

Mid-Coast EMS Project Update

EMS Project Steering Group

Audra Caler-Bell, Town of Camden

Thom Ingraham, Town of Hope

Nancy Jackson, RN, PBMC

David Kinney, Town of Lincolnville

Chris Michalakes, M.D., PBMC

William Post, Town of Rockport

Stephen Skinner, M.D., PBMC

Sarah Ann Smith, Town of Hope

Tom Judge, Volunteer Facilitator

Kevin McGinnis, EMS Consultant

Funded by the Towns of Camden and Rockport, and Pen Bay Medical Center

WHY THIS PROJECT?

- North East Mobile Health Services (NEMHS)
 - Among Largest EMS Agencies in Maine
 - Provided Inter-Facility Transport (IFT) for Pen Pay Prior to 2013 and After
 - Provides 911 Response in Camden/Rockport/Hope/Lincolntonville Since 2013
 - Private, Family-Owned For-Profit Service
- Perceived Issues
 - Large Private Service vs. Small Community-Based Service Characteristics
 - 911 Response Demands vs. Inter-Facility Transport (IFT) Demands
 - Tension and Communications Disconnects Between NEMHS and Stakeholders
 - Some Fire Service Desire to Have More EMS Capability or Operate EMS Agency
 - Reports of Some Problems With:
 - Response Timeliness and Overuse of Mutual Aid
 - Staff Performance, Patient Interaction and Attitude
 - Visibility/Participation in Community Events and Services

WHY THIS PROJECT?

- **What EMS is the Right Choice for the Area and PBMC?**
 - Project Funded by Camden, Rockport and Pen Bay Medical Center
 - New Contract Year Begins July 1, 2021
 - Planning/Operational/Financial Complicator: COVID-19 Status

But, First A Word About EMS Terminology.....

Pre-1970 to Present to..

EMS 3.0



EMS 1.0 Horizontal Taxicab



EMS 2.0 Advanced Emergency Care



EMS 3.0
Part of
Community
Health Care
Team

State and Regional EMS System



- **Aroostook EMS**

- Region 5: Aroostook - Aroostook
 - *Regional Medical Director: Beth Collamore, MD*

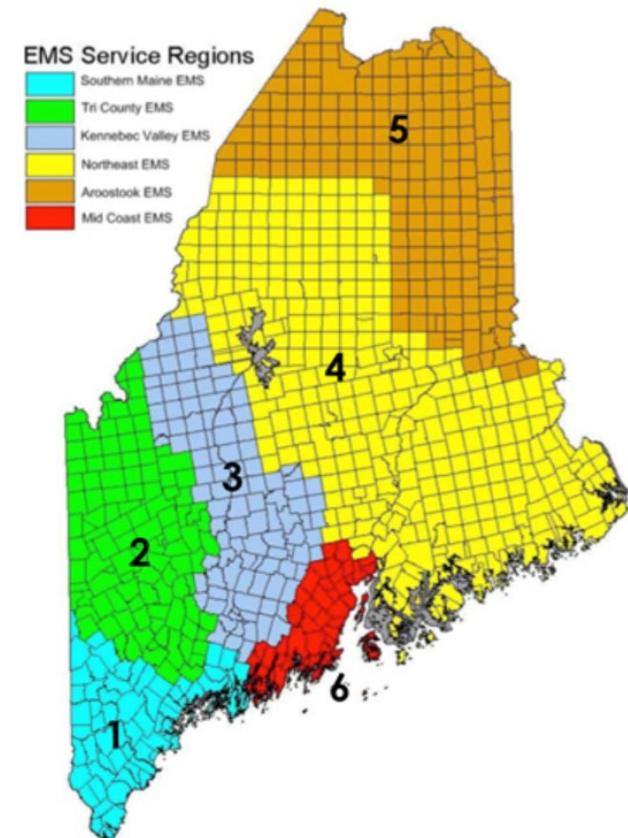
- **Atlantic Partners EMS**

- Region 1: Southern - York, Cumberland and Sagadahoc
 - *Regional Medical Director: Michael Bohanske, MD*
- Region 3: Kennebec Valley - Kennebec and Somerset
 - *Regional Medical Director: Tim Pieh, MD*
- Region 4: Northeast - Hancock, Penobscot, Piscataquis, and Washington
 - *Regional Medical Director: David Saquet, DO*
- Region 6: Midcoast - Lincoln, Waldo, and Knox
 - *Regional Medical Director: Benjy Lowry, MD*

