

New York State 2023 Evidence Based EMS Agenda for Future

**Written by:
State EMS Sustainability Technical Advisory
Group**

**A Technical Advisory Group of the
State Emergency Medical Services Council**

Table of Contents

Acknowledgments	2
Background	7
Summary	8
Key Recommendations	9
Appendix	12
History of EMS in the U.S. and New York State	12
Agency Subgroup	15
Education Subgroup	34
Government Support Subgroup	47
Operations Subgroup	51
Hospital Subgroup	55
Staffing Subgroup	59
Funding Subgroup	65

Acknowledgments

A special thanks to the following individuals for their participation in the EMS Sustainability Technical Advisory Group.

Theresa Allen

Program Associate, Council Operations, Finance and Administration Section, NYS Bureau of Emergency Medical Services

Ryan Alo, MS.Ed, CAS, NREMT

Assistant Principal, Waverly Central School District
EMT, Greater Valley Emergency Medical Services
Commissioner, Chemung Fire District
Co-chair Education sub-group

Shivam Barot

President, Five Quad Volunteer Ambulance, SUNY Albany (College-based EMS)
Co-chair Education sub-group

Patty Bashaw

NYS Emergency Medical Services Council
Chair, SEMSCO EMS Systems Committee

Michael T. Benenati, Sr., BS, EMT-P

EMS Administrator, Lagrange Fire District (Fire District ALS Transport)
Emergency Services Dispatcher, Ulster County
Division of Emergency Communications
Chair, EMS Sustainability TAG
Protocol Committee Chair, Hudson Valley REMSCO

Alan Bell, MPA, CMTE, EMT-P

Executive Director, Clifton Park & Halfmoon
Emergency Corps (not-for-profit)
Vice Chairperson, Hudson Mohawk REMSCO
Secretary, Saratoga County EMS Council

Bryan Brauner, MBA, NRP, CIC

CEO, Twin City Ambulance (for-profit ALS ambulance service)
Chair Elect and Past Chair, Wyoming-Erie Regional EMS Council
Member, SEMSCO Safety and Legislative Affairs Committees

Jeffrey Call, EMT P

General Manager, Guilfoyle Ambulance Service Inc. (For Profit Paramedic Service)
Chief of Operations, Cape Vincent Ambulance Squad Inc. (Not For Profit Paramedic Service)
Chair, United New York Ambulance Network (UNYAN)
SEMSCO Legislative Affairs, Safety and Finance Committee Member

Dan Clayton

Section Chief, NYS Bureau of Emergency Medical Services & Trauma Systems

Mark Deavers, EMT-P

Executive Director, Gouverneur Rescue (not-for-profit, ALS transport)
Chair Government sub-group
Chair SEMSCO EMS Systems Committee
Chair of St. Lawrence County EMS Council,
Vice Chair of North Country REMSCO
Representative, NYSEMSCO
Vice President, NYSVARA

Amy Eisenhauer

EMS for Children Program Manager,
EMS Liaison to Coverdell Stroke Program,
NYS Bureau of Emergency Medical Services

Paul Glasser

Deputy Director of Public Safety, Rensselaer County
(County-based EMS)

Steven G. Gordon

Director of Emergency Communications, Saratoga
County Sheriff's Office
Co-chair Identifying the problem sub-group
NYS 911 Coordinators Association

Ryan Greenberg, MBA, FACPE, NRP

Director, NYS Bureau of Emergency Medical
Services & Trauma Systems
Member, National Association of State Emergency
Medical Services Officials
Board Member, State Office of Interoperable &
Emergency Communications Board
Committee Member, National Registry of Emergency
Medical Services AEMT Redesign Project

Jason D. Haag, CCEMT-P, CIC

Assistant Chief, Finger Lake Ambulance
(Commercial Ambulance)
Geneva Fire Department (BLS First Response)
Wayne County Advanced Life Support (County-
based EMS, County 911)
Chair, Operations sub-group
1st Vice Chair, State EMS Council
Chair SEMSCO Innovations Committee
Secretary, Finger Lakes REMSCO
FASNY EMS Committee

Teresa A. Hamilton, EMT

Executive Vice President, NYS Volunteer
Ambulance and Rescue Association
Representative, NYS Emergency Medical Services
Council
Representative, Hudson Valley REMSCO
Deputy EMS Coordinator-Projects Coordinator,
Rockland County
Haverstraw Volunteer Ambulance (Volunteer/Paid)

Curtis Hammond, Paramedicine-AAS, NRP, CIC

Director of Operations, Candor Emergency Squad
Inc. (Not-for-profit ambulance)
Director of Education, Dryden Ambulance Inc. (Not-
for-profit ambulance)
Representative, Susquehanna Regional EMS Council
Representative, REMSCO Education Committee

Timothy Hardy, ENP

Deputy Director of Public Safety, Washington
County Department of Public Safety
(Reviewing Countywide EMS Initiatives)
Vice President, New York State Emergency
Management Association
Prior AEMT-Critical Care
UAS Instructor (SME) at National Center for
Security & Preparedness (NCSP)

