2018 Annual Report
Center for Emergency Medical Services

September 5, 2019

Table of Contents

Overview

In accordance with the *Emergency Medical Services Transportation Act*, Rhode Island General Law §23-4.1-3(e), the Rhode Island Department of Health's (RIDOH) Center for Emergency Medical Services (CEMS) releases its *2018 Annual Report* to Governor Gina M. Raimondo and the leadership of the General Assembly.

CEMS is located within the Division of Preparedness, Response, Infectious Disease, and Emergency Medical Services (PRIDEMS). The core functions of CEMS include licensure of emergency medical services (EMS) practitioners and ambulance services, inspection of ambulances, development of protocols for emergency medical treatment in the pre-hospital setting, management of statewide EMS data, establishment of educational requirements, and investigation and resolution of complaints.

In 2018, CEMS had the opportunity to work with internal and external partners to shape healthcare policy and improve delivery of care to all Rhode Islanders. CEMS collaborated with multiple partners to achieve many successes.

- CEMS collaborated with the Ambulance Service Coordinating Advisory Board (ASAB) to finalize a significant revision of the *Rules and Regulations Relating to Emergency Medical Services* [R23-4.1EMS], both in format and content, pursuant to the *Administrative Procedures Act* mandate. The new rule §216-RICR-20-10-2 is active and was effective as of December 27, 2018.
- The Chief of CEMS continued to support the ongoing initiative of the Governor's Overdose Prevention and Intervention Task Force. CEMS received funding for the First Responder's Project to Combat Opioid Overdoses in Rhode Island, a grant under the *Comprehensive Addiction and Recovery Act*.
- The Rhode Island EMS Information System (RIEMSIS) is still undergoing changes and upgrades. CEMS continues to collaborate with the health informatics team at the Executive Office of Health and Human Services (EOHHS) to share EMS electronic patient care record data with the State's Health Information Exchange (HIE). Also, CEMS developed a new partnership with Biospatial to analyze RIEMSIS data.
- The EMS for Children program received a new four-year award and supplemental funds to participate in a learning collaborative that enhanced the integration of pediatric coordinators in EMS agencies.
- CEMS hosted the National Association of EMS Officials annual conference during EMS Week (May 20 – May 26, 2018) at the Providence Omni and celebrated its fifth annual EMS recognition ceremony at the Rhode Island State House.

CEMS staff are active participants of the Governor's Overdose Prevention and Intervention Task Force, the Stroke Task Force, the HeartSafe Communities Project, the Drug Overdose Prevention and Rescue Coalition, the Rhode Island Children's Cabinet, and the Child Death Review Team. Staff regularly attended meetings of the Department of Transportation's (RIDOT) Traffic Records Coordinating Committee because CEMS provides data for the Fatality Analysis Reporting System (FARS). CEMS staff were also contributors to the Rhode Island Emergency Management Agency's (RIEMA) work group to revise the state's Mass Casualty Plan and Mutual Aid Plan.

At the national level, three staff were active members of the National Association of State EMS Officials (NASEMSO), serving in leadership roles and on the Association's Board of Directors.

- EMS for Children program manager Carolina Roberts-Santana became the past chair for Pediatric Emergency Care Council and the New England Regional Lead.
- CEMS Physician Medical Consultant Kenneth Williams, MD, chaired the Medical Directors Council.
- CEMS Chief Jason Rhodes was elected chairperson for the East Region.

EMS Licensing Statistics

In 2018, CEMS staff licensed 423 Emergency Medical Technicians (EMTs), 93 Advanced EMT Cardiacs, 50 Paramedics and two Instructor Coordinators (See Table 1).

Figure 1: *Number of Rhode Island EMS Practitioner Licenses Issued, By License Type, 2016 – 2018*

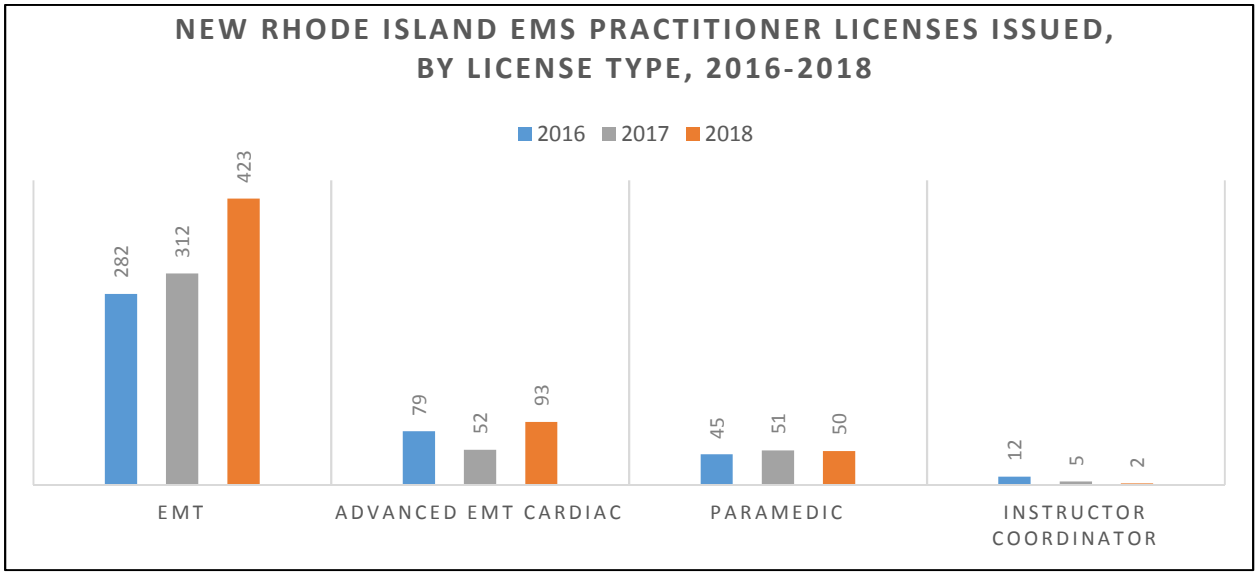


Figure 2: *Number of Rhode Island EMS Practitioners Active Licenses, By License Type, 2016 – 2018*

