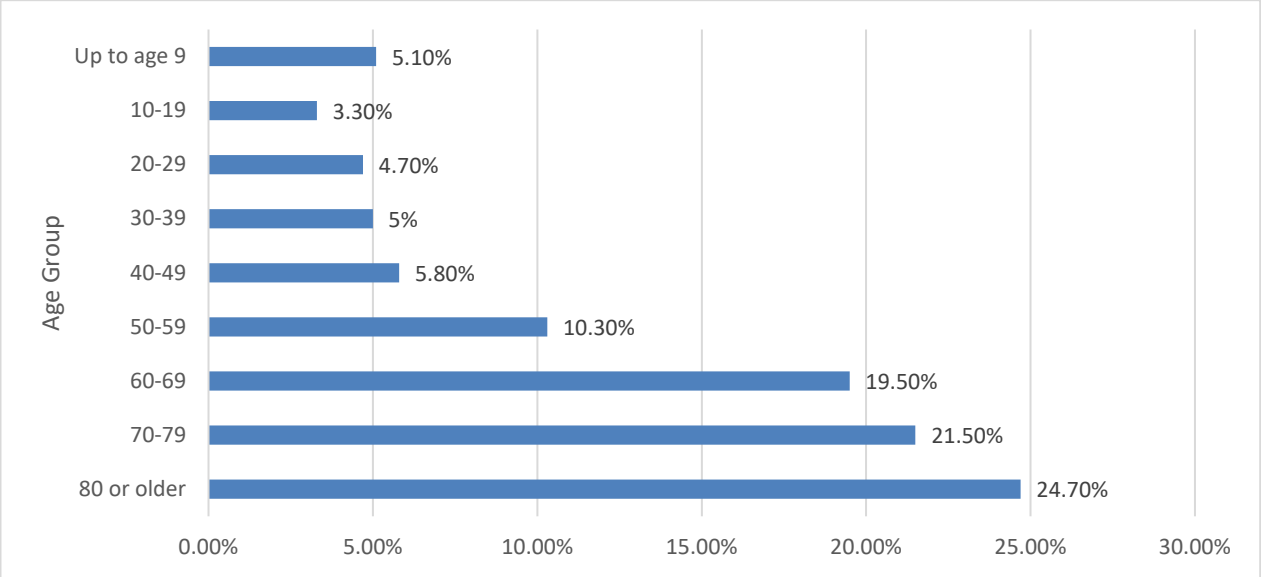
Figure 13: *Number of EMS Runs for Respiratory Emergencies in Rhode Island, By Week, 2021-2023*



Age

Respiratory illness continued to disproportionally impact the older population throughout 2023. As shown below, 76% of respiratory-related emergency medical service requests were made by individuals 50 or older.

Figure 14: *Number of EMS Runs for Respiratory Emergencies in Rhode Island, By Age, 2023*



Primary Impressions and Symptoms

The most common provider primary impression among respiratory emergencies was "respiratory disorder, unspecified." Followed by "shortness of breath". Other common primary impressions from EMS practitioners included:

- Chronic obstructive pulmonary disease with (acute) exacerbation
- Acute respiratory distress syndrome
- Influenza
- Asthma with (acute) exacerbation

Symptoms reported by individuals during these calls included dyspnea, upper respiratory infection, wheezing, cough, fever, and/or malaise.

EMS Response to Opioid Epidemic

In 2023, the nation continued to experience the effects of drug overdoses, including both fatal and non-fatal incidents. Opioids contributed to a large proportion of drug-related deaths.[8]

In 2023, EMS responded to a total of 2,436 non-fatal opioid overdose-related runs and 39 individuals were found dead on arrival from a drug overdose. As of March 2023, the Office of State Medical Examiners (OSME) has reported 186 opioid overdose fatalities in the first two quarters of 2023. EMS responded to opioid overdoses around the clock, with a slightly higher frequency during the evening hours (5 p.m.- 9 p.m.). EMS attended to opioid-related cases every day of the week, with a notable increase in incidents on Fridays and Saturdays.

An estimated 95% of opioid overdoses were treated and transported to a hospital. Approximately 66% of calls occurred in Providence County. Kent County had the second-highest number of calls.

Table 3: *Number and Rate of EMS Runs for an Opioid Overdose in Rhode Island, By County, 2023*

County	Total Number of Runs	Population*	Rate per 10,000 people
Providence	1,622	657,288	24.68
Kent	330	171,275	19.27
Washington	163	130,330	12.51
Newport	71	84,481	8.40
Bristol	55	50,360	10.92

**Population estimates from US Census Community Survey. Since 2023 population estimates have not been released, 2022 population counts are used as a proxy. Data is current as of 3/12/2023 and is subject to change.*

The highest percentage of fatalities were in people age 30-39 (29.6%), and the second highest was in people age 40-49 (21.8%). Males were more likely to overdose than females, constituting about 68% of all opioid-related calls.