- **Tri County EMS**

- Region 2: Tri-County - Androscoggin, Franklin, and Oxford
 - *Regional Medical Director: Seth Ritter, MD*

MAP OF REGIONS



EMS Professional Roles

EMS Clinicians Perform Many Roles:

- Traditional 911 Response on Ambulances
- 911 Emergency Medical Response Until Ambulance Arrives
- Interfacility Transport - Local Hospitals May Need to Move Patients to Larger Hospitals for More Advanced Care
- Providing Community Paramedicine Care at Patient Homes
- Running And Administering Medications at Vaccine Clinics

EMS Professional Roles

EMS Clinicians Perform Many Other Roles:

- Designing and Delivering Educational Programs at Colleges and Training Centers Throughout the State
 - Teaching CPR and Stop the Bleed Courses
 - Using Their Education to Staff Urgent Care Centers and Emergency Departments Throughout Maine
 - Developing Disaster Plans and Medical Preparedness Guidelines
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EMS Professional Roles/Licenses

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

•Note: A minority of 911 calls require AEMT or Paramedic

Who Can Do What When?

BASIC LIFE SUPPORT	BLS/ALS Skills	ADVANCED LIFE SUPPORT	
EMT	Advanced EMT	Paramedic	
<p>Assists with Meds (OLMC*) Assists with Inhaler (OLMC*) CPR Oxygen Heart Defibrillation (AED) Glucometer (Glucose Testing) Splinting Spinal Motion Restriction Bleeding control (including Tourniquet and hemostatic agent) Airway Management (BVM,OPA, NPA)</p> <p>Albuterol (Patient's)(OLMC*) Aspirin 324 mg (Heart) Oral Glucose (Paste) Epinephrine (Auto Injector) Naloxone (Atomized)(Overdose) Nitroglycerin (Patient's) (OLMC*)</p>	<p>Assists with Meds Assists with Inhaler CPR Oxygen Heart Defibrillation (AED/Manual) 4 Lead Heart Monitor (Limited) 12 Lead Placement Secure Vein Access (IV) Glucometer (Glucose Testing) Spinal Motion Restriction Splinting Laryngeal Mask Airway Blind Insertion Airway Device Capnography EZ I/O</p> <p>Aspirin (Heart) Albuterol (Breathing)(OLMC*) Acetaminophin (Pain)(OLMC*) Nitroglycerin SL (OLMC*) Epinephrine (Auto Injector) Glucagon (Diabetes) Naloxone/Narcan Dextrose D10/D50 Oral Glucose (Paste)</p>	<p>Assists with Meds Assists with Inhaler CPR Oxygen Heart Defibrillation (AED/Manual) 4 Lead Heart Monitor 12 Lead Heart Monitor Secure Airway (Intubation) Secure Vein Access (IV) Glucometer (Glucose Testing) Heart Pacing Heart Cardioversion Surgical Procedures (Breathing) Splinting Spinal Motion Restriction Capnography EZ I/O Gastric Tube Blind Insertion Airway Device Tourniquet and Hemostatic Agent Chest decompression</p> <p>Acetaminophin (Pain) Activated Charcoal (Poison) Adenosine (Heart)</p>	<p>Albuterol (Breathing) Amiodarone (Heart) Aspirin (Heart) Atropine (Heart) Calcium Gluconate (Heart) Dexamethasone (Breathing) Dextrose/D10/D50 (Diabetes) Diphenhydramine/Benadryl (Allergy) Epinephrine (Heart/Breathing) Fentanyl (Pain) Glucagon (Diabetes) Ipratropium Bromide (Breathing) Levophed (Heart/BP) Lidocaine (Pain) Ketamine (Pain)(OLMC*) Magnesium (Heart, Breathing) Metoprolol/Lopressor (Heart) Midazolam/Versed (Seizures) Naloxone/Narcan (Overdose) Nitroglycerin (Heart/Breathing) Nitrous Oxide (Pain) Ondansetron/Zofran (Nausea) Sodium Bicarbonate (Heart) Tetracaine (Eye Pain) Tranexemic Acid (Bleeding)</p>