William Hughes, MBA, EMT

Executive Director, Hudson Valley Regional
Emergency Medical Services Council
Treasurer, Congers-Valley Cottage Volunteer
Ambulance Corp.
SEMSCO Finance Committee

George June, EMT-P

Ambulance Administrator, Chief of EMS, Town of
Catskill Ambulance (Municipal ambulance)
Chair, EMS Committee, Association of Fire Districts
of the State of New York (Fire-based EMS)
EMS Director, NYS Association of Fire Chiefs
State Fire Instructor, NYS Office of Fire Prevention
and Control
Adjunct Instructor, Member, Greene County
Emergency Medical Services Council
Commissioner, Coeymans Fire District

Benjamin Keller, AEMT-CC, MPA

Chief, Fire and Life Safety Branch, NYS Division of
Homeland Security & Emergency Services, OFPC
Director, Kuyahoorra Valley Volunteer Ambulance
Corps
Rescue Captain, Newport Volunteer Fire Company

Bill Kennedy

Emergency Management Coordinator, Schuyler
County Emergency Medical Services (County Fire
Coordinators)

Steven Kroll, MHA, EMT

Co-chair Staffing sub-group
Executive Director & Chief, Delmar-Bethlehem
Emergency Medical Services (not-for-profit, merged,
combination agency)
Executive Leader for Mobile Integrated Health at
UCM Digital Health
Board of Trustees Chair, Cobleskill Regional
Hospital
Past Chair, REMSCO of the Hudson Mohawk
Valleys
Finance Committee Chair, NYS Emergency Medical
Services Council
Non-Physician Representative, NYS Medical
Advisory Committee
Director, Region 1, National Association of EMTs
(NAEMT)
Director, NYS Volunteer Ambulance and Rescue
Association

Dr. Yedidyah Langsam, EMT-P, Ph.D.

Professor, Brooklyn College (CUNY) (Faith-based
EMS, Collegiate EMS)
Representative & Parliamentarian, NYS Emergency
Medical Services Council
Secretary, Board of Directors NYC REMSCO
Chair, NYC REMSCO

James Lee, EMT-P

Director, Wayne County Advanced Life Support
(County-based EMS, County 911)
Project Manager, Wayne County 911

Alan D. Lewis SR. CCT-Retired 00095

AMR Senior EMS Consultant
SEMSCO Executive Board Member
Chair SEMSCO Legislative Committee
Vice-Chair, EMS Sustainability TAG
SEMSCO Systems Committee Member
SEMSCO Private Ambulance Representative
UNYAN Founding Member Past President and
Board Member Charter member Southern Tier
Regional EMS Council Member

Robert McCartin, BS, AAS, EMT-P, CIC

EMS Program Director, UB Emergency Medicine -
EMS Division
CIC, Niagara County Community College
Chair, Program Agency TAG
Rapids Volunteer Fire Company, ALS Ambulance
Transport
Member of the SEMSCO Systems Committee
Member of the SEMSCO Innovation Committee

Sara McCartin, M. Ed., AEMT, CIC

EMS Instructor, Niagara Career & Tech Ed Center,
Orleans Niagara BOCES
EMS Instructor at Niagara County Community
College
Co-Chair, Education sub-group
Member of SEMSCO Training and Education
Committee
Rapids Volunteer Fire Company
Vice Chair, Big Lakes Regional Council

Mike McEvoy, PhD, EMT-P, RN, CCRN

Editor, NYS EMS Sustainability TAG
Chair, NYS Emergency Medical Services Council
2023
EMS Coordinator, Saratoga County Emergency
Medical Services
Professional Development Coordinator, Clifton Park
& Halfmoon Ambulance Corps
Senior Staff Nurse, Albany Medical Center Hospital
Chief Medical Officer, West Crescent Fire
Department

Keith Mondschein, DC, MA, EMT-P, CIC

EMS Educator, Erie County Department of
Homeland Security and Emergency Services EMS
Division
Firefighter/Paramedic, Snyder Fire Department

Sara Moore-Gruver, M.Ed, FP-C, EMT-P

Proof-reader, EMS Sustainability TAG
Paramedic, Erway Ambulance
Certified Lab Instructor

Jim O'Connor, EMT-P

Vice-President Corporate Development, Empress
EMS (Commercial Ambulance)
American Ambulance Association
Greater NY Hospital Association

Valerie Ozga

Program Coordinator & SEMSCO Executive
Secretary, NYS Bureau of Emergency Medical
Services & Trauma Systems

Joseph Pataky, EMT-P

Deputy Assistant Chief; Chief of the EMS Academy,
Fire Department City of New York (Municipal)
EMSC Advisory Committee Elect