Figure 15: *Percentage of EMS Runs for an Opioid Overdose, By Age, 2023*

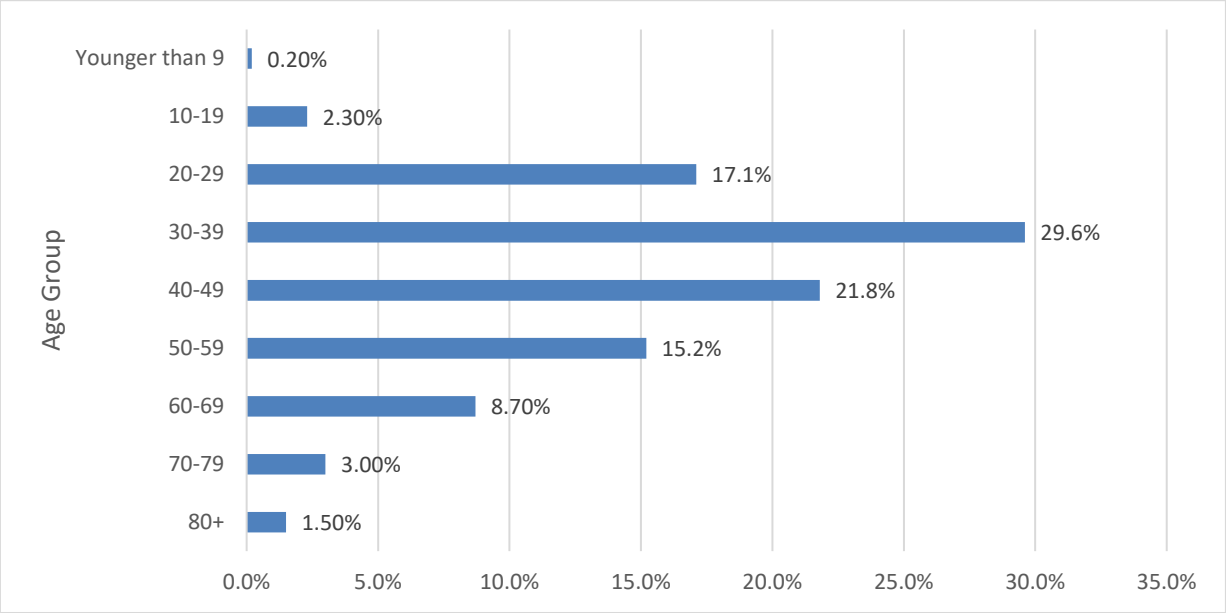
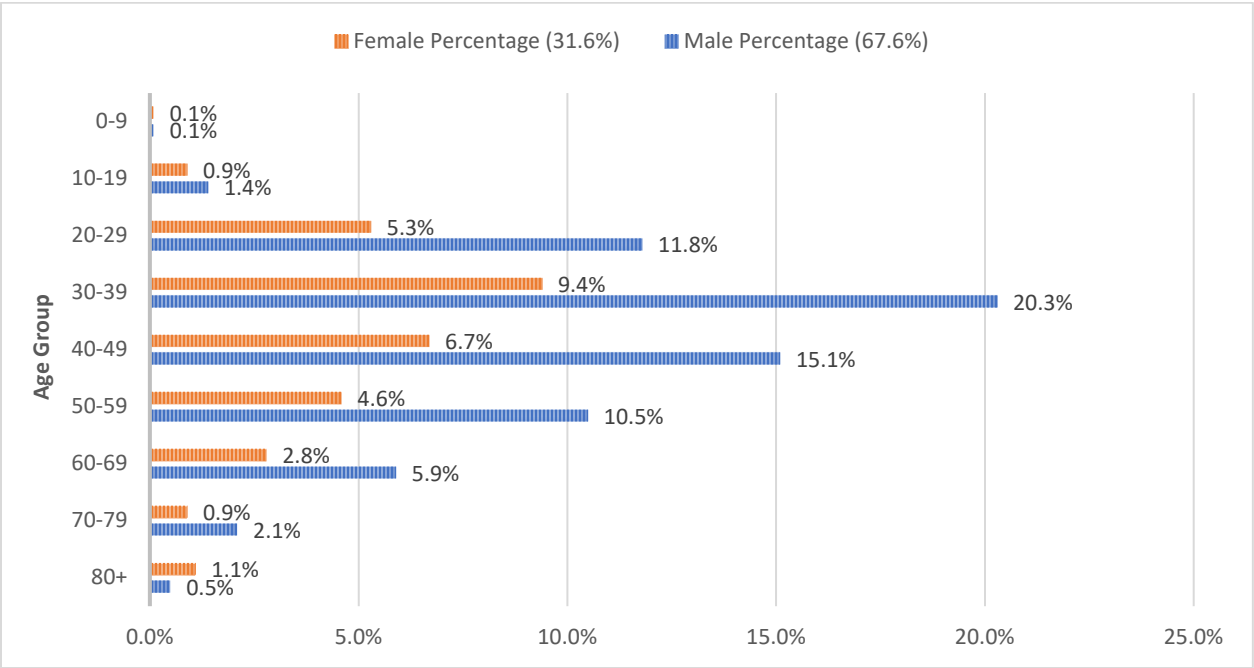
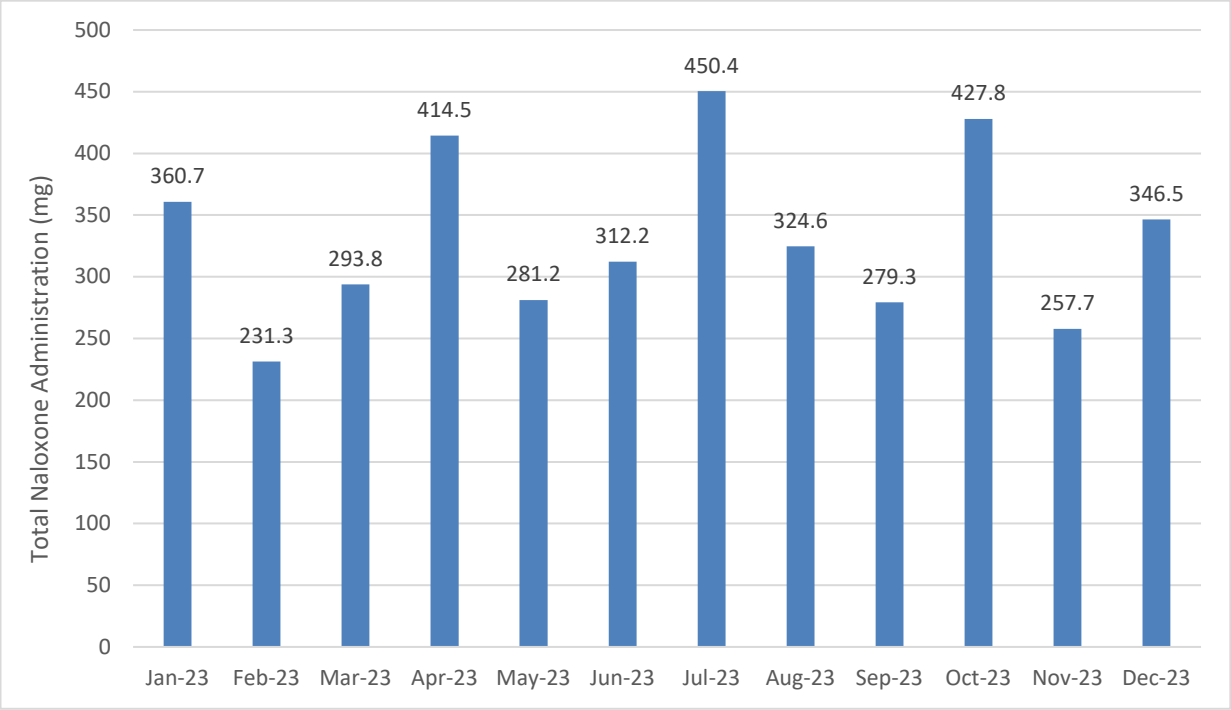


Figure 16: *Percentage of EMS Runs for an Opioid Overdose, By Age and Sex, Rhode Island, 2023*



Naloxone was administered frequently during EMS runs. One four milligrams (mg) dose is equivalent to a single intranasal naloxone spray. Approximately 2,524 mg of naloxone was used by EMS providers in 2023, about 49% of which was administered intranasally. An estimated 886 mg was used prior to EMS arrival. In 2023, there were three instances where more than 400 mg of naloxone was administered in a month. **Generally, there were fewer opioid-related EMS runs in 2023 compared to 2022 (when 2,668 non-fatal opioid overdose-related EMS runs were identified).**

Figure 17: *Total Milligrams of Naloxone Administered in Rhode Island, By Month, 2023*



The most cited provider primary impression was "opioid-related disorder." Other primary provider impressions included:

- Overdose/Drug ingestion
- Altered Mental Status
- Unspecified Coma
- Cardiac arrest

Behavioral Health EMS Incidents

Behavioral health includes mental health and substance use disorders. **In 2023, behavioral health conditions had a significant impact on both individuals and emergency medical responders, accounting for approximately 22% of all EMS (approximately 27,870 EMS runs)**. This is an increase from 2022 which saw a 19% incident rate of behavioral health runs compared to all EMS runs. July had the greatest number of calls, with 2,576 (an average of 83 calls per day).