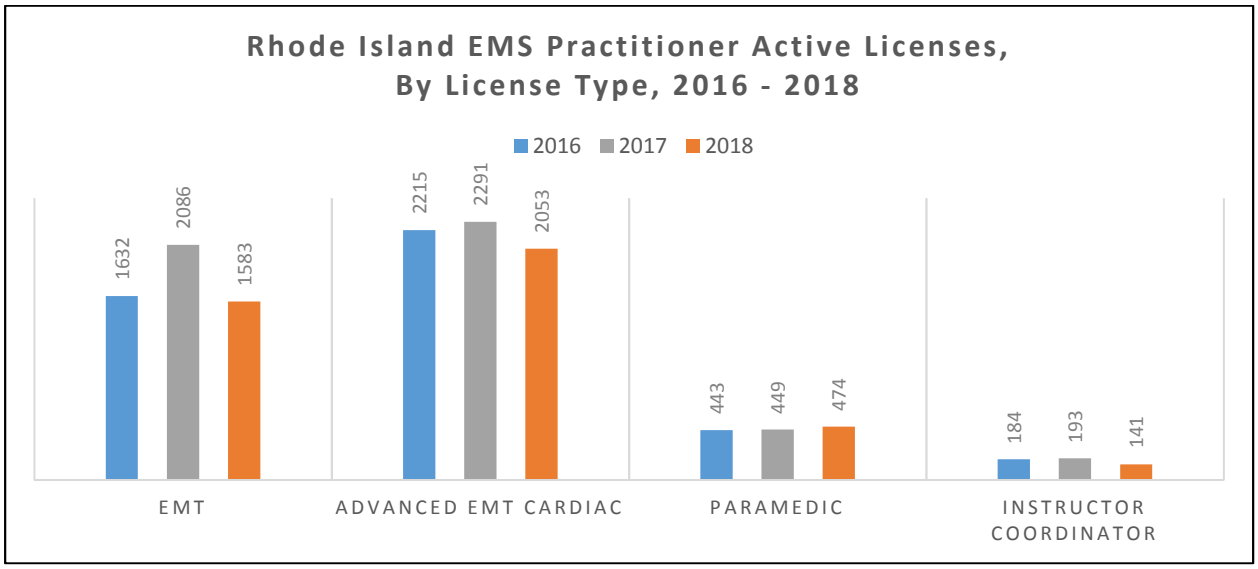
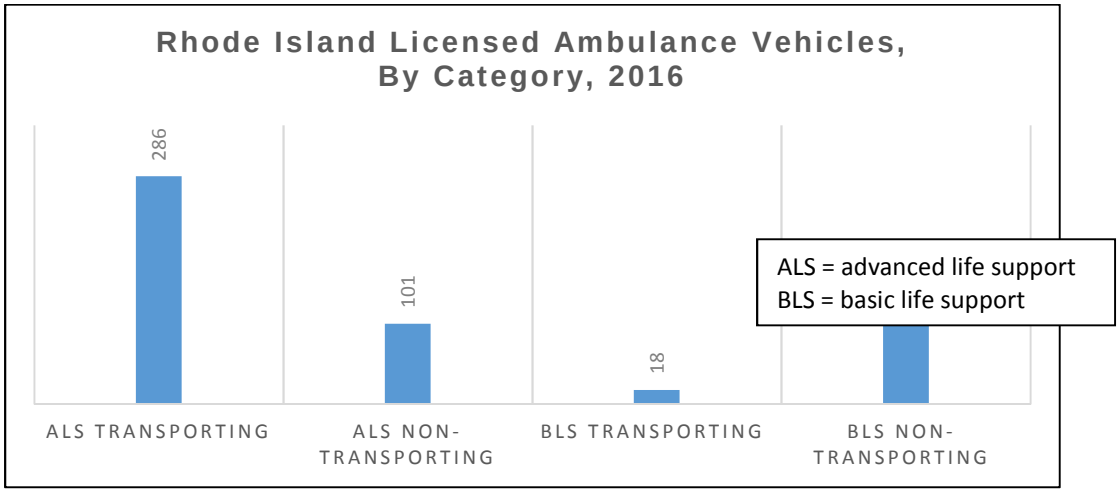


Table 1:*Rhode Island Licensed Ambulance Services, By Category, 2018*

Category	Number
Municipal (total)	**28**
Fire Department, transporting	*25*
Independent EMS, transporting	*3*
Fire district (total)	**20**
Transporting	*12*
Non-transporting	*8*
Private, non-profit, community-based (total)	**18**
Transporting	*12*
Non-transporting	*6*
Private, for-profit (total)	**9**
In-state home office, transporting	*3*
In-state home office, non-transporting	*1*
Out-of-state home office, transporting	*5*
College/University (total)	**7**
Transporting	*2*
Non-transporting	*5*
Hospital-based	**1**
State assets, non-transporting	**3**
Federal fire department	**1**
Industrial, private, non-transporting	**1**
Total licensed ambulance services	**88**

Note: A transporting service has at least one ambulance capable of transporting a patient. A non-transporting service (fire engines, sports utility vehicles) has licensed apparatus that are equipped with EMS supplies. There were no changes in the number of ambulance services from 2018.

Figure 3: *Rhode Island Licensed Ambulance Vehicles, By category, 2018*



Note: Based upon the vehicle class (transporting or non-transporting, basic life support, or advanced life support), each licensed ambulance is required to carry equipment as outlined in the Rhode Island EMS Rules and Regulations*. Advanced life support vehicles refer to those vehicles that are staffed by Advanced EMT-Cardiacs and/or Paramedics. There were no changes in the number of ambulance services from 2018.*

EMS Education

EMS Continuing Education

In 2016, CEMS announced the release of the Rhode Island Continued Competency Program (RI-CCP), which replaced the traditional U.S. Department of Transportation (USDOT) EMS refresher model for license renewal. The RI-CCP was modeled after the National Continued Competency Program of the National Registry of EMTs (NREMT). This process allows for a lifelong learning experience, similar to other healthcare professions, and aided in keeping EMS professionals current in a rapidly evolving EMS environment.

Each EMS practitioner within the different licensure categories (EMT, AEMT-C and Paramedic) must complete a pre-determined number of hours to be able to successfully renew a license with CEMS. The National Continued Competency Program (NCCP) model utilizes three categories: national, state/local and individual.