Mark Philippy, B.A., EMT-P

Chair, New York State EMS Council 2020-2022
Chair, Monroe-Livingston Regional EMS Council
Chair, Monroe County Traffic Safety Board, EMS
Liaison
Executive Deputy Chief, American Medical
Response, Rochester NY, 2020-Present
Director of Logistics and Compliance, EMS
Supervisor, CHS Mobile Integrated Healthcare,
2015-2020
Clinical Manager, Chief Paramedic, Rural/Metro
Medical Services, Rochester NY, 2013-2015
Director of Training, Special Enforcement Programs
Coordinator, Sergeant, Brockport Police Department,
1991-2013
Region 9 Coordinator, NYS Drug Evaluation &
Classification Program, Governor's Traffic Safety
Committee, 2003-2013

Brett Roberts, EMT, CIC

County EMS Deputy Chief, Westchester County
Department of Emergency Services (County-based
EMS)
Westchester Regional Emergency Medical Services
Council
ASHE Team Member/ALERT Instructor

Douglas Sandbrook, EMT-P, MA, NRP, CIC

Chair Hospital sub-group
Director, EMS Education, SUNY Upstate Medical
University, Department of Emergency Medicine
EMS Liaison, Upstate University Health System
Representative, Central New York RESMCO
Paramedic, Greater Baldwinsville Ambulance Corps
Regional Faculty, New York State Department of
Health Bureau of Emergency Medical Services

Raymond Serowik

Co-chair Identifying the problem sub-group
EMS Coordinator, Broome County Emergency
Medical Services

Christopher Smith

Director, Emergency Preparedness and Response and
Trauma Initiatives, Healthcare Association of New
York State (HANYNS)

Susie Surprenant, BBA, BS, EMT-P, NRP

Executive Director, Central New York EMS Program
Agency
Associate Member, Central New York EMS
REMSCo
Member, Central New York EMS REMAC
Member, NYS SEMSCo Finance Committee
Member, NYS SEMSCo Quality Metrics Committee
Member, NYS SEMSCO Systems Committee
National Registry Exam Proctor
DeWitt Fire Department (ALS First Response –
Paramedic level)
North Area Volunteer Ambulance Corps, Inc. - Life
Member (Not-for-profit Paramedic Ambulance)
Onondaga County Volunteer Firemen's Association

Bryse Taylor

EMS Coordinator, Essex County Office of
Emergency Services

David Violante, MPH, MPA, EMT-P, CIC

Director of EMS, Arlington Fire District (ALS First Response & Transport)
Chair Agency sub-group
Delegate, Hudson Valley REMSCO
Chair, Training and Education, HVREMSCO
2nd Vice Chair, NYS Emergency Medical Services Council (2023)
SEMSCO Quality Metrics Committee Chair, member of Systems, Training & Education
Adjunct, Dutchess Community College EMS Programs

Wendi Walker

Niagara County Communications Center
Chair of EMS Committee, Fire Association of the State of New York (FASNY)

Jonathan Washko, MBA, FACPE, NRP, AEMD

Assistant Vice President, Center for EMS | SkyHealth
| Centralized Transfer Center | Pre-hospital
TeleHealth Center
Northwell Health (Hospital-based EMS)
Co-chair Staffing sub-group
National Emergency Medical Advisory Council
National EMS Quality Alliance

Brian Wiedman

District Chief Investigator, NYS Bureau of
Emergency Medical Services & Trauma Systems

Background

A presentation, "EMS in Crisis, A New York State Perspective" on October 20, 2021, to the New York State Emergency Medical Services Council (SEMSCO) led to the formation of an EMS Sustainability Technical Advisory Group (TAG), charged with writing a White Paper. The crux of the problem is summarized as, *“Every day we see new headlines across this state and the nation on EMS Coverage; topics include staffing shortages, the decline of volunteerism, stagnant reimbursement, hospital over-crowding, inadequate coverage, use of mutual aid, pay disparities, absence of consistency in the EMS model and the lack of EMS educational opportunities. Yet we have not developed a comprehensive approach to addressing our crumbling EMS system.”*

The Sustainability TAG represented the variety of EMS providers in New York State, including for-profit, nonprofit, municipal, volunteer, fire, hospital, faith-based, and collegiate ambulance services, as well as their separate professional associations. The NYS Bureau of EMS, the NYS Department of Homeland Security and Emergency Services, regional EMS councils, regional EMS program agencies, county EMS coordinators, county fire coordinators, 911 public safety answering points (PSAPs), EMS educators, and hospitals were also represented.

This White Paper is the result of numerous hours spent in meetings, discussion, concessions, compromises, and creative critical thinking to co-ordinate a plan to improve the EMS system in New York State. It represents the work of EMS Sustainability TAG. The phrase "EMS in Crisis" has been commonly used to characterize the current situation of EMS in counties, regions, and states across this country.

To identify issues and formulate suggestions, the EMS Sustainability TAG divided into topic-specific subgroups: agency, education, government support, operations, hospitals, and staffing. Detailed discussions and suggestions from each subgroup are provided in the appendices to this report.

