

# Maine Community Paramedicine: Summary of Services

Community Paramedicine Monitoring, Evaluation & Policy Research

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## Maine Community Paramedicine: Summary of Services

Under a contract with Maine Office of Emergency Medical Services (Maine EMS), the Catherine Cutler Institute (Cutler) staff is reviewing services provided by the Community Paramedicine (CP) programs in the State of Maine. There are three aspects to this review. The first aspect is a review of the services CP programs anticipated offering as outlined in their initial applications to Maine EMS. The second is a review of the actual CP services that CP programs documented in the Maine EMS & Fire Incident Reporting System (MEFIRS) system. A third component will be conducted through qualitative interviews with the personnel in the community paramedicine programs.

Through this review, Cutler staff will identify the most commonly provided services which will help inform the overall evaluation of the Maine EMS scope of work and identify gaps in service provision.

### BACKGROUND

#### *Legislative history of CP pilot programs*

In 2012, the Maine Legislature passed legislation granting the Board of Emergency Medical Services the authority to approve up to 12 CP pilot programs for a period of up to three years (L.D. 1837).<sup>1</sup> All applications for CP programs authorized by the EMS Board were required to indicate the types of services they would provide within their respective scope of practice and based on identified community needs. Legislative re-authorization in 2017 removed the pilot status, making CP programs permanent, enabling the Board of EMS to renew existing projects and accept additional applications.<sup>2</sup>

#### *Scope of services authorized*

Community Paramedicine is defined by Maine's authorizing legislation as the practice by an emergency medical services (EMS) provider primarily in an out-of-hospital setting, providing episodic patient evaluation, advice, and treatment directed at preventing or improving a particular medical condition, within the scope of practice of the emergency medical services provider as specifically requested or directed by a physician. (Sec. 1. 32 MRSA §84, sub-§4). Community Paramedicine services do not expand the existing scope of practice of the licensed EMS personnel which is established by the Board of EMS; it only expands the sphere of practice. Additionally, each EMS service in the CP pilot program was required to include a primary care physician and an EMS medical director as part of their pilot program to oversee training, staffing, and for quality assurance purposes.

#### *Services provided by the CP pilot programs*

In 2014, staff from the University of Southern Maine's Cutler Institute in the Muskie School of Public Service were awarded a contract from the Office of EMS to evaluate the implementation of the twelve CP pilot programs. Their report, published in 2015, presents findings from their data review and qualitative analysis.<sup>3</sup> The review of applications and follow-up interviews with each of the CP pilot sites showed that the twelve CP pilot programs focused on the needs of their communities, most of which are rural, primarily targeting elderly patient populations with chronic conditions (e.g., congestive heart failure, COPD, and diabetes). Assessments for these conditions were a standard part of the CP provider's visit protocol.

The majority of the CP pilot programs were providing or anticipating provision of what is documented in the Maine EMS run reporting data system, MEMSRR/MEFIRS as medication reconciliation. Additional services identified in the review of the pilot programs included the following, listed in rank order by the number of CP programs providing these services:

- |                              |  |
|------------------------------|--|
| 1. Medication Reconciliation | 9. Blood Draws                             |
| 2. Diabetes Care             | 10. Vaccine Administration                 |
| 3. Fall Risk Assessment      | 11. Congestive Heart Failure care          |
| 4. Home Safety Assessment    | 12. COPD care                              |
| 5. Monitoring Vitals         | 13. Asthma management                      |
| 6. Physical Exam             | 14. Diet/Weight Monitoring                 |
| 7. Wound Care                | 15. Hypertension Assessment and Monitoring |
| 8. Surgical Follow-up        | 16. Edema Assessment                       |

All identified CP services are within their designated EMS scope of practice and are delivered under medical direction.

## CURRENT EVALUATION OF MAINE'S COMMUNITY PARAMEDICINE PROGRAMS

### *Scope of Services Review*

In the spring of 2022, Cutler staff reviewed all community paramedicine (CP) applications, both past and current, to identify specific services to be provided by the CP programs. A total of 21 CP program applications were reviewed. This provided the baseline of services that programs either anticipated offering or started offering and was compared with MEFIRS CP data from 2018 through 2021 for each CP program as available. Table 1 lists the currently active CP programs as indicated in the MEFIRS system between 2018-2022.

Three community paramedicine programs, Calais Fire and Rescue, Camden First Aid, and Crown Ambulance, all applied for and received approval for program status in 2013 but were not active after 2018.