Table 2: *NREMT NCCP Model Hours*

	EMT	AEMT-C	Paramedic
National	20	25	30
State/Local	10	12.5	15
Individual	10	12.5	15
Total	40	25	60

The local or state competency components are developed by CEMS.Seven hours of distributive education may be applied in this category. The State-required content includes:

- Biological death
- CHEMPACK
- Documentation
- Epinephrine administration
- Mass casualty incidents
- Medical orders for life sustaining treatment (MOLST)
- Medical direction/quality assurance
- Pediatrics: safe sleep
- Pediatrics: skills check
- Respiratory illness
- RIEMS protocol update
- Well-being of the EMS practitioner
- Medication administration

To disseminate pertinent information, CEMS developed an education site. The site collected insights about the number of visits (Figure 4), days of the week in which EMS practitioners visited the site (Figure 5) and time of day in which EMS practitioners access the site (Figure 6). This information helped CEMS consider the use of CDC TRAIN learning management system to support education for the 2019-2022 license renewal cycle. Also, CEMS will hire a training coordinator in 2019 with funds from the Substance Abuse and Mental Health Service Administration (SAMHSA) Comprehensive Addiction and Recovery Act (CARA) grant.

Accreditation of training facilities
The state accreditation process is in place and as of December 31, 2018, there were 15 accredited educational institutions in Rhode Island. As of December 31, 2018, three paramedic education programs held a letter of review with the Committee on Accreditation for the EMS Professions (CoAEMSP), but there were no educational programs in the State that were fully accredited by CoAEMSP. A letter of review allows a paramedic program to operate, but they are required to obtain full accreditation in order to continue as a program.

Figure 4: *Number of Visits to the Rhode Island EMS Education Website*

Figure 5: *Number of Visits to the Rhode Island EMS Education Website, By Day of the Week*

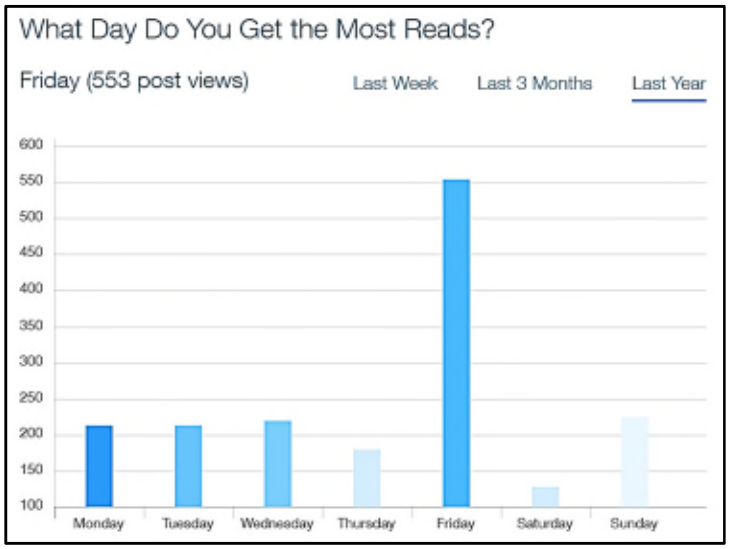
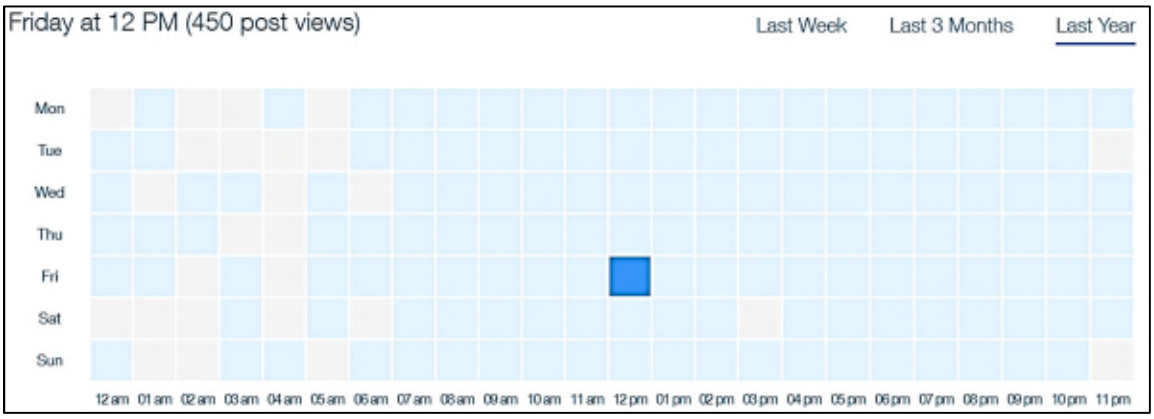


Figure 6: *Number of Visits to the Rhode Island EMS Education Website, By Hour of the Day*



EMS Data Management

EMS data can help local, state and national EMS stakeholders more accurately assess EMS needs and performance, as well as support better strategic planning for the EMS systems of tomorrow. In Rhode Island, CEMS has been collecting electronic data since 2014. A goal for 2019 is to streamline processes for data extrapolation and cleaning, expand analytic capabilities, and disseminate findings to the EMS community and other stakeholders.

Rhode Island EMS Information Management System
The Rhode Island Emergency Medical Services Information System (RIEMSIS) is the pre-hospital electronic patient care (ePCR) reporting system for CEMS. A web-based platform, hosted by the vendor ImageTrend, manages the State's data exchange. Per state EMS regulations, all licensed ambulance services are required to submit a patient care report for each patient transported within two hours of the incident's close. The use of a fully electronic system means that all licensed EMS agencies provide *only* ePCRs, and those ePCRs are uploaded to the State data repository on a regular basis. Rhode Island provides real-time de-identified data uploads to the National EMS Information System (NEMSIS), using the version 3.4.0 data standard.

In 2018, CEMS worked with the Data Management Committee of the Ambulance Service Coordinating Advisory Board (ASAB) for the migration to the most current version of RIEMSIS (v.3.4). While ImageTrend's Elite product operates the data management system for RIEMSIS, EMS agencies may upload records to the State using any NEMSIS v.3-compliant software. As of December 31, 2018, 72 of the 88 ambulance services used a state-supplied ImageTrend license; five agencies purchased ImageTrend licenses separate from the state; and 11 employ third-party vendor data management products.