Most patients with a behavioral health crisis requiring EMS intervention were in their 30s, and individuals in their 50s had the second highest need for behavioral health-related EMS runs. Males were slightly more likely to experience behavioral health emergencies, making up about 57.7% of calls. Approximately 90.8% of callers were treated and transported to a hospital. Provider primary impressions include alcohol use, mental disorder, homicidal/suicidal ideation, altered mental status, panic disorder, and anxiety disorder. The majority of calls (approximately 60%) related to behavioral health occurred in Providence County.

Figure 18: *Number of Behavioral Health-Related EMS Runs in Rhode Island, By Month, 2023*

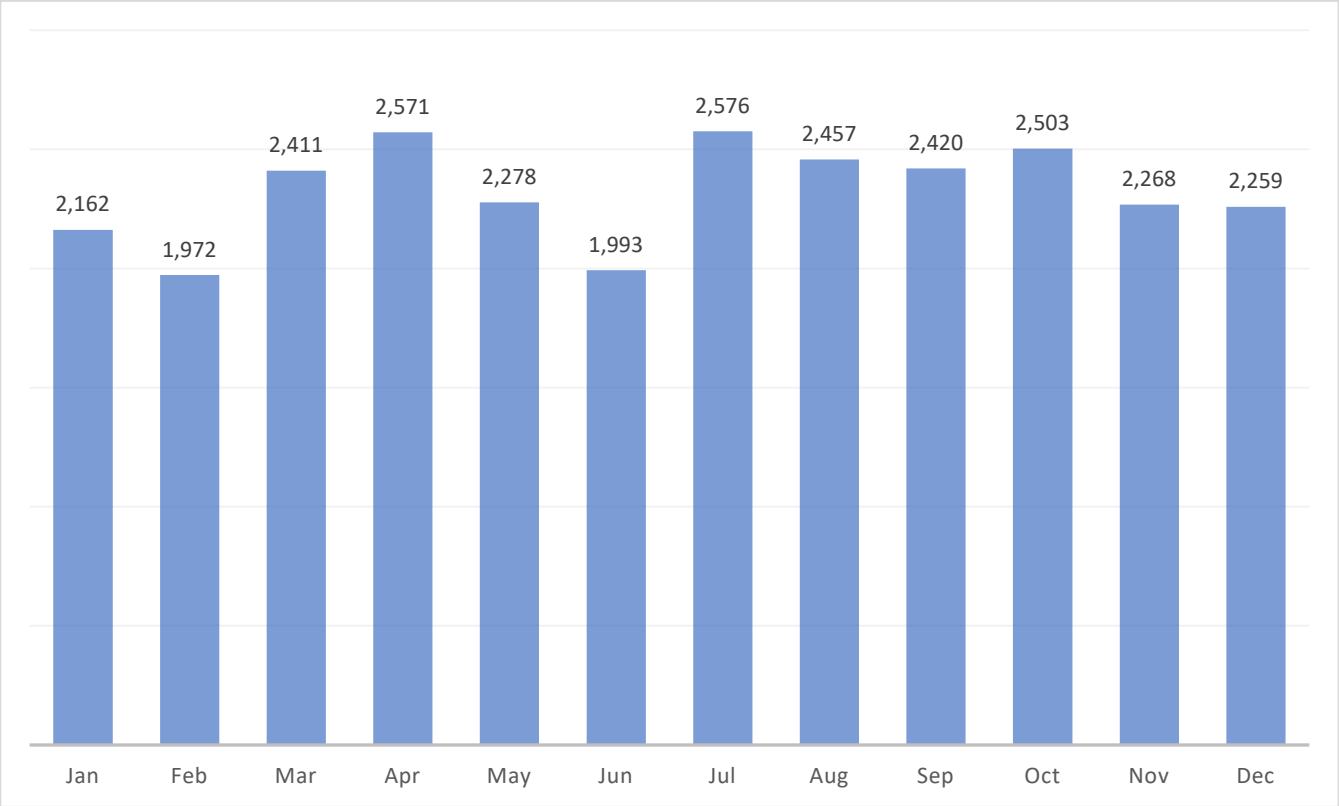


Table 4: *Number of Behavioral Health-Related EMS Incidents in Rhode Island, By Age Group, 2023*

Age	Count
0-9	337
10-19	3,122
20-29	3,896
30-39	5,038
40-49	4,177
50-59	4,692
60-69	3,449
70-79	1,763
80 or older	1,182

The majority of the calls, approximately 65%, originated from Providence County. When looking at adjusted rates, Providence County also had the highest rate, with 276 runs per 10,000 people.

Table 5: *Number of Behavioral Health-Related Incidents in Rhode Island, By County, 2023*

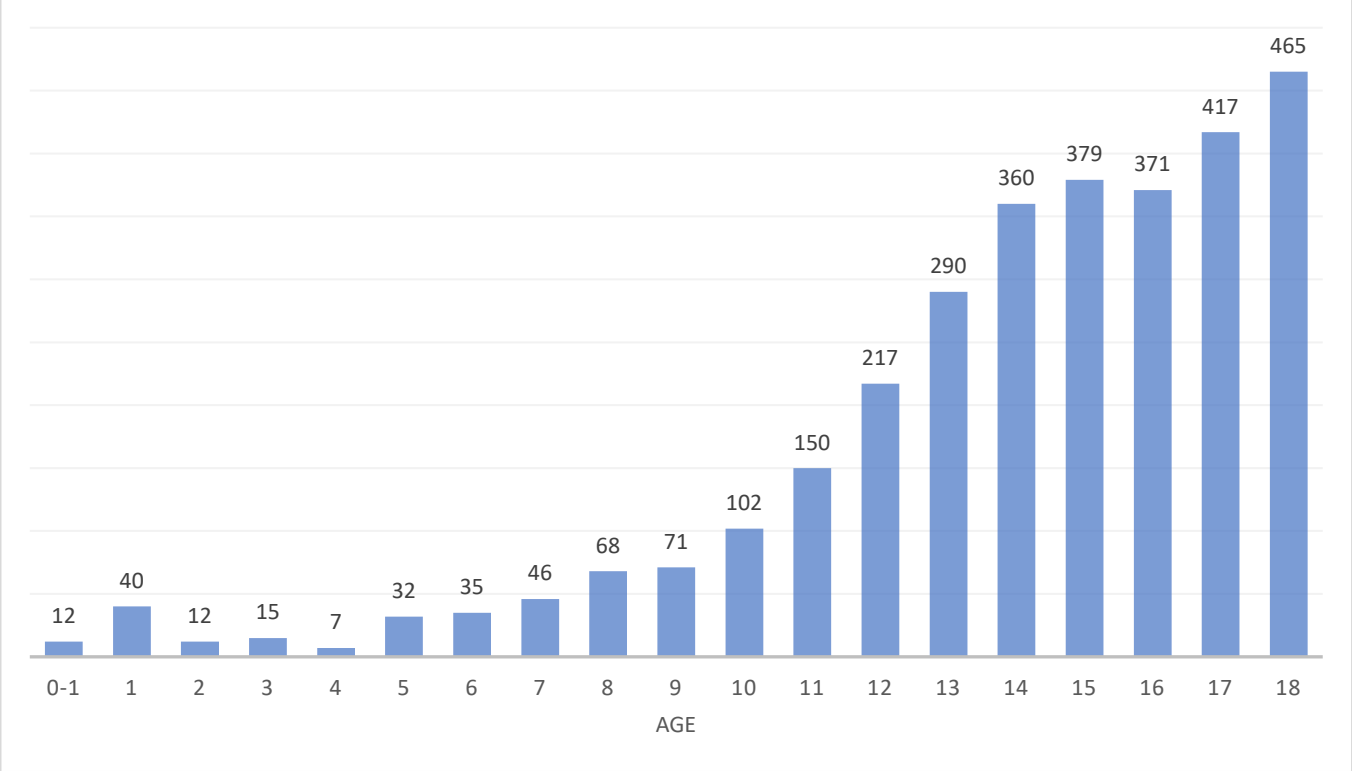
County	Total Runs	Population*	Rate per 10,000 people
Providence	18,149	657,288	276.12
Kent	4,315	171,275	251.93
Washington	2,443	130,330	187.45
Newport	1,942	84,481	229.87
Bristol	1,021	50,360	202.74