Summary

The New York State EMS system has markedly deteriorated over the past several years due to declining volunteerism, lack of public funding to cover costs of readiness, inadequate staffing, rising costs, insufficient insurance reimbursement, rising call volumes, a lack of performance standards, poor understanding of the EMS system by elected officials and the public, NYS home rule, and lack of transparency and accountability for EMS agencies.

New York State's (NYS) emergency medical services (EMS) are in trouble. Multiple ambulance services have closed their doors over the past several years, and many who remain open are unable to respond to emergency calls in any consistent fashion. Originally established as a transportation provider, EMS has developed over time to encompass healthcare, public safety, disaster response, mitigation, and public health. Today, EMS is an unanticipated (and often unfunded) safety net provider of pre-hospital healthcare, offering care to all patients regardless of their ability to pay for services.

Prior to the COVID-19 pandemic, a majority of New York State volunteer and paid EMS agencies reported that staffing shortages impacted their ability to adequately serve their communities (see [EMS Workforce Shortage in NYS: Where Are the Emergency Medical Responders?](https://ubmdems.com/wp-content/uploads/2020/01/Download-2019-NYS-EMS-Workforce-Report.pdf) <https://ubmdems.com/wp-content/uploads/2020/01/Download-2019-NYS-EMS-Workforce-Report.pdf>). The number of New York State certified EMS personnel is insufficient to meet the needs of communities. Data provided by the NYS Department of Health shows that the number of certified EMS personnel declined from about 80,000 to about 70,000 between 2019 and 2021, a decrease of approximately 13%. Equally troubling, less than half of these 70,000 certified providers were working in EMS, as only 30,000 of them were named on a pre-hospital care report (PCR) during 2021.

A citizen calling for EMS assistance has little to no awareness of when or what EMS will actually respond to their emergency. Many municipalities or EMS

agencies have their own, non-interoperable 9-1-1 dispatch centers, collecting data using different systems, standards, and dispatch protocols. With such fragmentation, it is impossible to measure system performance or outcomes. EMS response plans utilize geopolitical boundaries to decide what ambulance is assigned to a call, despite a closer ambulance often being available.

EMS response is often at the mercy of time of day, day of week, proximity of an ambulance within a geopolitical boundary, and the availability of staff. Response times vary from minutes to more than an hour in many locations. Multiple dispatch centers may be involved in a single EMS call, often when numerous EMS agencies fail to answer. There are no standard performance metrics for response times or agency performance (overall percentage of calls answered). EMS agency leaders are reluctant to endorse centralized collection and publication of performance statistics. When looking at EMS responses, it is difficult to determine how many different agencies were requested to answer a call prior to one actually responding. As a result, measuring time from the receipt of an EMS call until an ambulance arrives on scene is virtually impossible in most of New York State.

In some localities across New York State, municipal funding has supported efficient and effective EMS response. In these locales, future viability may well depend on shared services and scale economies.

Key Recommendations

The EMS Sustainability TAG recommends the following solutions. Detailed proceedings from each of the TAG subgroups are contained in the appendix. These elaborate on the recommendations below and provide data to support the solutions.

1. By December 31, 2023, the New York State Emergency Medical Services Council, the Bureau of EMS, and the Commissioner must create a comprehensive state-wide EMS plan. To enhance coordination, education, and responsibility among EMS organizations at the regional level, the plan should modernize the structure, duties, and responsibilities of the Regional Emergency Medical Service Councils (REMSCOs) and its Program Agencies while simultaneously standardizing, and clearly delineating the REMSCOs roles, functions, lines of oversight and lines of accountability.
2. Increase the number of certified EMS providers in New York State by 10,000 by 2025.
3. Fund a three-year, \$5 million campaign to promote EMS volunteerism and careers in New York State.
4. Engage stakeholders to address the decreasing pool of EMS providers to include pay disparities between EMS and other emergency services (Fire and Law Enforcement), benefits, longevity, mental health, work hours, access to EMS education and migrating from certification to licensure.
5. Engage NYS Hospitals and the healthcare policy council to strengthen relationships between EMS professionals and hospital systems in order to cooperate to speed up off-loading (wall time) and facilitate discharge planning.
6. Create and finance logical and rationalized EMS system design through agency and CON consolidation that appropriately recognizes and includes existing agencies, CON holders and EMS market-right holding municipalities at the County or Regional levels. Create a safety net, system of systems architecture to direct EMS organizations that are unable to support themselves into a consolidated and coordinated regional entity for shared services and economies of scale or implement a regional mechanism to provide an independent secondary safety net service that can adequately provide fully functional ambulance services when the primary organization is unable to do so.
7. Establish state designated EMS leadership credentials, similar to those recommended in the fire service. Fund EMS leadership development programs.
8. Incentivize implementation of tiered EMS response systems, using Certified First Responders (CFRs), Basic Life Support (BLS) ambulances, Advanced Emergency Medical Technician (AEMT) staffing, and Paramedic staffed response units.
9. Establish, implement, and enforce agency performance standards. Develop standardized, reasonable, measurable, and reportable response reliability, clinical quality/outcome, customer service and provider engagement/satisfaction expectations and standards with performance-based incentives, such as subsidies, contract incentives, and other impactful inducements to perform. Measures should be transparent to the public and standardized across the state for comparative purposes.
10. Require PSAPs to engage local authorities having jurisdiction over EMS to collaborate in plans to assure dispatch of the closest available ambulance.
11. Through statutory and regulatory changes, implement regionalized EMS demand coverage reliability standards and policies that require a transport capable ambulance be available to respond to calls for service within a clinically appropriate response time and level of service (BLS/ALS), inside an agency's CON regulated corresponding area(s) of primary service responsibility using the following supply coverage reliability standards:

- a. In 2024 agencies will be required to respond to 80% of dispatched calls without mutual aid
 - b. 2025: 85% of dispatched calls without mutual aid
 - c. 2026: 90% of dispatched calls without mutual aid
 - d. 2027: 95% of dispatched calls without mutual aid
12. Authorize and fund County EMS Coordinators to facilitate coordination of EMS within their counties, to maximize economies of scale, and ensure the timely delivery of EMS. Increase statutory authority of County EMS Coordinators for managing EMS responses.
 13. Through statutory change, ensure all 911 centers (PSAPs) that dispatch EMS in New York State utilize a national recognized emergency medical dispatch (EMD) protocol, or equivalent, to appropriately determine the resource needs and priority for EMS calls.
 14. Implement mandatory annual EMS agency participation in a statewide EMS cost reporting system that mirrors Medicare's (CMS) Ground Ambulance Data Collection System (GADCS) for use in evidence-based adjustment of ambulance reimbursement under Medicaid, municipal subsidies and other sources of justifiable revenues.
 15. Create statutory changes that establish and define EMS as an essential service in New York State and mandate that the service's beneficial stakeholders pay their fair share of the costs of funding it, including the cost of maintaining continuous readiness and reimbursement for any pre-hospital care that is rendered, including the actual cost of transportation.
 16. Develop a state subsidy or grant program (with support from the Federal government) to provide financial relief for EMS agencies to improve & meet quality response metrics as defined by the SEMSCO and the Department. The subsidies or grants should be channelled through REMSCO's, to Counties or geographical regions to facilitate reaching the goal of meeting quality response metrics, provide funding for consolidation and mergers, or other methods which develop county or regional EMS systems. Work with elected officials and the Department of Health to create a subsidy or grant program to all allow EMS agencies in need to have access to funding within three months of the start of the next legislative sessions.
 17. Fund a \$36 million EMS sustainability grant program, distributing \$2 million to each REMSCO. Initial grants would be awarded based on an approved plan with subsequent grants based on performance.
 18. Pass enabling legislation for Mobile Integrated Healthcare and innovation like the Medicare Pilot project on Emergency Triage, Treat, and Transport (ET3). Such initiatives would serve to develop load balancing by expanding EMS system capacity through Community Paramedicine and programs such as alternate destinations, treat-in-place, and 911 diversion programs.
 19. Request SEMSCO to examine patient treatment modalities to assess whether procedures currently at the ALS level could be safely and reasonably moved to the BLS level. This would allow BLS agencies to more effectively treat and transport a greater number of patients when ALS care is not available.
 20. Increase and allow EMS Course funding at all EMS levels and specialized EMS training from state EMS training fund to incentivize alternate delivery models, improve student enrollment, better compensate certified instructional staff, and coordinate geographic scheduling of classes to prevent overlap.
 21. Require all newly certified Paramedics in New York State, effective 2027, to have a minimum of an associate of applied science degree in paramedicine, grandfathering all prior ALS practitioners from this requirement. EMS field supervisors and advanced practice clinicians (Critical Care Paramedics, Flight

Paramedics, and Community Paramedics) should have a minimum of a Bachelor of Science degree in paramedicine or a related field, and that EMS leaders including administrators, managers, researchers, educators should have graduate level degrees.

22. Amend New York State law to recognize EMS certifications as professional licenses regulated by the Department of Health and issued by the Commissioner.
23. Require each hospital in New York State have a staff member designated as the EMS Outreach Coordinator / Ambulance Discharge Coordinator to facilitate day-to-day communication, planning, and collaboration with ambulance services.
24. Form a joint workgroup between SEMSCO, STAC, EMS for Children Advisory Committee, the Bureau of EMS, and the DOH Division of Hospitals and Diagnostic & Treatment Centers to review interfacility critical care transportation. The workgroup should review educational standards, response guidelines, clinical guidance, medical protocols, and equipment specifications. Unique consideration should be given to cardiology, pediatrics, trauma, and stroke.
25. Fund personnel within the Bureau of EMS specifically to assist SEMSCO with leadership, administrative support, and process and policy execution.