*After Consultation with On Line Medical Control

Effective December 1, 2019 (Updated 11/3/2020)

Courtesy of NorthStar EMS ~ www.fchn.org/NorthStar

EMS Professional Roles/Licenses

EMS Clinicians Specialty Licenses/Certifications:

- Community Paramedic (CP)
 - Critical Care Paramedic
 - Tactical Paramedic
- Flight Paramedic and Flight Nurse

As of January, 2021, Maine has 5,063 Volunteer and Career Licensed EMS Professionals:

- 85 Emergency Medical Responders (EMRs)
- 2,631 Emergency Medical Technicians (EMTs)
- 878 Advanced Emergency Medical Technicians (AEMTs)
- 1,469 Paramedics
- Although Not Licensed, Some EMS Agencies Also Use a Number of People as Vehicle Operators

EMS Agency Operator Types

Maine's 276 Licensed EMS Agencies
(No Operator Type is Superior to Another)

- 173 Fire Service First Responder or Ambulance Services (e.g. Rockland)
 - 41 Non-Profit Community EMS Services (e.g. St. George)
 - 35 Independent Municipal EMS Services
 - 11 Private EMS Services (e.g. NEMHS, St. George)
 - 11 Hospital-Based EMS Services
 - 3 College-Based EMS Service
 - 2 Tribal EMS Services
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WHY THIS PROJECT?

- **What EMS is the Right Choice for the Area/PBMC in 2021-2022 and Beyond?**
 - Follows on Months/Years of Discussion Among Public Safety Agencies
 - Follows on Fire-Based EMS Proposals at Some Town Meetings
 - Tom Judge Asked to Serve as Volunteer Facilitator
 - Project Funded by Camden, Rockport and Pen Bay Medical Center
 - New Contract Year Begins July 1, 2021
 - Planning/Operational/Financial Complicator: COVID-19 Status

EMS Project Staff

Project Volunteer Facilitator

Tom Judge, Critical Care Paramedic
Director, LifeFlight of Maine
Port Clyde, Maine

Project Primary Consultant

Kevin McGinnis, MPS, Paramedic Chief (Ret.)
Hallowell, Maine

Project Consultants

Mike Senecal, Paramedic Chief
Director, North Star EMS
Farmington, Maine

Richard Narad, JD, DPA
Coordinator, Health Services Administration Program
California State University Chico

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PROJECT COMPONENTS

- Steering Group Meetings (Added Hope and Lincolnville)
- North East Mobile Health Service (Rockport Base) Evaluation:
 - Inspection of Facility, Vehicles, Practices, Contracts and Records
 - Interviews with Over 40 Stakeholders as Recommended by Steering Group
 - Requested/Reviewed Performance Data for NEMHS and Comparison Agencies
 - Investigated Maine/Regional EMS Licensure/QI Oversight for Incidents
- Reviewed Alternative Operational Proposals and Models
 - NEMHS
 - Local Fire-Based
 - Other Models (e.g. Brewer, Waterville, Ambulance District)

STEERING GROUP FINDINGS

- Steering Group Deliberations:
 - Conventional Request for Proposals (RFP) not Pursued
 - Project Extended to Parallel Towns Budget Adoption Processes
 - Developed a Series of Ten Operating Options to Consider
 - Considered Pros/Cons, Costs, Likelihood for Success in Current Timeframe and COVID Environment
- Findings
 - Contract Compliance/Data Review
 - Interviews
 - Consideration of Options and Selection

Response Performance Data

Paramedic Response to Advanced Life Support Trips*

*Contract Requirement: As measured quarterly, a paramedic will respond to 95% or greater of all Advanced Life Support trips