Upon accepting a report into the State repository, ImageTrend exports de-identified records through a live data feed to three external partners: NEMSIS, Biospatial, Inc., and CurrentCare, the Rhode Island health information exchange (HIE).

National EMS Information System (NEMSIS)
NEMSIS compiles EMS data into publicly accessible dashboards which compare statewide aggregated data on performance measures, ST-Elevation Myocardial Infarction (STEMI), naloxone administration, motor vehicle crashes (MVC), and data quality. It also allows researchers to use nationwide EMS data to study and analyze current trends and practices.

Biospatial ,Inc.
In 2018, CEMS formalized an agreement with the National Collaborative for Bio-Preparedness (NCBP), a venture funded by the US Department of Homeland Security, to receive NEMSIS-compliant data. Biospatial, a cloud-based data visualization software, uses geospatial analysis to conduct syndromic surveillance to inform data-driven EMS response. Built-in dashboards can perform customized searches related to ePCR analytics, EMS performance measures, data management, and syndrome-specific surveillance, such as opioid overdose and motor vehicle crashes. In future years, CEMS plans to explore use of Biospatial's probabilistic matching algorithm to link external sources of data to EMS incidents.

Health Information Exchange (HIE)
The HIE admission, discharge, and transfer (ADT) system, known as CurrentCare, appends the pre-hospital patient care report to the patient's medical record to be accessed by authorized medical professionals. In addition to supporting robust clinical care, quick access to EMS pre-hospital data empowers state and community-level leaders to track trends in injury and disease and to inform and improve prevention efforts.

In addition, CEMS provides data to many internal and external partners, including:

- National EMS Information System
- National Collaborative for Bio-Preparedness
- The Governor's Overdose Prevention and Intervention Task Force
- Prevent Overdose RI
- Rhode Island Department of Transportation (RIDOT)
- The Center for Disease Control and Prevention (CDC)
- Office of State Medical Examiners
- RIDOH's Violence and Injury Prevention Program
- RIDOH's Center for Health Data Analysis
- First Responder Workgroup on Overdose Prevention.

Approximately 154,000 NEMSIS v.3 records were submitted from RIEMSIS in 2018. Due to the migration to the v.3 standard, some agencies are back-entering ePCR reports that failed validation due to the upgraded data standard. A report of common EMS data points from the RIEMSIS is available in Appendices B and C.

EMS Compliance Investigation

A significant responsibility of CEMS is to investigate complaints which may result in disciplinary action. In 2018, EMS investigated 19 complaints against licensed EMS practitioners, EMS services, or ambulances.

The nature of complaints received included notification of a licensee's arrest for felony or misdemeanor counts, violations of the *Rules and Regulations Relating to Emergency Medical Services [R23-4.1EMS]* or the *Rhode Island Statewide EMS Protocols,* medication errors, and patient-care issues.

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

EMS Partnerships and Collaborations

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

Internal Partnerships
In 2018, CEMS worked with the following Centers and Offices and their respective programs:

- **Center for Chronic Care and Disease Management**: CEMS collaborates with the Diabetes, Heart Disease, and Stroke Prevention Program to support the State's Stroke Task Force and the Heart Safe Community Program.
- **Center for Emergency Preparedness and Response**: CEMS incorporated the CHEMPACK program into the EMS continuing education requirements and collaborated with the Hospital Preparedness Program by participating in their preparedness conference and on its coalition. CEMS staff was available to fulfill staffing needs Departmental incident and emergency responses. CEMS staff completed training, including forklift operator training and Incident Command System operations training. CEMS also met with CEPR staff to discuss the development of a training for EMS that orients EMS practitioners to the importance and use of the Rhode Island Special Needs Emergency Registry.
- **Center for Health Data and Analysis and Public Health Informatics**: CEMS worked very closely with this center, specifically, the Enhanced State Opioid Overdose Surveillance (ESOOS) Program, which utilized EMS data to build the current Rhode Island ESOOS definition for opioid overdoses in Rhode Island.
- **Center for Health Promotion**: In 2018, CEMS worked with the Drug Overdose Prevention Program (DOPP) and the Violence and Injury Prevention Program (VIPP). CEMS sends staff to all meetings related to combatting the opioid overdose epidemic in the State, and the Chief of CEMS is an appointed member of the Governor's Overdose Taskforce. In addition, CEMS collaborated with VIPP to apply for the SAMHSA Mental Health First Aid grant that aimed to train 1,000 EMS practitioners across the state in Mental Health First Aid.
- **Office of the State Medical Examiner**: CEMS maintains an active partnership with the with this Office regarding EMS patient care reports and also participates in Child Death Review Team (CDRT).

In 2018, the CEMS Chief co-chaired RIDOH's Health and Safety Committee and authored the emergency evacuation plan for RIDOH's Cannon Building. Also, CEMS staff provided first aid to visitors or other staff who were ill or injured and conducted CPR and first aid training for RIDOH employees.

External Partners

- **Rhode Island Emergency Management Agency (RIEMA)**: CEMS and RIEMA worked to modernize the State's Mass Casualty Incident Asset Program. This Program was started in the aftermath of the Station Night Club Fire, and the State placed eight mass casualty incident (MCI) trailers throughout the state. The trailer program was analyzed for effectiveness and it was determined that three vans, strategically positioned in the state, would meet the needs of the public during a major emergency. MCI vans are located in Cumberland, Portsmouth, and South Kingstown.
- **Rhode Island Department of Transportation (RIDOT)**: CEMS assisted RIDOT by providing data to help minimize traffic-related injuries and contribute to the Towards Zero Death efforts of the state.
- **Ambulance Service Coordinating Advisory Board**: CEMS works closely with the Ambulance Service Coordinating Advisory Board (ASCAB) to provide advice to the Director of Health regarding emergency medical services related issues. In 2018, the Center participated in all scheduled meetings of the board and its subcommittees in addition to providing staff support. Members of the board are listed in Appendix A.

Other external partners include EMS agencies, hospitals, and educational institutions.

National Partners

- **National Association of EMS Officials (NASEMSO)**: In 2018, three CEMS staff belonged to the leadership of NASEMSO. Chief Jason Rhodes was the Chair of the organization's East Region; Kenneth Williams, MD, served as the Chair of the Medical Directors Council; and Carolina Roberts-Santana completed her term as the immediate past Chair of the Pediatric Emergency Care Council.