Appendix

History of EMS in the U.S. and New York State

- **1862** Major Johnathan Letterman, MD, established the US Ambulance Corps within the Army of the Potomac to triage wounded on active battlefields rather than retrieving them after battle ended. Based on the success in saving lives, Ambulance Corps were adopted throughout the Union Army. Dr. Letterman is considered the Father of EMS.
- **1865** Cincinnati, Ohio, established the first civilian ambulance service.
- **1868** New York City advertises a 30-second response by an Ambulance Surgeon.
- **WW1** Wounded soldiers on the battlefield use signal boxes to summon medical help. Service uses electronic, steam and gasoline powered ambulances to transport wounded.
- **1928** Rural Volunteer service begins in Roanoke, Virginia, using lifesaving and first aid crews. Other states follow, but the quality and kind of services vary widely.
- **1930s and 1940s** Unregulated hodgepodge of services emerge at state and local levels. Fire departments, hospitals, funeral homes, towing companies, and volunteers set their own standards. Transportation of patients remains primary focus until after midcentury.
- **1950s** Beginnings of Modern EMS. Funeral homes begin patient care and operate nearly half of the country's ambulances.
 - EMS became of importance in the 50s and 60s when undertakers decided to exit providing ambulance services. Undertakers had been providers of ambulance services as their vehicles had stretchers and could accommodate an ill or injured person riding on the stretcher to a community hospital.
 - Undertakers could not keep up with modern society demands for more prehospital care while enroute to hospitals.
 - Volunteer ambulance corps cropped up in rural and suburban communities, operated by residents willing to volunteer their time and talents to help when illness and accidents needing ambulance transportation happened.
- **1966-1969** Modern EMS evolves from landmark National Academy of Science study: *Accidental Death and Disability – The Neglected disease of Modern Society*. The data shifts from a focus on transportation to Emergency Medical Service. Federal Legislation standardizes training requirements and introduces the term Emergency Medical Technician.
- **1968** National first call to 911 received at a police station in Haleyville, Alabama.
- **1969** Mobile Advanced Life Support debuts in New York City and Miami. Columbus, Portland, Seattle and Los Angeles followed soon after.
- **1970s** Not mentioned in EMS History was the TV Show “*Emergency*”. Featuring fire-fighter Paramedics working in Los Angeles.
 - Paramedics Johnny Gage and Roy DeSoto introduced America, and most likely other countries, to TV's version of EMS and advanced patient care in the streets. It's this writer's opinion that the TV program created EMS awareness and introduced its viewers to what type of patient care was possible as EMS developed across our nation.
- **1972** Health Services and Mental Health Administration under the Department of Health, Education and Welfare becomes the

lead agency for EMS, formalizing the shift from primary transportation to emergency medical service.

- **1973 EMS System Act** establishes 300 EMS systems throughout the country. Department of Transportation adopts training curricula for EMT, EMT-Paramedics and first responders. New rules establish EMS Radio communications and introduce ambulance specifications.
 - The next forty years resulted in upwards of 1,000,000 trained EMT's, Paramedics, and First Responders in NYS.
 - NYS passed *Article 30 and Part 800 of the Public Health Law (PHL)* creating the New York State Emergency Medical Services Committee (SEMSCO) and eighteen Regional EMS Councils (REMSCO). These Regional EMS Councils coordinate emergency medical services within their specific regions.
 - Article 30 required each existing ambulance service to apply for a Certificate of Need (CON) Ambulance Service Operating Permit that would identify service territory.
 - Part 800 listed medical equipment necessary for ambulance agencies to reach certification through the New York Department of Health Bureau of Emergency Medical Service
- **1980s** The future autonomy and wider medical services of evolving EMS highlights the need for increased medical oversight. EMS Physicians emerge as a new specialty to ensure that care provided by EMS is both appropriate and beneficial.
- **1981 Consolidated Omnibus Budget Reconciliation Act** consolidates funding into preventative health block grants to states, reduces compliance with federal guidelines, and abolishes the lead federal agency.
- **1984 Emergency Medical Services for Children** program adds an EMS emphasis on how to care for children and prevent pediatric injuries.
- **1996 EMS Agenda for the Future**, further connects EMS with other Medical Professions.
- **1999** Comprehensive review of current EMS landscape produces the *EMS Educational Agenda for the Future*, with recommendations for core content and scope of practice, and adds certification of EMS professionals.
- **2001 National EMS Information System** begins to standardize storage and sharing of EMS data to improve analysis, research, and performance at local, state, and regional levels.
- **2005 Enhanced 911 Act** establishes a national 911 program to assess and improve public safety and communication services. New *Federal Interagency Committee on EMS* is created to coordinate federal efforts and improve EMS Systems nationwide.
- **2007 National EMS Advisory Council** is created to improve EMS recommendations to Department of Transportation and Federal Interagency Committee on EMS.
- **2018 Public Law 115-275** authorizes *National EMS Memorial Foundation* to establish a fitting and permanent National EMS Memorial in Washington DC.
- **2019** COVID-19 attacks our country, and all EMS agencies perform heroically, working with fire and police departments, hospitals and other allied healthcare professionals to care

for people as hospitals are overrun with critically ill patients.