**Population estimates from US Census Community Survey. Since 2023 population estimates have not been released, 2022 population counts are used as a proxy. Data is current as of 3/12/2023 and is subject to change.*

Pediatric Behavioral Health

While pediatric calls represent a relatively small proportion of all EMS runs in Rhode Island, they hold significant importance in reporting and addressing mental health crises among children. **In 2023, EMS providers responded to 3,089 calls for behavioral health-related emergencies among children and adolescents up to age 18.** These calls pertained mostly to homicidal and suicidal ideation or attempt, depression, self- harm, alcohol or drug use, and general psychiatric issues.

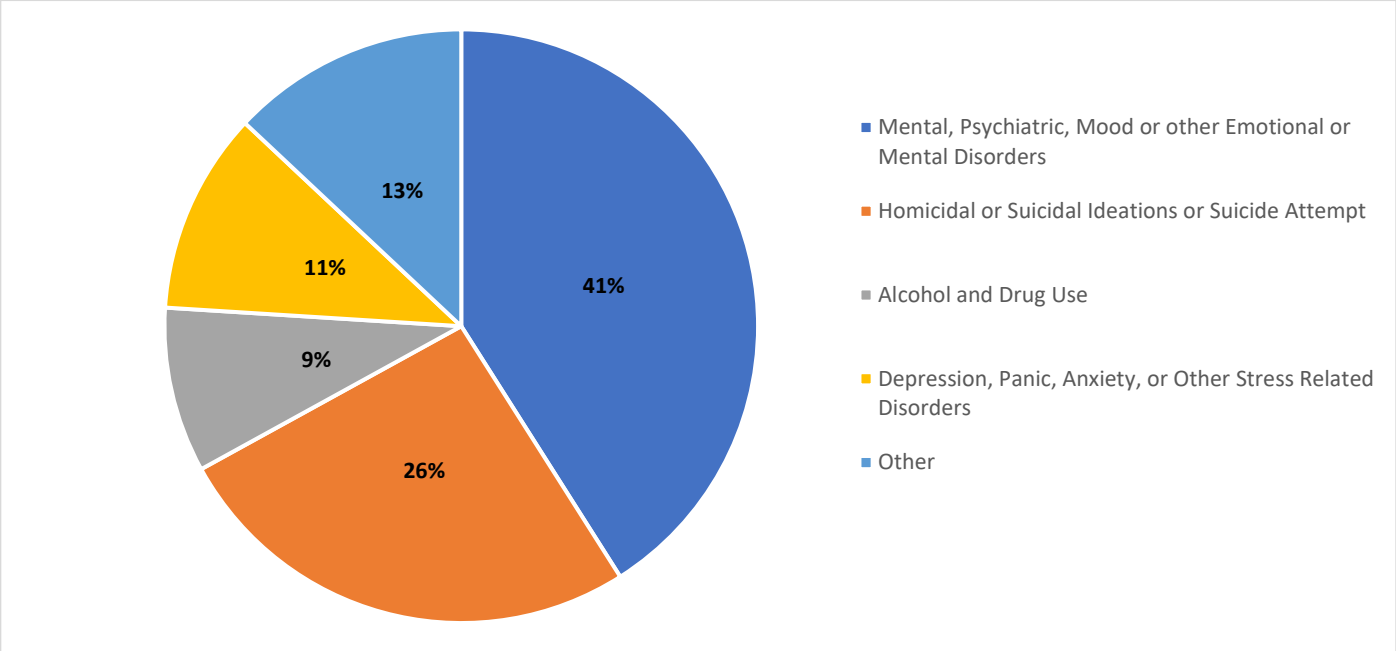
Figure 19: *Count of Pediatric Behavioral Health Runs by age, Rhode Island, 2023*



**Data note: Primary impressions for behavioral health runs for children younger than age two include seizures, falls, and excessive crying.*

The most frequently listed provider primary impression was an unspecified mental disorder, accounting for about 31% of all impressions. Homicidal ideations and suicidal ideations and attempts accounted for 20% of all impressions (approximately 894 EMS calls with this impression found). These impressions are summarized into broader categories presented below.

Figure 20*: Distribution of Provider Primary Impressions from Pediatric Behavioral Health Calls, Rhode Island, 2023*



Motor Vehicle Crashes

According to United States government data, Americans have increased roadway travel by an estimated 2.2% in the past year. Data released by the National Highway Traffic Safety Administration (NHTSA) for January – September 2023 shows a 15% decrease in estimated traffic fatalities in the northeast region, and a decrease of 4.5% nationally. **However, Rhode Island experienced a 50.0% *increase* in traffic fatalities (N=57) for the first nine months of 2023 compared to the same time period in 2022 (N=39).**[9]

EMS responded to approximately 10,999 motor vehicle crashes (MVCs) in 2023. Approximately 95% of the injuries associated with these MVCs were considered non-severe.

Did you know, in Rhode Island…

In 2023, nearly 1,736 children younger than 10 were involved in MVCs where EMS responded.