  The Association held its annual meeting during National EMS week (May 20 – May 26) in Providence. For the first time in MASEMSO's 38-year history, Rhode Island served as the host state. Highlights included a nighttime tour of the State House and participation in the Hasbro Children's Hospital *Goodnight Lights* celebration on National EMS for Children Day.

EMS Programs

Emergency Medical Services for Children

Grantor: Health Resources and Services Administration (HRSA)
Funding Amount: $230,000 per year
Budget Period: 04/01/2018 – 03/31/2019
Project Period: 04/01/2018 – 03/31/2021

Note: EMSC State Partnership grant is $130,000; however, the $100,000 supplement increased the amount to $230,000 for the budget year only.

Summary
The purpose of the Rhode Island EMS for Children (EMSC) activities is to coordinate, extend, and improve upon the integration and focus of pediatric needs within the state EMS system. This involves building upon and strengthening relationships between mutually supportive pediatric-oriented programs and activities, such as those found in Maternal and Child Care, trauma system development, disaster preparedness, and highway safety. EMSC also looks to support continued pediatric education for EMTs, paramedics, and school and emergency department nurses. EMSC also partners with local chapters of the American Academy of Pediatrics (AAP) and the American College of Emergency Physicians (ACEP), Family Voices, and other professional organizations to seek support and advice for the continued improvement of EMS care for children in Rhode Island.

Target Population
All the children in Rhode Island that are transported by Emergency Medical Services.

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

2018 Program Successes
In 2018, the EMSC program was awarded a $100,000 grant to participate in the Pediatric Emergency Care Coordinator (PECC) Learning Collaborative Demonstration Project which aimed to increase the number of pediatric emergency care coordinators within EMS agencies in Rhode Island. The overall goal of the EMSC program is that 90% (n=55) of EMS agencies have a PECC by 2026. The role of the PECC is to be a pediatric champion within their EMS agency by encouraging and promoting pediatric continuing education opportunities, pediatric prevention programs, pediatric research efforts, and family-centered care. Our goal was to identify a PECC for 90% (n=55) of agencies and train 50% (n=27.5) of the PECCs by March 31, 2019.

First Responder's Project to Combat Opioid Overdoses in Rhode Island

Grantor: Substance Abuse and Mental Health Services Administration (SAMHSA)

Funding Amount: $800,000 per year
Budget Period: 09/30/2018 – 09/29/2019

Project Period: 09/30/2018 – 09/29/2022

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. The project aims to make naloxone available to all law enforcement officers by 2022, train all first responders (approximately 1,800 law enforcement officers, 4,500 EMS providers and 2,000 fire fighters) so that they can effectively respond to Rhode Island residents that 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) and Rhode Island residents that 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), Medical Reserve Corps Naloxone Overdose Prevention Education (NOPE) Program, Rhode Island State Police Heroin Opioid Prevention Effort (HOPE) Initiative.

2018 Program Successes
Positions for a new EMS epidemiologist/data manager and an EMS Training Coordinator were posted and candidates were interviewed, and it is anticipated the two positions will be filled in early 2019.

Appendix A: Ambulance Service Coordinating Advisory Board

As of December 31, 2018

Member	Representing	Role
John Potvin, NRP	Rhode Island State Association of Firefighters	Chair
Michael DeMello, NRP	Bristol County EMS	Vice Chair
Raymond Medeiros, AEMT-C	Rhode Island State Association of Firefighters	Secretary
James Richard, NRP	Rhode Island State Association of Firefighters	Member
Gillian Cardarelli, NRP	Providence County, Career EMS	Member
Kimberly Perrault, AEMT-C	Providence County, Volunteer EMS	Member
Jason Umbenhauer, AEMT-C	Kent County EMS	Member
Bethany Gingerella, RN, NRP	Washington County EMS	Member
Randall Watt, AEMT-C	Newport County EMS	Member
Lynne Palmisciano, MD	American Academy of Pediatrics	Member
Joseph Lauro, MD	American College of Emergency Physicians	Member
Michael Connolly, MD	American College of Surgeons	Member
Kenneth Williams, MD	Rhode Island Medical Society	Member
Carolina Roberts-Santana, MHA	Rhode Island Department of Health	Member
Jason Rhodes, MPA, AEMT-C	Rhode Island Department of Health	Member
Dawn Lewis, PhD, RN, EMT	Hospital Association of Rhode Island	Member
John Pliakas, APRN, NRP	Emergency Nurses Association	Member
Andrew Pappas, NRP	Private EMS	Member
Adam Reis, RN, EMT	Private EMS	Member
Scott Partington, AEMT-C	Rhode Island Association of Fire Chiefs	Member
Kathleen Barton	Public member	Member
Tina Goncalves, Esq.	Public member	Member
Paul Casey, AEMT-C	Rhode Island House of Representatives	Member
Derek Silva, AEMT-C	Rhode Island Senate	Member
Christine Moniz, EMT	Rhode Island State Firemen's League	Member

Committees

- Rules and Regulations Committee
- Educational Standards Committee
- Legislation Committee
- Medical Affairs Committee
- EMS Culture of Safety Committee
- Data Management Committee
- Controlled Substances Committee
- EMS Dispatch Committee
- EMS for Children Committee
- Falls by the Elderly Committee

Appendix B: Rhode Island EMS Information System (RIEMSIS) Data

At the time of publication, RIEMSIS contained 153,986 ePCR reports submitted in 2018. Basic elements of the EMS run reports are listed below.