**Table 1. Maine Community Paramedicine Programs, Active between 2018-2022**

Belfast Ambulance & Rescue Service
Boothbay Region Ambulance
Castine Fire and Rescue
Central Lincoln County Ambulance
Charles A Dean Ambulance Service
Cumberland Fire Department
Delta Ambulance
Memorial Ambulance Corps
Northeast Mobile Health Services
Northern Light Mayo Hospital
Northern Light Medical Transport
NorthStar
Peninsula Ambulance Corps
Searsport Ambulance Service
St George Ambulance
United Ambulance Service
Waldoboro Emergency Medical Services
Winthrop Ambulance Service

Table 2 indicates the categories within which each CP program application identified specific services and protocols. Not all CP programs are currently active, but in order to gain a better understanding of the commonalities across the CP programs, Cutler staff reviewed every application filed with Maine EMS since the inception of the program in 2012. Applications vary in the way services are described, so Cutler staff reviewed both the narrative as well as the attached protocols and workflow documents for each application.

Table 2 provides the high-level categories of services that were anticipated being provided based on review of CP applications for each CP provider. Within each category, specific services mentioned by each service were noted. Examples of Assessment include overall health and physical assessments and home safety assessments; Education services provided include falls prevention, asthma, and chronic disease management; Clinical services include specimen collection, blood draws, and vaccine administration; Social Services includes connecting CP patients with community resources. These subcategory tables are available upon request.

**Table 2. Community Paramedicine Services Categories Based on Application Review, 2013-2020**

CP Provider	ASSESSMENT	EDUCATION	CLINICAL	SOCIAL SERVICES
Belfast Ambulance & Rescue Service	•	•	•	•
Boothbay Region Ambulance	•	•	•	
Calais Fire and Rescue	•	•	•	
Camden First Aid	•	•	•	
Castine Fire and Rescue	•		•	
Central Lincoln County Ambulance	•		•	
Charles A Dean Ambulance Service	•		•	•
Crown Ambulance	•		•	
Cumberland Fire Department	•	•	•	•
Delta Ambulance	•		•	
Memorial Ambulance Corps	•			
Northeast Mobile Health	•	•	•	•
(Northern Light) Mayo Hospital	•	•	•	
Northern Light Medical Transport	•	•	•	
NorthStar (Franklin Mem. Hospital)	•	•	•	
Peninsula Ambulance Corps	•	•	•	
Searsport Ambulance Service	•	•	•	
St George Ambulance	•	•	•	
United Ambulance Service	•	•	•	
Waldoboro EMS	•	•	•	
Winthrop Ambulance Service	•		•	
<b>TOTAL</b>	<b>21</b>	<b>14</b>	<b>20</b>	<b>4</b>

Data for table 3 was extracted from reports generated in the Maine EMS data system (MEFIRS) and lists the procedures documented in MEFIRS by the CPs for each visit (or incident). Per Maine EMS, data from 2018 is incomplete; 2022 data is current through October 19. Cutler believes that this summary report provides a baseline for representing the services that CP programs were actively delivering during the period 2018 through October 2022.

**Table 3. Count of Procedures by Community Paramedics, MEFIRS 2018-Oct 2022**

PROCEDURE PERFORMED	2018	2019	2020	2021	Thru Oct. 2022	Row Total
12 Lead Electrocardiogram	2				1	3
Assess - Blood Glucose Analysis	79	227	178	229	268	981
Assess - Monitoring of Patient			1	3	2	6
Assess - Physical Assessment		25	19	4		48
Assess A/W - ETCO <sub>2</sub> Monitoring				1		1
Assess - Orthostatic Vital Signs			1			1
CP - Ability to Obtain Food (observable entity)		3	2			5
CP - Asthma Education Provided	11	13	1			25
CP - CHF Education Provided	1	4	2	11	4	22
CP - COPD Education Provided	13	18	5	1	3	40
CP - Diabetes Education Provided	7	31	9	2	11	60
CP - Discharge Assessment	2	9	2			13
CP - Dressing Change/Wound Care Case Management	10	22	12	2	12	58
CP - Fall Education Provided	1	1			1	3
CP - Fall Risk Assessment	4	1	2	2	1	10
CP - Follow-up	120	758	731	873	641	3123
CP - Get Up and Go Test	1					1
CP - Health Assessment		55	26	4	2	87
CP - Home Safety Assessment	4	10	3	1	1	19
CP - Influenza Vaccination	5	4	22	7	1	39
CP - Initial Assessment	13	39	40	25	12	129
CP - Medication Reconciliation	74	420	764	851	726	2835
CP - Urine Collection	3	5	11	8	4	31
CP - Vaccination Education Provided				12		12
CP - Wound Care Management	5	15	4	2	1	27
CP Cholesterol measurement			1			1
CP Hemoglobin A1c measurement			2	4		6
CP Hypertension education			5	9	1	15
CP- Primary Care Physician Contacted	17	81	79	62	45	284
Electrocardiographic Monitoring	1	1				2
OLMC (online medical control) Consultation			1			1
Specimen collection for COVID-19			91	8		99
Spinal - Cervical Collar Application	1					1
Surgical face mask applied			6	8	5	19
Trauma - Wound Care General	2	3	3	2		10
Vasc/Acc - Blood Draw	121	159	164	192	59	695
Vasc/Acc - D/C IV Cath		2		1	2	5
Vasc/Acc - Intraosseous			1			1
Vasc/Acc - Peripheral Vein	10	6	5	21	6	48
<b>Grand Total</b>	<b>507</b>	<b>1912</b>	<b>2193</b>	<b>2345</b>	<b>1809</b>	<b>8766</b>

Source: Maine EMS MEFIRS data report 10/19/22

Table 4 provides the count of the CP visits by agency documented in MEFIRS from 2018 through August 2022. Not all agencies provided continuous CP services from 2018-2022. For example, Castine Fire and Rescue only provided services in 2018 and 2019. Northeast Mobile Health Services, a pilot program in 2013, did not document community paramedicine services from 2018-2021, but began to do so in 2022.