Camden					Hope					Lincolnvillle					Rockport					
Month	Total Calls	ALS Calls	Medic	Average	Month	Total Calls	ALS Calls	Medic	Average	Month	Total Calls	ALS Calls	Medic	Average	Month	Total Calls	ALS Calls	Medic	Average	Quarter Average
July '19	89	41	41	100.0%	July '19	7	5	5	100.0%	July '19	14	7	7	100.0%	July '19	37	13	13	100.0%	
Aug '19	70	22	22	100.0%	Aug '19	4	3	3	100.0%	Aug '19	13	7	7	100.0%	Aug '19	49	22	22	100.0%	
Sept '19	90	34	33	97.1%	Sept '19	0	0	0	-	Sept '19	7	4	4	100.0%	Sept '19	35	14	14	100.0%	
Q1	249	97	96	99.0%	Q1	11	8	8	100.0%	Q1	34	18	18	100.0%	Q1	121	49	49	100.0%	99.42%
Oct '19	92	37	37	100.0%	Oct '19	6	6	6	100.0%	Oct '19	14	7	7	100.0%	Oct '19	25	10	9	90.0%	
Nov '19	64	21	21	100.0%	Nov '19	6	3	3	100.0%	Nov '19	14	10	10	100.0%	Nov '19	40	21	21	100.0%	
Dec '19	68	24	24	100.0%	Dec '19	2	0	0		Dec '19	14	6	6	100.0%	Dec '19	31	25	25	100.0%	
Q2	224	82	82	100.0%	Q2	14	9	9	100.0%	Q2	42	23	23	100.0%	Q2	96	56	55	98.2%	99.41%
Jan '20	71	29	29	100.0%	Jan '20	8	5	5	100.0%	Jan '20	4	4	4	100.0%	Jan '20	44	23	23	100.0%	
Feb '20	68	26	25	96.2%	Feb '20	4	2	2	100.0%	Feb '20	3	1	1	100.0%	Feb '20	24	8	8	100.0%	
Mar '20	73	31	31	100.0%	Mar '20	7	4	4	100.0%	Mar '20	8	6	6	100.0%	Mar '20	26	14	14	100.0%	
Q3	212	86	85	98.8%	Q2	19	11	11	100.0%	Q2	15	11	11	100.0%	Q2	94	45	45	100.0%	99.35%
April '20	53	25	24	96.0%	April '20	5	1	1	100.0%	April '20	14	9	9	100.0%	April '20	17	9	9	100.0%	
May '20	42	16	16	100.0%	May '20	5	1	1	100.0%	May '20	20	15	15	100.0%	May '20	23	10	10	100.0%	
June '20	54	23	23	100.0%	June '20	10	5	5	100.0%	June '20	12	7	7	100.0%	June '20	18	7	7	100.0%	
Q4	149	64	63	98.4%	Q4	20	7	7	100.0%	Q4	46	31	31	100.0%	Q4	58	26	26	100.0%	99.22%
Annual	834	329	326	99.1%	Annual	64	35	35	100.0%	Annual	137	83	83	100.0%	Annual	369	176	175	99.4%	99.36%

Response Performance Data

Average Response Time by Town*

*Contract Requirement: Each town will have an **Average** response time measured quarterly. Fiscal year begins July 1st.