Figure B1: *EMS Incident Response Times*

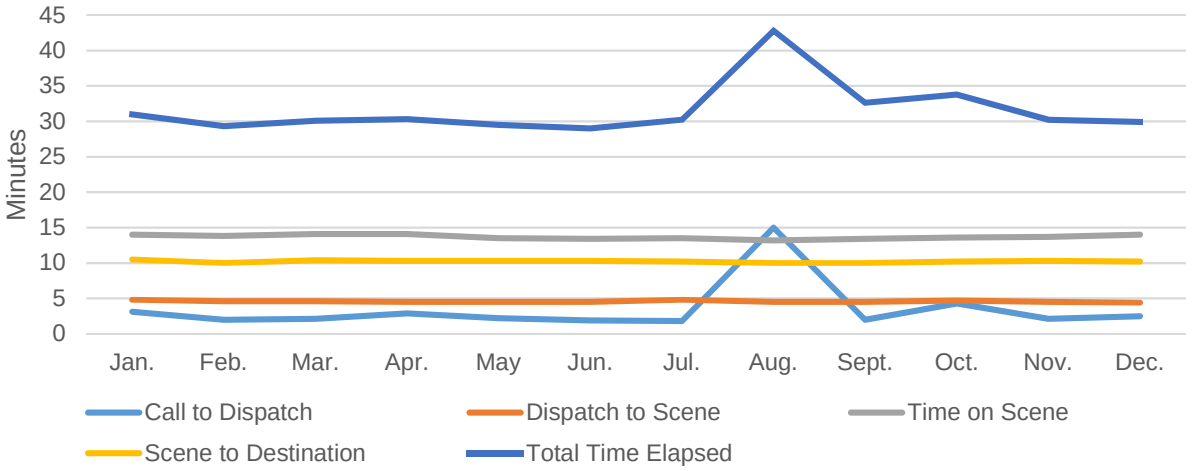
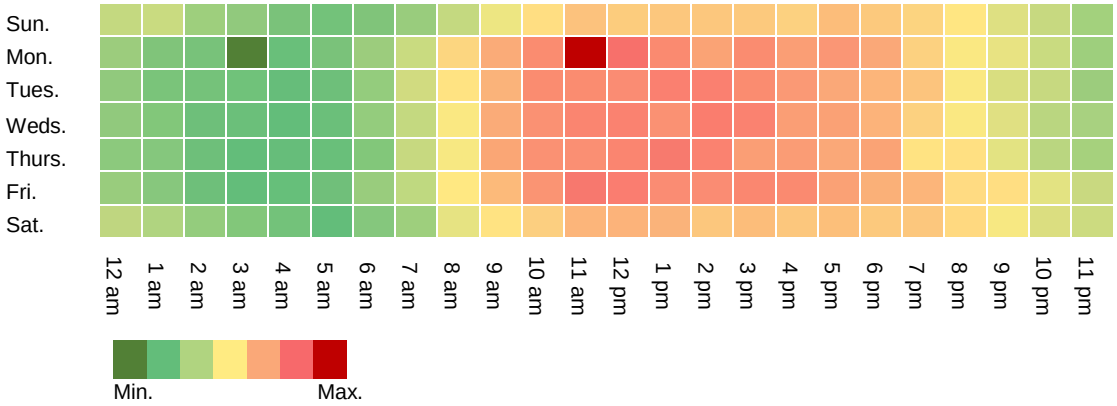
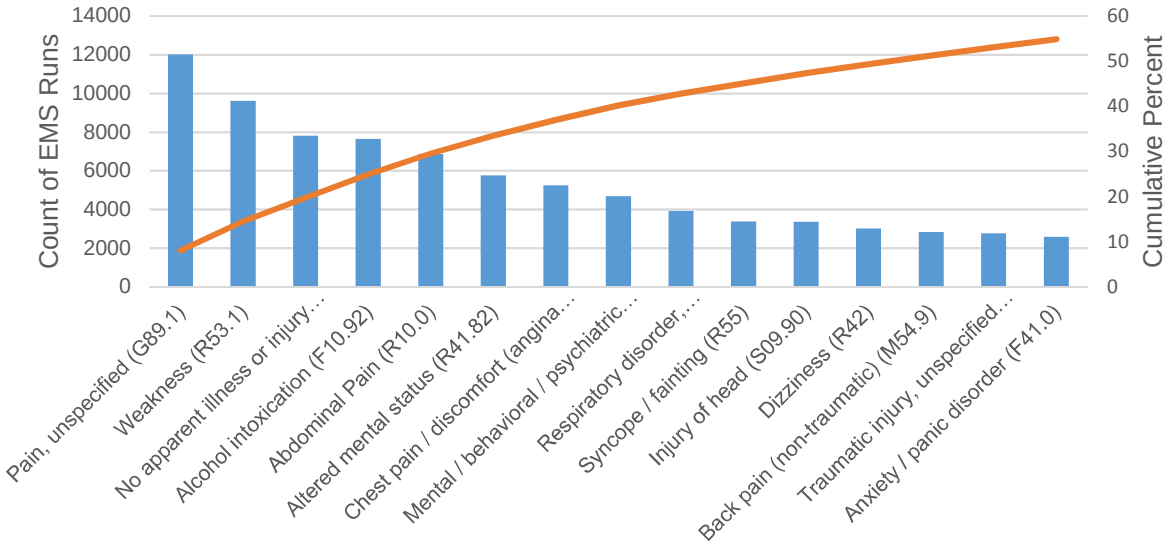


Figure B2: *Frequency Heatmap, Day/Hour EMS Unit Notified by Dispatch*



The highest volume of EMS calls are dispatched weekdays between the hours of 10 a.m. and 3 p.m., with the peak time occurring during the 11 a.m. hour. Agencies experienced lower call volume on weekends compared to weekdays; however, the lowest number of calls occurred on weekdays between 2 a.m. and 5 a.m..

Figure B3: *Top 15 Most Commonly Reported Provider Primary Impressions*



Primary impression conveys the EMS provider's initial assessment of the patient's condition. In total, 388 distinct primary impressions were indicated on ePCR forms in 2018. Half (51%) of the EMS runs in the state comprise 12 frequently reported primary impressions. However, most primary impression categories are non-specific and require analysis of additional RIEMSIS fields to accurately represent the incident type.