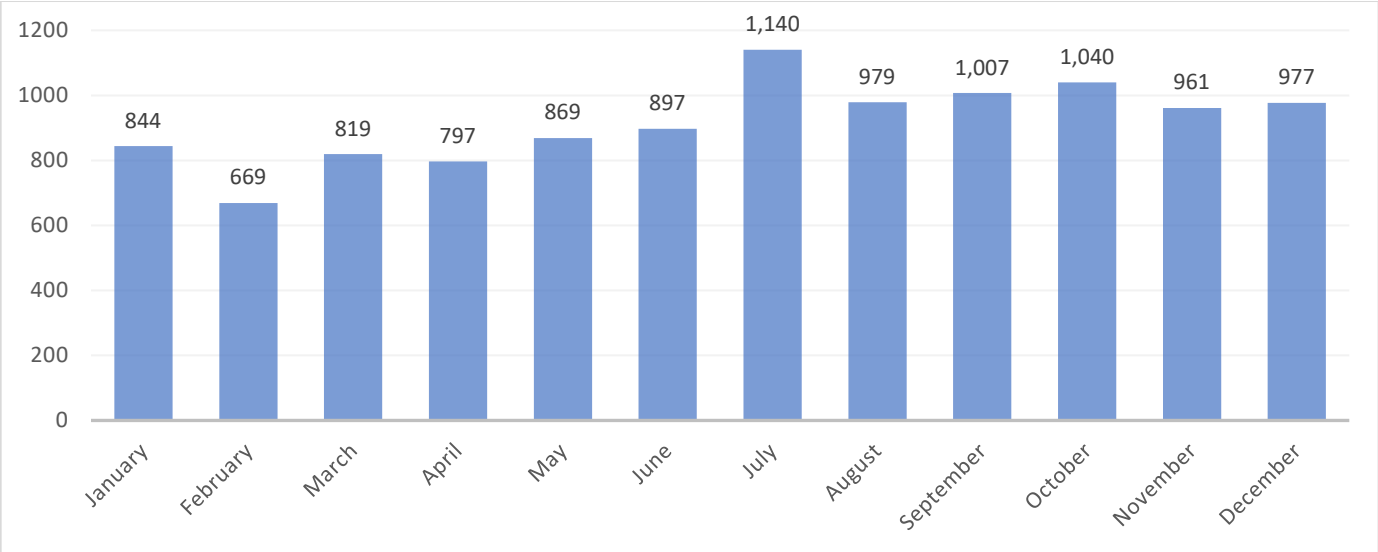
Alcohol use was suspected in 6.0% of EMS MVC calls, and drug use was suspected in 1.3% of calls.

Overall, one in four MVCs where EMS responded had a victim between 20-29.

Frequency of Calls

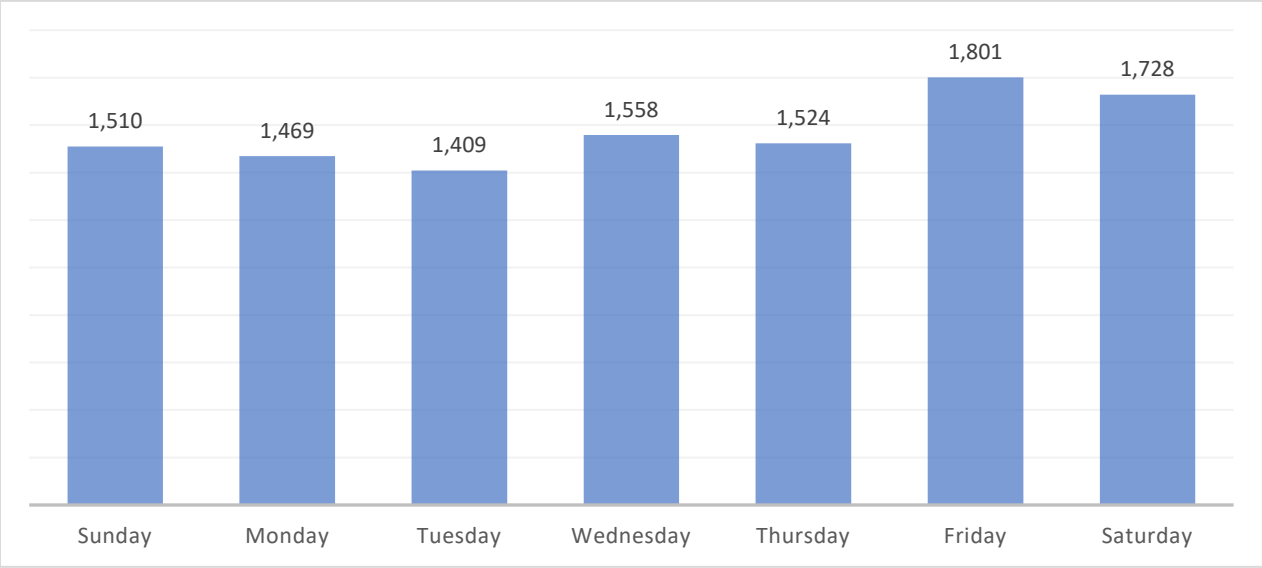
The number of MVCs increased throughout the year, peaking in July (1,140 accidents). January through April had the lowest number of MVCs for the year.

Figure 21: *Number of EMS Calls for MVC in Rhode Island, By Month, 2023*



Most MVC runs occurred on Fridays and Saturdays. The day of the week with the least number of reports was Tuesday. Most fatalities occurred on a Sunday.

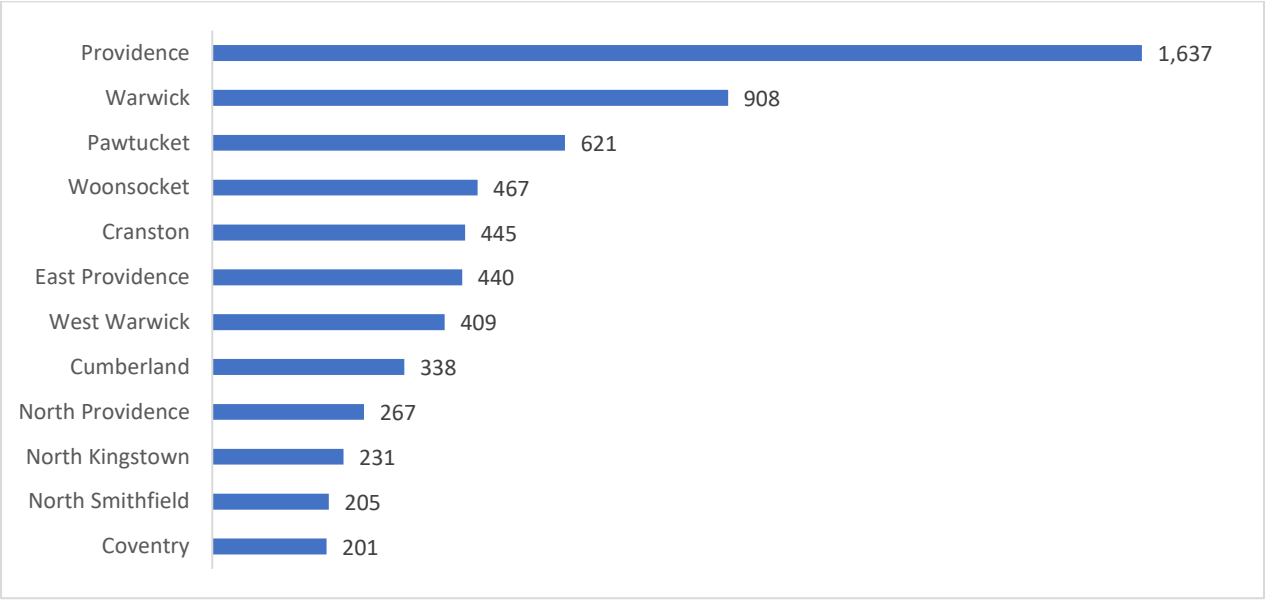
Figure 22: *Number of EMS Calls for MVC in Rhode Island, By Day of Week, 2023*



Location of Response

The city of Providence had the most MVC responses (1,637 runs). Warwick had 908 runs. Other prominent cities included Pawtucket (621 runs), Woonsocket (467 runs), Cranston (445 runs), and East Providence (440 runs).