Contractual Time		Contractual Time		Contractual Time		Contractual Time	
Camden: 9 minutes		Hope: 17 minutes		Lincolnvile: 19 minutes		Rockport: 9 minutes	
Month	Ave. Response Time	Month	Ave. Response Time	Month	Ave. Response Time	Month	Ave. Response Time
July '19	07:33.0	July '19	16:09.0	July '19	15:39.0	July '19	06:23.0
Aug '19	08:04.0	Aug '19	13:30.0	Aug '19	15:40.0	Aug '19	06:04.0
Sept '19	07:27.0	Sept '19	-	Sept '19	20:00.0	Sept '19	07:43.0
Q1	07:40.0	Q1	15:11.0	Q1	16:14.0	Q1	06:39.0
Oct '19	07:15.0	Oct '19	11:20.0	Oct '19	13:44.0	Oct '19	06:10.0
Nov '19	08:04.0	Nov '19	14:00.0	Nov '19	18:14.0	Nov '19	06:11.0
Dec '19	07:52.0	Dec '19	17:00.0	Dec '19	19:26.0	Dec '19	06:02.0
Q2	07:40.0	Q2	13:17.0	Q2	17:22.0	Q2	06:08.0
Jan '20	07:38.0	Jan '20	15:23.0	Jan '20	15:50.0	Jan '20	06:25.0
Feb '20	07:47.0	Feb '20	13:52.0	Feb '20	16:47.0	Feb '20	06:37.0
Mar '20	07:57.0	Mar '20	14:05.0	Mar '20	16:55.0	Mar '20	05:15.0
Q3	07:48.0	Q3	14:35.0	Q3	16:37.0	Q3	06:09.0
April '20	07:20.0	April '20	11:45.0	April '20	15:35.0	April '20	05:35.0
May '20	06:50.0	May '20	12:56.0	May '20	15:46.0	May '20	07:32.0
June '20	07:16.0	June '20	13:13.0	June '20	15:25.0	June '20	06:34.0
Q4	07:10.0	Q4	12:47.0	Q4	15:37.0	Q4	06:40.0
Annual	07:37.0	Annual	13:50.0	Annual	16:24.0	Annual	06:23.0

2019 Response Performance Data

Response	Total	Mean Average	90th Percentile
NEMHS to Camden	903	9.4	14.0
NEMHS to Hope	70	16.4	23.0
NEMHS to Lincolnvilve	165	19.0	27.2
NEMHS to Rockport	423	8.8	14.7
Rockland FD to Rockland	1436	7.2	10.2
Belfast FD to Belfast	1254	11.3	16.0
Belfast FD to Northport	113	17.0	22.75
Belfast FD to Morrill	57	18.1	24.0

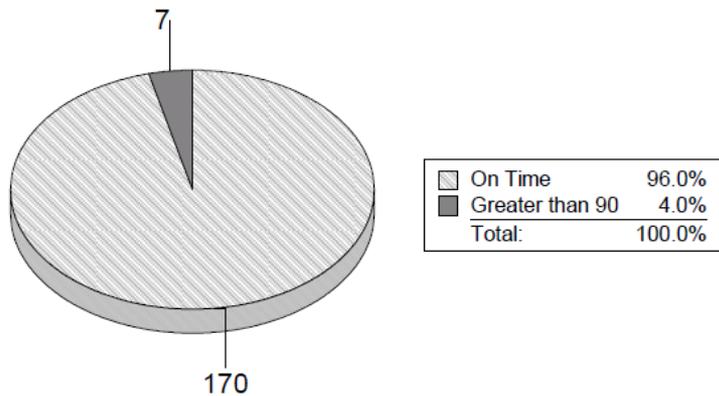
2020 PBMC Response Performance Data

Pen Bay Medical Center

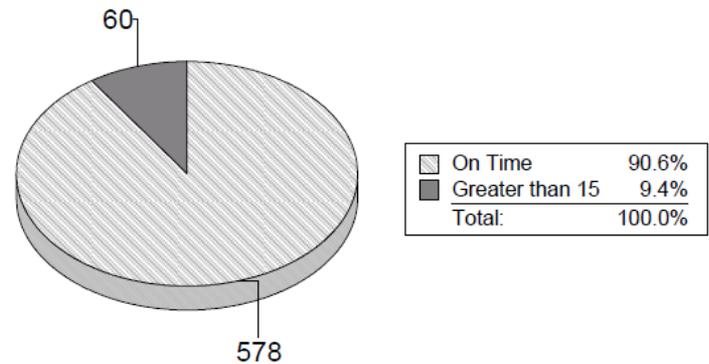
Transport Summary Report
All Departments

Q1-Q3: Jan-Sept 2020

On Time Performance - Ready Trips



On Time Performance - Scheduled Trips



FINDINGS

- Interview Findings
 - Frustration with ability to integrate MedComm into general dispatch process, and to get interfacility transfers done in timely fashion
 - Would appreciate closer routine communications with NEMHS during the week for hospital patient management planning
 - Hospital staff, Rockland and local fire staff underscore “professionalism” and some clinical deficiencies in comparing NEMHS and Rockland FD EMS staff
 - Predominantly positive feedback on NEMHS and staff.
 - Lack of supervisor presence/oversight for multiple years attributed to negative comments
 - Mutual aid incurred 52 times in 2019 and 40 times in 2020 and now poses less of an issue for Rockland FD
 - Staffing shortages blamed on MA use in 9/19 and at other times