Table B1: *Patient Demographics, REMSIS 2018*

Patient Characteristic	Percent (%)
Gender	
Female	48.8
Male	44.7
Unknown*	6.42
Race	
White, non-Hispanic/Latino	18
Black, non-Hispanic/Latino	1.2
Hispanic/Latino	1
Other race	0.4
Unknown*	79.4
Age	
0-9 years	3.7
10-19 years	6.4
20-29 years	10.7
30-39 years	9.4
40-49 years	9.6
50-59 years	14.3
60-69 years	13.9
70-79 years	13.3
80 years and older	18.6

**Unknown includes missing, not recorded, and not reported values.*

Appendix C: Opioid Overdose Surveillance through RIEMSIS

Real-time reporting of EMS ePCRs creates opportunities to leverage RIEMSIS for statewide syndromic surveillance. The mandate for information-driven rapid response to the opioid epidemic led to a partnership between CEMS and RIDOH's Center for Health Data Analysis (CHDA) to systematically query RIEMSIS to identify opioid-overdose related EMS runs. RIDOH created a case definition based on five RIEMSIS elements: primary/secondary impression categories; medication given (dropdown field); medication response; mention of naloxone and unresponsive term in narrative report; and naloxone given prior to EMS. A complete case definition of overdose-related EMS run, compiled by Rhode Island ESOOS Program, can be found on RIDOH's website:

http://www.health.ri.gov/publications/guidelines/ESOOSCaseDefinitionForEMS.pdf

The figures and tables in Appendix C were created by CHDA using RIEMSIS data. All data are current as of May 10, 2019, and subject to change. Cities or towns with opioid overdose counts less than five have been repressed due to the *RIDOH Small Numbers Policy*.

Figure C1: *Count of Opioid-Overdose Related EMS Runs, By City/Town, 2018*

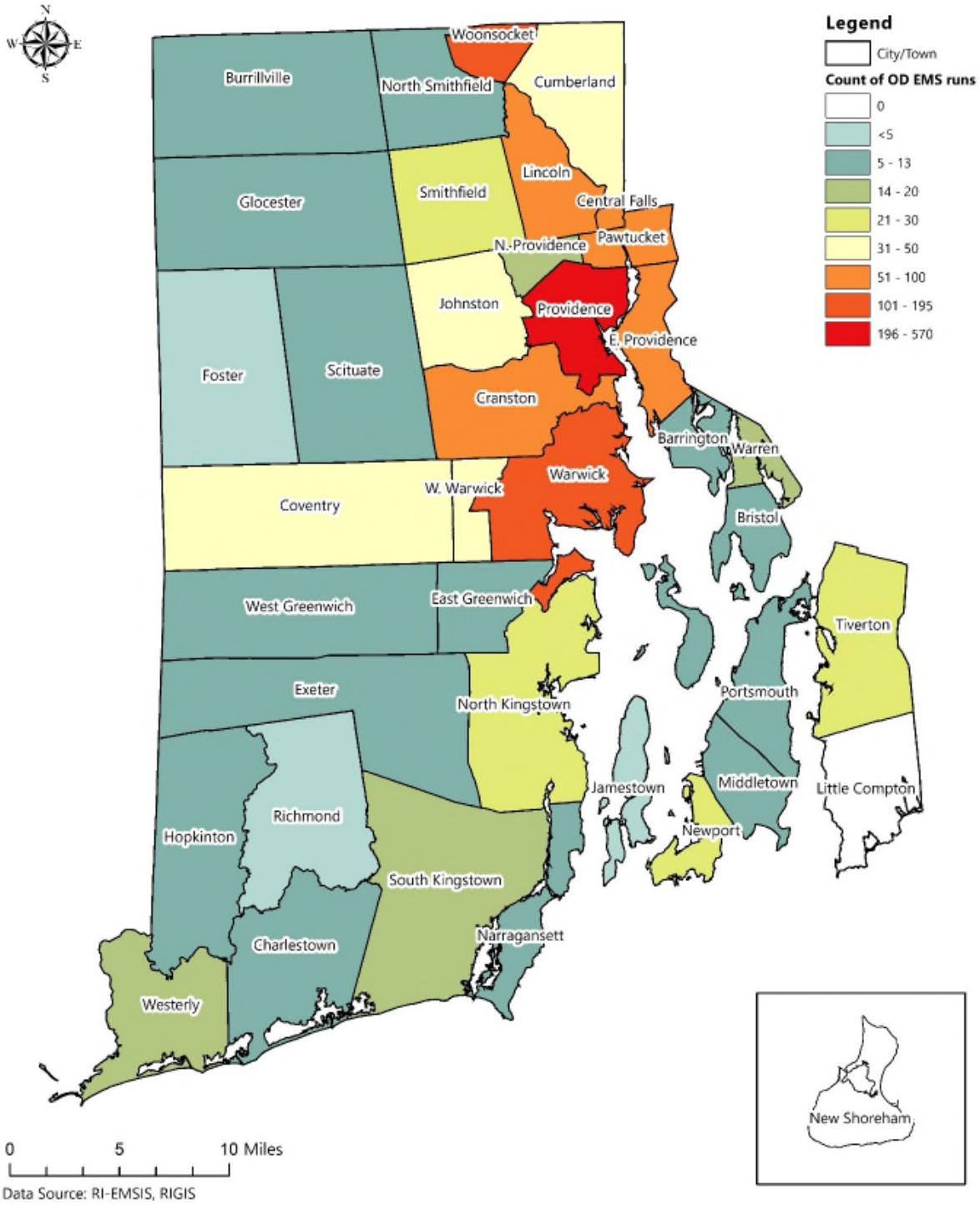


Table C1: *Opioid-Overdose Related EMS Runs, Rhode Island, 2016-2018*

State of Rhode Island	Quarter and Year															
	2016					2017					2018					% change 2016 to 2018
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
Total	350	493	414	392	**1649**	377	389	395	353	**1514**	289	410	384	425	**1508**	-9%
Out of State	<5	<5	6	0	**12**	0	<5	0	<5	**<5**	<5	<5	<5	<5	**7**	-42%

Table C2: *Opioid-Overdose Related EMS Runs, By City of Incidence/Residence, Bristol County, 2016-2018*

County	City of Incident/ Residence	Quarter and Year															
		2016					2017					2018					% change 2016 to 2018
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
Bristol	**Barrington**	<5	<5	<5	<5	**10**	0	0	<5	<5	**<5**	<5	<5	<5	0	**8**	<5
	Bristol	<5	9	<5	5	**20**	<5	<5	5	<5	**13**	<5	6	<5	<5	**13**	-35%
	Warren	<5	0	0	0	**<5**	<5	0	0	<5	**8**	<5	<5	<5	9	**16**	<5

Table C3: *Opioid-Overdose Related EMS Runs, By City of Incidence/Residence, Kent County, 2016-2018*