Figure 23: *Numbers of MVCs by Location of Incident, By Municipality with More Than 200 MVCs, 2023*



A total of 54 MVCs had a documented fatal outcome. More than three quarters (76%) of these incidents occurred in Providence County. When examining fatality rates based on the number of reports, Providence County had the highest rate of fatal incidents, with 0.62% of MVCs reported as fatal.

Table 6: *Number of Fatal and Non-Fatal MVC EMS Runs by County, 2023, Rhode Island*

County	Fatal MVC Runs	Non-Fatal MVC Runs	Fatality Percentage
Providence	41	6,659	0.62%
Newport	3	687	0.45%
Kent	6	1,911	0.31%
Washington	3	1,244	0.24%
Bristol	1	433	0.23%

Challenges and Opportunities for Improvement

EMS systems invest in the equipment and expertise necessary to maintain and adequately secure data systems which use the most advanced methods of protecting patient privacy.

Quality of Data

Accurate and comprehensive data play a critical role in understanding the entirety of pre-hospital patient care. CEMS relies on EMS patient care reports to shape policies and communicate patient pre-hospital outcomes to the community and partners. Given that EMS activities encompass various areas like mental health and motor vehicle accidents, this data serves as a valuable resource for both internal and external stakeholders. CEMS acknowledges the challenges faced by EMS professionals, who operate under intense pressure and in life-or-death circumstances, making it difficult to capture all requested data elements. Factors such as time constraints, scene complexities, or unavailable data due to the nature of the emergency contribute to incomplete data entries. Nonetheless, CEMS encourages EMS professionals to prioritize data accuracy and completeness in their reports, as this information drives enhancements in protocols, procedures, patient care, and data systems. Although essential details like patient demographics may sometimes be omitted, striving for data completeness remains crucial for informed analysis and decision-making.

Additionally, numerous optional data fields are frequently left blank but have the potential to significantly improve data quality, such as documenting seatbelt usage or road conditions during motor vehicle collisions. Starting in January 2024, a NEMSIS update to the current data system will require previously left blank data fields to be completed by EMS professionals. In addition, new educational materials will be introduced to demonstrate the value of complete data and ensure that entry of information into RI NEMSIS is as easy as possible for first responders while in the field.

Limited Funding

CEMS currently relies on federal funding to support data initiatives related to emergency medical services. As such, continued and uninterrupted funding for data initiatives is not guaranteed for the long term. CEMS has worked tirelessly to obtain new and diversified sources of funding to continue to support data efforts. CEMS will continue to seek out new federal funding sources but reaffirm the need for other sources of funding to ensure longevity of these surveillance mechanisms.

CEMS Programs

> *A people-centered EMS system includes processes, protocols, technology, policies and practices designed to provide the best possible outcome for individuals and communities—every day and during major disasters*.
>
> *– EMS Agenda 2050*

The aim for EMS to evolve into a flexible and mobile healthcare resource by 2050, integrated into regional care systems that address acute illness, injuries, and chronic conditions, still stands. CEMS began transitioning towards this vision in 2020.

CEMS programs strive to empower EMS professionals to be the frontline of Rhode Island's healthcare system, playing a pivotal role in promoting the health and safety of both residents and visitors. This is achieved through data-driven, evidence-based, and safe strategies in prevention, response, and clinical care. CEMS is dedicated to assisting EMS agencies in collaborating with community partners and ensuring they have access to necessary resources, including up-to-date technology and a well-trained health workforce. To achieve this, CEMS oversees the following programs:

- Rhode Island Emergency Medical Services for Children Program
- Rhode Island Mental Health Awareness Training Project
- Rhode Island First Responders Project
- Health Equity Mobile Integrated Healthcare / Community Paramedicine (MIH-CP) programs

In addition, CEMS provides guidance and staffing support to multiple internal and external partners.

Social Equity

The Rhode Island EMS practitioner of the future will ensure children in Rhode Island receive consistent, high-quality care by participating in continuing education and having access to specialists and other resources that ensure their comfort in treating a population they encounter less frequently in the field.

RHODE ISLAND EMS FOR CHILDREN

Grantor: Health Resources and Services Administration (HRSA)
Funding Amount: $190,650 per year
Budget Period: 04/01/2023 – 03/31/2024
Project Period: 04/01/2023 – 03/31/2027
Staff: Megan Umbriano (FTE); Dr. Linda Brown (Medical Director)

Summary
The purpose of the Rhode Island EMS for Children (EMSC) program is to coordinate, extend, and improve the integration and focus of pediatric needs within Emergency Medical Services in Rhode Island. This involves building upon and strengthening relationships between mutually supportive pediatric-oriented programs and activities, such as those listed below. EMSC also supports continued pediatric education for EMTs, paramedics, school nurses, and emergency department nurses. EMSC collaborates with hospitals and pre-hospital EMS agencies to encourage participation in the National Pediatric Readiness Projects.

Target Population
All children in Rhode Island who may require treatment or transport by EMS due to illness or injury.

Partners
- **Internal:** Maternal and Child Health Program, Office of Rural Health, Office of Special Needs, Center for Emergency Preparedness and Response, Office of State Medical Examiners, Violence and Injury Prevention Program
- **External:** EMS agencies, Hasbro Children's Hospital, hospitals, Ambulance Service Coordinating Advisory Board, Lifespan Simulation Center, Autism Project, Family Voices

2023 Program Successes/Challenges
- 100% participation in the annual EMS Readiness Survey;
- Collaborated with northeastern states to develop a cohesive hospital emergency department and pre-hospital EMS agency recognition program; and
- A new Program Director, Megan Umbriano, was hired in February 2023.

Rhode Island EMS practitioners of the future will participate in EMS education that includes extensive discussions of behavioral health issues, making clinicians capable of and comfortable treating people who suffer from both acute behavioral health episodes and chronic mental illness. - *Socially Equitable*

Rhode Island Mental Health Awareness Training Project

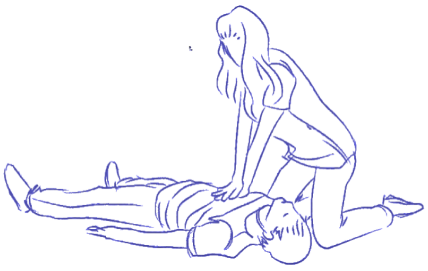
Grantor: Substance Abuse and Mental Health Service Administration
Funding Amount: $125,000 per year
Budget Period: 09/30/2023 – 09/29/2024
Project Period: 09/30/2021 – 09/29/2026
Staff: Megan Umbriano (FTE); Eric Rossmeisl (FTE); Feven Alemu (FTE); Heather Seger (0.25 FTE)

Summary
The Rhode Island Emergency Medical Services Mental Health Awareness Training (RI EMS MHAT) project will provide mental health awareness training to Rhode Island licensed EMS professionals. At the end of 2023, there were 4,576 licensed EMS practitioners in 83 EMS agencies. In 2023, these EMS professionals responded to 27,870 behavioral health emergencies (BHE).