FINDINGS

- Data Review Findings
 - Do Not Indicate Serious Response Reliability Issue but Do Indicate Need for Contractual Clarity on Measures for Accountability
 - Suggest Value for First Responder Development
 - NEMHS Has No Service or Licensed Personnel Performance Incidents Resolved or Under Review
 - No Penalties Have Been Assessed per Violation of Contractual Agreements

FINDINGS

- **Consideration of Options and Selection**

- **1.0 Status Quo** - Approximately \$311,000. This figure includes a CPI-based estimate from NEMHS which may be negotiated.
 - Finding: Not responsive to issues raised.
- **3.1-3.3 NEMHS Sole Provider with Enhanced Crew Coverage** –General magnitude of cost \$.85 million to \$1.4 million (\$311,000 of NEMHS contract cost plus additional expenses) depending on solution selected.
 - Finding: Data do not support funding higher crew pay or additional truck cost.
- **4.1-4.2 Fire-Based Sole Provider for 9-1-1 and IFT** – \$1.2 million start-up (largely capital) costs and \$1.2 million annual operating costs. Cost could be somewhat less if operated from Rockland. Revenue from all calls is included as a deduction from costs cited.
 - Finding: Table this for regionalization planning process. Evaluation does not support need for this expense and EMS service creation project in the timeframe allowed (July 1) under current COVID environment.

OPTIONS CONSIDERED

- **5.1-5.2 Fire-Based 911 EMS/NEMHS Based IFT** – \$600,000 start-up (largely capital) costs and just under \$1 million annual operating costs. This is cost after revenue for 9-1-1 calls deducted. Cost could be somewhat less if operated from Rockland.
 - Finding: Table this for regionalization planning process. Evaluation does not support need for this expense and EMS service creation project in the timeframe allowed (July 1) under current COVID environment.
- **6.0 Mixed NEMHS and Fire-Based Response (and Possibly Hospital Based Participation)** –Cost estimates vary with exact model selected and whether used for 9-1-1 response only or for both 9-1-1 and IFT.
 - Finding: Table this for regionalization planning process. Evaluation does not support need for this expense and EMS service creation project in the timeframe allowed (July 1) under current COVID environment.

OPTIONS CONSIDERED

- **2.0 NEMHS Primary Provider with Fire-Based First Response, Service Improvements and Regional Planning Initiative** –Approximately: \$403,000 (\$311,000 for NEMHS contract plus first response start-up and regionalization planning initiative costs).
 - Finding: Recommend this option. Offer new contract to NEMHS for one year with second year option. Most issues raised may be addressed with improved contractual provisions for accountability, performance measures, supervisory staffing, and dispatch communications, among others.
 - Finding: Steering Group recommends a relatively small investment to start a first fire-based first responder capability involving all four towns. Fire chiefs concur. Managed by one FD with call pay administered by each town in which calls occur.
 - Finding: Steering Group recommends initiating a further planning initiative to consider regionalization of EMS. Fire-based EMS regionalization will require SME guidance. This should consider Options 4.1-4.2, 5.1-5.2, and 6.0 should be considered in this process. Should invite Thomaston, Warren, Union and others who may be interested.

Estimated Cost of Recommended Option

- Basic Contract with North East Mobile Health Services
 - \$315,000
- EMS Regionalization Plan with Municipal Planning Facilitator
 - \$20,000
- Initiate Fire-Based Four Town First Responder Service
 - Establish: July 1 – December 31, 2021;
Operate: January 1 – June 30, 2022
 - Call Pay: \$29,000 (approximately 6 months)
 - Initial Equipment, Supplies and Replacements: \$33,000
 - Insurance, Other Administrative Expenses: \$6,000

Total Cost in Year 1: \$403,00,000