We do not have a clear indication from these counts regarding the nature of each visit. For example, how many of the CP visits by Memorial Ambulance or United Ambulance were related to COVID-19 vaccinations during 2021 and 2022? These are details that the Cutler evaluation team will need to review through a more precise query of the MEFIRS data.

**Table 4. Community Paramedicine Visits by Agency and by Year, MEFIRS data 2018- Aug 2022**

Agency Name	Count of CP Visits						
	2018	2019	2020	2021	Total 2018-2021	2022 through 8.19.22	2018 through 8.19.22
Belfast Ambulance & Rescue Service	53	31	22	15	123	12	135
Boothbay Region Ambulance	112	61	43	20	236	0	236
Castine Fire and Rescue	27	10	0	0	37	0	37
Central Lincoln County Ambulance	112	68	100	55	335	5	340
Charles A Dean Ambulance Service	15	7	4	1	27	0	27
Cumberland Fire Department	1	0	0	0	1	0	1
Delta Ambulance	126	169	95	0	390	0	390
Memorial Ambulance Corps	236	357	450	684	1727	617	2344
Northeast Mobile Health Services	0	0	0	0	0	27	27
Northern Light Mayo Hospital	83	115	90	67	355	10	365
Northern Light Medical Transport	1	0	105	6	112	0	112
NorthStar	78	148	225	283	734	10	744
Peninsula Ambulance Corps	0	3	8	0	11	0	11
Searsport Ambulance Service	92	156	57	82	387	0	387
St George Ambulance	51	51	87	134	323	38	361
United Ambulance Service	279	871	828	1,010	2,988	684	3,672
Waldoboro Emergency Medical Services	93	61	107	94	355	0	355
Winthrop Ambulance Service	2	12	0	0	14	0	14
<b>TOTAL COUNT</b>	<b>1361</b>	<b>2120</b>	<b>2221</b>	<b>2451</b>		<b>1403</b>	

Source: Maine EMS MEFIRS data report, 8/19/22

## DISCUSSION

In our review of the CP applications and reports generated from the MEFIRS data queries, we noted a lack of consistency in how CP services performed were described and documented. This highlights the need for the Maine State EMS Office to provide clear definitions of the available services as well as education on how to document these services in MEFIRS. The most salient example is the data element “medication reconciliation” which is one of the most frequent services documented by the CP in MEFIRS. What does this service entail with regard to the CP patient’s prescribed medications? Does this service only include collecting a complete list of medications and dosages, or does it include consultation with ordering clinician(s) to reconcile any issues? Developing this level of clarity will help inform the scope of services allowed by CPs.

We note three factors critical to our understanding of these services performed and documented by a CP provider:

1. The referring medical provider needs to be aware of the available scope of services of the CP provider.
2. The CP provider needs to accurately document the procedures ordered and performed at each CP visit.
3. The data collection system needs to be user friendly so that the CP provider can submit accurate documentation in a timely fashion and so that data can be queried and extracted to provide meaningful reports.

The summary also highlights the difference between the services that CP programs had anticipated offering in the initial applications and those that they have actively been providing over the last four years. For example, most programs highlighted Falls Prevention and Education as being important to their CP efforts, yet no more than four of these visits were documented in MEFIRS during any single year in the last four years. Cutler staff will explore these discrepancies as part of the qualitative phase of the study.

This summary of services document is a first step toward a better understanding of the types of services that each CP program provides within their scope of practice. It provides a baseline for continued discussion with the CP providers and the Maine State EMS Office on data collection efforts to show the value of the CP programs across the state.

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1 *An Act to Authorize the Establishment of Pilot Projects for Community Paramedicine*, LD 1837, HP 1359, 125th Maine Legislature, Second Regular Session; March 29, 2012.

2 *An Act to Make Community Paramedicine Service Permanent*, LD 1427, HP 981, 128th Maine Legislature, First Regular Session; June 28, 2017.

3 Pearson KB, Shaler G. *Maine EMS community paramedicine pilot program evaluation*. 2015 November. Available at: [https://www.maine.gov/ems/sites/maine.gov/ems/files/inline-files/cp\\_muskie\\_report\\_0.pdf](https://www.maine.gov/ems/sites/maine.gov/ems/files/inline-files/cp_muskie_report_0.pdf)