- About four years prior to the COVID-19 Epidemic there was evidence that EMS Agencies were experiencing shrinkage in their work forces.
- Mid-2019 through 2021 the world experienced tremendous loss of life and devastating workforce shortages. Health care workers especially, including EMS providers, lost their lives or left their profession during this time.
- In New York the overwhelming loss of seasoned EMS personnel across all ambulance agencies resulted in approximately 30 Volunteer Ambulance Corps closing their doors and other departments losing valuable, well-trained personnel.
- Commercial (paid) ambulance services in New York lost one third to half of their highly trained professionals across the state, resulting in the inability to fully staff every ambulance in their fleets.
- Staffing shortages were not unique to New York State and the closing of ambulance agencies across the nation resulted in stretching surviving ambulance providers well beyond their capabilities. Meeting 911 demands and providing inter facility transports to tertiary care centers, consistent with past performance standards, was becoming impossible.
- EMS staffed vaccination sites across the state and worked hand in hand with the nursing profession to fill gaps created by the scourge of the epidemic.
- Community Paramedicine Programs were set up in over 50 New York counties to help patients in their homes and at county staffed clinics receive vaccinations.
- **Where we are now 2021-23** The number of EMS providers in NYS has plummeted. In 2021, 15% of those certified in EMS did not renew their certifications. Of those who remained, less than 50% of those who were certified provided care. That means that 42.5% of certified EMS personnel cover 100% of the calls. NYS certified less than 500 new Paramedics in 2021.

Agency Subgroup

The TAG created the ‘Agency’ subgroup to understand issues among EMS agencies and make recommendations for improvement and/or solutions to such issues. The other subgroups of the TAG represent areas that directly affect agencies across New York State and have significant influence on how agency providers may or may not be able to care for their communities. There is a crossover of challenges and opportunities that each subgroup represents in this complex issue of describing the pre-hospital care system, and what is working and what is not. To that end, there may be similarities of information among subgroups that have come to the same conclusions albeit from different perspectives.

To gain a better and broader understanding of the current condition of agencies, the subgroup surveyed agency personnel at all levels from across the State to determine the relevant challenges, and their potential solutions. Very clearly, it appears that the primary challenge among all agency types and personnel levels is ‘staffing’, and the primary solution to this challenge is ‘funding’. Other challenges included those in community and political awareness, leadership, operations, and education and certification. Short- and long-term solutions to such issues will involve changes in agency and community perspectives, political influence, legal, and regulatory changes.

Scope and Definition

To understand the scope of the landscape and be able to define any challenges or opportunities, the subgroup needed information from around the state, that represented the challenges of different agency types, geographic locations, delivery models, population densities and call volumes, provider types, personnel positions, and lengths of service. Such differing and varying perspectives could only begin to show the complexity of why and how out-of-hospital care is delivered in the way it is. From a survey of personnel across the state, and from information collected through county reports and studies, news reports, magazines, journals, social media, and through varying anecdotal experiences, the following topics appeared as contributory primary factors into the current state of out-of-hospital care. These are in no particular order.

Staffing is the linking of a role to someone who is qualified, experienced, and appropriate for such a position. Staffing models include the quantity and quality of personnel, recruitment methods, selection criteria, offering employment or membership, training and certification / recertification, and retention. Staffing / personnel challenges as identified by the subgroups’ survey included those of poor recruitment, poor retention, decreasing membership, reduced staffing, ageing providers, attrition, burnout, turnover, inadequate personnel coverage, not meeting qualifications, not being able to meet the physical demands of the role, personnel working other jobs or needing to work other jobs, staff being unprepared, and generally, people just not available.

Funding is the provision of resources to an agency and while usually in the form of money (through cash, credit, donations, grants, subsidies, taxes, gifts, loans, investing, etcetera) can also be through the donation or provision of time, goods, and services. Different agency types utilize different funding mechanisms and streams partially because of regulation. Funding challenges as identified by the subgroup’s survey included those of poor finances, insufficient pay, issues in billing, poor reimbursement, insufficient budget, or poor budgeting, poor or lack of appropriate contracts, reduced income, cost of health insurance, cost of benefits, cost of inflation, retirement, lack of funding incentives, and lack of rewards.

The idea of leadership is comingled with management across groups and individuals, and although the two are distinctly different they are sometimes identified similarly in terms of position, authority, or control. Leadership is generally the ability to influence, motivate, or guide a group towards a vision or a goal while management is generally considered the coordinated administration of an organization in getting there. Leadership challenges as identified by the subgroup’s survey included those of accountability, culture, attitudes, buy-in, communication, happiness, succession planning, management, supervision, micro-management, trainers / mentors, morale, respect, officers, legislative, rules / requirements, mandates, stress of the job environment, view of EMS by others, public relations, and competency. Succession planning and leadership development are two very important and

significant but faltering areas in many agencies. The lack of leadership development leads to a lack of understanding of the overall EMS system and how it operates both locally and regionally, a lack of understanding and completing necessary practices, a lack of understanding of DOH policies and procedures, a lack of the responsibilities and accountability of such leadership, and significantly wasted time, effort and money in fixing mistakes or shortcomings as a result.