Target Population
The program targets the State of Rhode Island, focusing on responding to those who access 9-1-1 with a BHE and caring for EMS professional's mental health.

Partners
- **Internal:** Violence and Injury Prevention Program
- **External:** EMS agencies, fire departments, the Mental Health Leadership Council, Rhode Island Critical Incident Stress Management (CIMS)

2023 Program Successes/Challenges
- EMS practitioners received training from the Substance Abuse and Mental Health Services Administration (SAMHSA) on recognizing behavioral health conditions, safe crisis de-escalation, mental health, substance use conditions prevalent among EMS professionals, and healthy coping and stress management techniques.
    - Creating Safe Scenes: 303
    - Service to Self: 286
    - First Response: Working on the Front Lines of the Opioid Crisis: 278
- CEMS strives to address workforce challenges in both the career and volunteer sectors of EMS in the state, recognizing the potential negative impact on work-life balance. Efforts include engaging and encouraging leaders to support their crews during these challenging times.



Seamless Integration
Rhode Island EMS practitioners of the future will go beyond sharing data and communicating during or after a specific incident or episode of patient care to be truly integrated. A people-centered EMS system takes advantages of the strengths and resources brought by each organization and clinician to protect the health and wellness of individuals and communities.

Rhode Island First Responders Project

Grantor: Substance Abuse and Mental Health Services Administration (SAMHSA)
Funding Amount: $800,000 per year
Budget Period: 09/30/2023 – 09/29/2024
Project Period: 09/30/2022 – 09/29/2026
Staff: Megan Umbriano (FTE); Eric Rossmeisl (FTE); Feven Alemu (FTE); Heather Seger (0.25 FTE)

Summary
The first responder's project to combat opioid overdoses in Rhode Island (First Responders – CARA grant or CARA grant) was a proposal submitted to SAMHSA in 2017 and was awarded in 2018. We are in our second cycle with the grant. The project aims to make naloxone available to all law enforcement officers by 2026; train all first responders (approximately 1,800 law enforcement officers, 4,500 EMS providers, and 2,000 firefighters) so that they can effectively respond to Rhode Islanders who overdose; establish processes, protocols, and mechanisms for first responders to refer consumers to appropriate treatment and recovery services; and enhance the EMS opioid surveillance system.

Target Population
First responders (law enforcement, EMS, and fire personnel) and Rhode Islanders who experience an overdose

Partners
- **Internal:** Drug Overdose Prevention Program (expert partner), Violence and Injury Prevention Program (training partner – MHFA grant), Center for Health Data and Analysis, and Public Health Informatics (data partner - ESOOS grant)
- **External:** Department of Behavioral Healthcare, Developmental Disabilities and Hospitals (BHDDH), Rhode Island State Police Heroin Opioid Prevention Effort (HOPE) Initiative

2023 Program Successes/Challenges
- As reported by law enforcement agencies: They administered naloxone in 218 suspected overdose events and discharged 280 4 mg intranasal doses of naloxone during the calendar year.
- EMS responded to more than 2,436 overdose events and administered more than 2,500 mg of naloxone.
- The Professional First Responder Online Training for Law Enforcement Officers was developed and released. More than 1,200 officers completed the training by the end of the year.
- CEMS supplied 1,086 naloxone kits to EMS and law enforcement agencies for leave-behind programs during the 2023 calendar year.

Socially Equitable

Local EMS leadership, educators and clinicians reflect the diversity of their communities. EMS professionals often take pride in responding to, treating, and transporting anyone who needs help, regardless of socioeconomic or insurance status, race or ethnicity, or any other factors. –

HEALTH EQUITY MOBILE INTEGRATED HEALTH-COMMUNITY PARAMEDICINE (MIH-CP) PROGRAMS (SUB- RECIPIENT)

Grantor: Centers for Disease Control and Prevention
Funding Amount: $995,000 for three years
Budget Period: 06/01/2021 – 05/31/2024
Project Period: 06/01/2021 – 05/31/2025
Staff: Megan Umbriano (FTE), Marta Kryschuk (contractor)

Summary
This grant supports an 18-month pilot program that provides technical assistance, outreach, education, and subject matter expertise to help select municipalities implement a multidisciplinary model of care aimed at allowing paramedics and EMTs to operate in expanded roles by assisting with bringing primary healthcare and preventive services to underserved populations, with the goal of improving access to care.

Target Population
Rhode Islanders who access the 9-1-1 systems are at risk of being exposed to COVID-19 regardless of their health status, race, ethnicity, gender, socioeconomic status, or other social factors.

Partners
- **Internal:** RIDOH Health Equity Institute, Rhode Island Asthma Control Program
- **External:** Participating EMS agencies
    - Providence Fire Department
    - East Providence Fire Department
    - West Warwick Fire Department
    - Smithfield Fire Department
    - Southern collaborative: Narragansett Fire Department, South Kingstown EMS and Charlestown Ambulance and Rescue Service

2023 Program Successes / Challenges
- Community partners have begun their Mobile Integrated Health programs and have performed more than 300 patient home visits (May 2023 – December 2023).
- Community partners have established successful partnerships with local hospitals and healthcare practices.
- Community partners have successfully prevented COVID-19 and influenza outbreaks within assisted living facilities and nursing homes by hosting vaccination clinics and testing sites.
- Reimbursement for program services continues to be the biggest challenge post grant funding. Community partners are looking for ways to ensure their programs are sustainable.

Healthcare systems, including EMS, are fully integrated with each other and with the communities in which they operate. Additionally, local EMS services collaborate frequently with their community partners, including public safety agencies, public health, social services, and public works. Communication and coordination between different parts of the care continuum are seamless, leaving people with a feeling that one system, comprising many integrated parts, is caring for them and their families.

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EMS Partnerships and Collaborations

CEMS supports the overall mission of RIDOH by working with other Centers and Programs. In addition, CEMS has developed external partnerships that intersect with emergency medical services.