County	City of Incident/ Residence	Quarter and Year															
		2016					2017					2018					% change 2016 to 2018
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
Kent	**Coventry**	11	9	14	11	**45**	12	7	13	5	**37**	12	12	13	13	**50**	11%
	East Greenwich	0	<5	<5	6	**13**	<5	6	<5	<5	**12**	<5	<5	<5	<5	**6**	-54%
	Warwick	28	37	<5	20	**86**	20	32	36	33	**121**	21	34	34	26	**115**	34%
	West Greenwich	<5	<5	<5	<5	**6**	<5	<5	<5	<5	**11**	0	<5	<5	<5	**7**	17%
	West Warwick	7	16	10	8	**41**	<5	0	<5	8	**12**	10	17	7	8	**42**	2%

Table C4: *Opioid-Overdose Related EMS Runs, By City of Incidence/Residence, Newport County, 2016-2018*

County	City of Incident/ Residence	Quarter and Year															
		2016					2017					2018					% change 2016 to 2018
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
Newport	**Jamestown**	0	<5	<5	0	**<5**	<5	0	<5	<5	**<5**	0	<5	0	0	**<5**	<5
	Little Compton	0	<5	0	0	**<5**	0	0	<5	0	**<5**	0	0	0	0	**0**	<5
	Middletown	5	<5	5	5	**19**	<5	<5	<5	<5	**9**	<5	<5	<5	<5	**9**	-53%
	Newport	9	7	7	6	**29**	12	<5	9	<5	**24**	9	<5	6	6	**25**	-14%
	Portsmouth	0	7	6	<5	**16**	<5	<5	<5	<5	**11**	<5	<5	<5	<5	**<5**	<5
	Tiverton	7	<5	<5	7	**18**	<5	8	7	5	**24**	6	6	<5	11	**25**	39%

Table C5: *Opioid-Overdose Related EMS Runs, By City of Incidence/Residence, Providence County, 2016-2018*

County	City of Incident/ Residence	Quarter and Year															
		2016					2017					2018					% change 2016 to 2018
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
Providence	**Burrillville**	<5	5	7	<5	**15**	6	5	5	<5	**19**	<5	<5	<5	<5	**13**	-13%
	Central Falls	7	19	12	7	**45**	7	<5	13	9	**33**	14	13	10	14	**51**	13%
	Cranston	27	27	34	22	**110**	27	31	26	42	**126**	16	15	22	18	**71**	-35%
	Cumberland	6	<5	0	5	**15**	7	10	<5	8	**29**	8	12	9	6	**35**	133%
	East Providence	9	10	9	13	**41**	9	14	9	7	**39**	<5	24	17	10	**54**	32%
	Foster	<5	<5	<5	0	**<5**	0	0	<5	<5	**5**	<5	<5	0	0	**<5**	<5
	Glocester	0	0	<5	<5	**<5**	<5	<5	<5	<5	**8**	<5	<5	<5	0	**7**	<5
	Johnston	15	18	8	7	**48**	17	10	13	11	**51**	<5	11	<5	18	**37**	-23%
	Lincoln	7	6	7	5	**25**	14	7	13	14	**48**	11	13	8	19	**51**	104%
	North Providence	5	12	6	<5	**25**	0	0	0	0	**0**	<5	5	<5	<5	**14**	-44%
	North Smithfield	<5	<5	0	5	**13**	<5	11	<5	6	**25**	<5	<5	<5	<5	**12**	-8%
	Pawtucket	23	51	50	35	**159**	47	31	40	30	**148**	17	21	25	22	**85**	-47%
	Providence	112	154	155	147	**568**	121	127	101	84	**433**	80	129	124	137	**470**	-17%
	Scituate	0	0	0	<5	**<5**	<5	<5	<5	0	**<5**	<5	0	<5	<5	**7**	<5
	Smithfield	<5	<5	<5	8	**19**	9	<5	6	<5	**22**	5	8	7	7	**27**	42%
	Woonsocket	27	42	34	35	**138**	31	37	44	27	**139**	28	28	27	49	**132**	-4%

Table C6: *Opioid-Overdose Related EMS Runs, By City of Incidence/Residence, Washington County, 2016-2018*

County	City of Incident/Residence	Quarter and Year															
		2016					2017					2018					% change 2016 to 2018
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
Washington	**Charlestown**	<5	<5	<5	<5	**9**	0	<5	<5	<5	**8**	0	<5	5	<5	**10**	11%
	Exeter	0	0	0	<5	**<5**	0	<5	0	<5	**<5**	<5	<5	<5	<5	**8**	<5
	Hopkinton	<5	7	<5	<5	**17**	<5	<5	<5	<5	**8**	<5	<5	<5	<5	**10**	-41%
	Narragansett	0	<5	<5	<5	**9**	<5	<5	<5	<5	**11**	<5	<5	<5	<5	**6**	-33%
	New Shoreham	0	0	<5	0	**<5**	0	0	<5	0	**<5**	0	0	0	0	**0**	<5
	North Kingstown	<5	<5	5	<5	**12**	<5	5	<5	7	**19**	<5	8	10	6	**28**	133%
	Richmond	<5	0	0	<5	**<5**	0	<5	<5	<5	**5**	0	0	<5	<5	**<5**	<5
	South Kingstown	7	7	<5	<5	**17**	<5	9	<5	<5	**15**	5	5	6	<5	**20**	18%
	Westerly	8	8	9	<5	**27**	<5	<5	6	9	**21**	<5	7	<5	<5	**17**	-37%

Acknowledgements

Nicole Alexander-Scott, MD, MPH; Director of Health

RIDOH Division of Preparedness, Response, Infectious Disease, and Emergency Medical Services (PRIDEMS)

Utpala Bandy, MD, MPH; Medical and Division Director, Rhode Island State Epidemiologist
Christine Goulette, MAT; Assistant Director of Health
Jason M. Rhodes, MPA, EMT-C; Chief, Center for Emergency Medical Services
Kenneth Williams, MD; EMS Physician Medical Consultant
Carolina Roberts-Santana, MHA, DHSc; Program Director, EMS for Children
Todd Manni; Program Planner
Eric Rossmeisl, EMT-C; Field Technician
Elizabeth Vieira; Licensing Aide

Special thanks
RIDOH Center for Public Health Communication
RIDOH Center for Health Data and Analysis

Center for Emergency Medical Services
Phone: 401-222-2401
Fax: 401-222-3352