Internal Partnerships

In 2023, CEMS worked with the following Centers and Offices and their respective programs:

- Center for Chronic Care and Disease Management: CEMS collaborated with the Diabetes, Heart Disease, and Stroke Prevention Program to support the State's Stroke Task Force and the HeartSafe Community Program.
- Center for Emergency Preparedness and Response: CEMS collaborated with the Hospital Preparedness Program by participating in their preparedness conference and on the Rhode Island Healthcare Coalition. CEMS staff was available to fulfill staffing and emergency response needs. Center Chief Rhodes also serves as RIDOH's tactical communications coordinator.
- Center for Health Data and Analysis and Public Health Informatics: CEMS provided EMS data to enhance surveillance of opioid overdoses in Rhode Island.
- Center for Health Promotion: CEMS helped with the implementation of the SAMHSA Mental Health First Aid grant that aimed to train 1,000 EMS practitioners across the State. Also, CEMS staff, certified as instructors, provided mental health first aid training throughout Rhode Island.
    - Violence and Injury Prevention Program
    - Comprehensive Suicide Prevention Program
- Center for Preventive Health: CEMS partnered with the Rhode Island Asthma Control Program to provide asthma training to agencies involved in the Mobile Integrated Health program.
- Office of the State Medical Examiners: CEMS provided patient care reports and participated in the Child Death Review Team (CDRT).
- Office of Primary Care and Rural Health: CEMS provided funding for equipment for MIH-CP programs and utilizes EMS data for decision-making processes.
- Health Equity Institute: CEMS provided grant funding for local MIH-CP programs.

External Partnerships

- Ambulance Service Coordinating Advisory Board: CEMS worked with the Ambulance Service Coordinating Advisory Board (ASCAB) to provide recommendations to the Director of Health regarding EMS-related issues. Members of the board are listed in Appendix A.
- Rhode Island Department of Transportation (DOT): CEMS assisted DOT by providing data to help minimize traffic-related injuries and the Fatality Analysis Reporting System.
- Rhode Island Emergency Management Agency (RIEMA): Center Chief Rhodes served on the Rhode Island Interoperable Communication Committee, as a designee of the Director of Health.
- Rhode Island E-911: Center Chief Rhodes served on the executive steering committee and the advisory commission, representing the Director of Health.
- Rhode Island Quality Institute: CurrentCare health information exchange.
- Hospital Association of Rhode Island
- Rhode Island Association of Fire Chiefs
- Rhode Island State Association of Fire Fighters
- Rhode Island State Firefighter's League
- Other external partners include EMS agencies, hospitals, and educational institutions.

National Partners

- National Association of EMS Officials (NASEMSO)
    - Chief Jason M. Rhodes
        - NASEMSO President Elect, Board of Directors and Executive Committee
        - FirstNet Public Safety Advisory Committee
        - NASEMSO Program Committee for the annual meeting
    - Kenneth Williams, MD; Medical Directors Council (past chair)
    - Megan Umbriano; Pediatric Emergency Care Council
    - Eric Rossmeisl; EMS Training Coordinator, Education Council
    - Michelle Calouro; Trauma Managers Council
    - Christine Moniz; Personnel Licensure Council and Agency and Vehicle Licensure Committee
    - Feven Alemu; Epidemiologist
    - Marta Kryschuk; Data Managers Council

- National EMS Information System (NEMSIS)
- biospatial, Inc.
- National Registry of Emergency Medical Technicians
- US Department of Transportation, National Highway Traffic Safety Administration Office of Emergency Medical Services

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Appendix A: *Rhode Island Ambulance Service Coordinating Advisory Board Members, 2023*

As defined in R.I. Gen. Laws §23-4.1-2

John Potvin, NRP, EMS-IC; Chairperson, EMS Director, East Providence Fire Department, RISAFF*

Michael DeMello, NRP, EMS-IC; Vice Chairperson, Chief, Bristol Fire Department, Bristol County

Bethany Gingerella, RN, NRP, EMS-IC; Secretary, Charlestown Ambulance-Rescue Service, Washington County

Heather Rybasack-Smith, MD; Rhode Island Medical Society

Ryan Carter, MD; Rhode Island Chapter of the American College of Emergency Physicians

Lynne Palmisciano, MD; Rhode Island Chapter of the American Academy of Pediatrics

Michael Connolly, MD; RI Chapter of the American College of Surgeons, Committee on Trauma

Scott Partington, AEMT-C; Chief, Narragansett Fire Department, RI Association of Fire Chiefs

James Richard, NRP, EMS-IC; Captain, Cumberland Emergency Medical Services, RISAFF

Francesco Capaldi, NRP; South Kingstown EMS, RISAFF

Lori Poirier, NRP, EMS-IC; Lieutenant, Oakland-Mapleville Fire Department, RI State Firemen's League

Richard Greene, AEMT-C; Deputy Chief, Cranston Fire Department, Kent County

Randall Watt, AEMT-C; Captain, Little Compton Fire Department, Newport County

Virginia Colwell, **AEMT-C, EMS-IC;** South Foster Fire Department, Providence County, volunteer

Gillian Cardarelli, NRP; Lieutenant, Providence Fire Department, Providence County, career dept.

Lynn Blais, RN; Rhode Island Emergency Nurses Association

Dawn Lewis, PhD, RN, EMT; Hospital Association of Rhode Island

Adam Reis, RN; Regional Director for Midwest Medical Transport

Joseph Baginski, EMT; Chief, Professional Ambulance, Professional Ambulance Service

Joseph M. Polisena, RN, MEd., AEMT-C, EMS-IC; Former Mayor of Johnston, RI Senate President appointee

Zachariah Kenyon, AEMT-C; EMS Chief, Providence Fire Department, RI Senate President appointee

Michael Carreiro, AEMT-C; Lieutenant, Warwick Fire Department, RI Speaker of the House appointee

Keith Calci, AEMT-C; Battalion Chief, Johnston Fire Department, RI Speaker of the House appointee

Kathleen Barton, Public Member

Danielle Green, RN, Public Member

**RISAFF: Rhode Island State Association of Fire Fighters*

Acknowledgments

RIDOH Leadership
Staci Fischer, MD, Acting Director of Health
Utpala Bandy, MD, MPH; Interim Director of Health
Seema Dixit, Deputy Director of Health
Sandra Powell, Deputy Director of Health

RIDOH Division of Healthcare Quality and Safety (HQS) 2023
Jennifer Sternick, JD; Associate Director of Health
Joseph Catalano, MS; Assistant Director of Health
Jason M. Rhodes, MPA, AEMT-C; Chief, CEMS
Kenneth Williams, MD; EMS Physician Medical Director, CEMS
Linda Brown, MD; EMS for Children Medical Director, CEMS
Megan Umbriano, BS, AEMT-C, EMS-IC; Deputy Chief and Program Director, CEMS
Eric Rossmeisl, AAB, AEMT-C, EMS-IC; Training Coordinator, CEMS
Christine Moniz, AS, EMT; Field Technician, CEMS
Michelle Calouro, BS, NRP, TP-C, EMS-IC; Compliance Officer, CEMS
Feven Alemu, MPH; EMS Public Health Epidemiologist, CEMS
Marta Kryschuk, MS, AEMT-C; Data Manager/MIH-CP Program Manager, CEMS
Heather Seger, MSW, LICSW, QMHP; Behavioral Health Clinician, CEMS
Kenan Sasa, Licensing Aide, Center for Professional Boards and Licensing

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Melissa Basta, MPH, RN, BSN; Epidemiologist and Community Needs Project Manager, CHDA