Operations is an active process of functioning, ideally at the highest level of efficiency possible. Efficiency may be determined by a number of factors, and it may be determined differently by various personnel or departments within and without an agency. Factors hindering efficiency and therefore agency operations, as identified by the subgroup's survey, included those of supplies availability, increased call length, increased call volume, increased charting time (completing pre-hospital care reports), difficulty of electronic pre-hospital care reporting programs, increased hospital turn-around time, holdovers, lack of mutual aid, increased response times, dispatch issues, protocols, scheduling, certificates of need, lack of equipment, lack of personnel (staff or membership), and shift length.

Education & Certification is the process of recognizing that an individual has met and demonstrated an accepted body of knowledge and has the functional ability to provide care within a specific scope of practice standard. The New York State Department of Health certifies providers at various levels of healthcare provision through initial and ongoing training. Initial training occurs through NYS Course Sponsorships and recertification occurs through DOH authorized programs and processes. Factors affecting education and certification, as identified by the subgroup's survey, included the following: lack of training (internal / external), stringent recertification criteria, need for licensure, inexperience of workforce / providers / membership, competency of workforce / providers / membership, varying standards of care, lack of quality assurance programs, lack of quality improvement programs, lack of patient feedback, lack of hospital / clinical feedback, declining skills proficiency, having to travel long distances for training, lack of training availability, and lack of instructor availability.

There is great discussion about agencies needing to meet specific guidelines, metrics, or performance standards to continue operating in their designated capacities. While agencies had to meet such guidelines to receive an original certificate of need from the Department of Health, and some meet minimal guidelines to recertify their agency status, some no longer do and yet still maintain organizational operations however minimal they may be. Such organizations do not truly meet public need and cover their inability to provide such services through mutual aid. Some simply do not show-up. Communities are increasingly seeking EMS agency transparency by requesting that agencies demonstrate their ability to meet acceptable performance standards based on locale and publish data publicly that supports such claims. This concept is also tied to the idea of self-reflection and self-assessment, wherein an agency seeks to meet an agreed upon vision or objective by determining how well they are performing. Another way to look at this issue is whether an agency is meeting the standards of the Department of Health and is being accountable themselves to such standards, and likewise, is the Department of Health holding the agency to such standards as well.

Basic Life Support (BLS) Adjuncts are additional tools that basic level providers can use to enhance patient care options at the basic level. Agencies using such tools now, in an environment where paramedic level providers are becoming scarce, is a solution to reducing the strain on some EMS systems. Adjuncts available today include blood glucose testing (glucometry), application and transmission of a 12-Lead EKG, administration of epinephrine by syringe or auto-injector, application of Continuous Positive Airway Pressure (CPAP), aspirin administration, patient assisted nitroglycerin, the use of pulse oximetry, the application of hemostatic dressings, the administration of albuterol, tourniquet application, and naloxone administration. There is also a pilot study of BLS agencies using a supraglottic device to control an airway in cardiac arrest situations. By agencies using such modalities, they can more effectively treat and transport a greater number of patients that may not have the ability to encounter a paramedic otherwise.

Another area of great discussion is the need for awareness of these and other issues facing EMS

agencies and providers by the public, stakeholders, shareholders, and elected officials. Emergency Medical Services has evolved over time in a variety of ways and yet the model of delivery or what providers even do is still not completely clear or understood. This is a failure of those in EMS to not completely involve and/or inform their communities, the public at large, or their elected officials. With little communication, groups end up having disparate expectations. To further the problem, since EMS services are not used very often by any one individual, there is little to no apprehension about the profession until it is needed and not available. Agencies providing out-of-hospital care must be transparent with their community, involve them as users of such services, and involve elected officials in the process.

Legally, the EMS system in New York enjoys the advantages and must overcome the challenges of local governance through Home Rule. According to a report on Constitutional Home Rule by the New York State Bar Association, under Home Rule, counties, municipalities, towns, townships and villages are given the authority to exercise self-governance through the New York State Constitution. The report indicates that the continuing dilemma has been to strike the right balance of furthering strong local governments but leaving the State strong enough to meet the problems that transcend local boundaries. Such influencers of problems that transcend local boundaries are those that also influence people as previously indicated: culture, leadership, politics, pay, traditions, hours, requirements, benefits, pension, workload, equity, recognition, family, other jobs... or anything that could influence an individual, for any one or variety of reasons. The same flexibility provided to local entities is the same rigidity afforded to them. A solution is in the ability of the State to encourage coordination, regionalization, and responsibility, through leadership development. Also, to institute performance standards and hold agencies accountable to such standards. In such a way, the State could encourage the benefits of local governance (how) to ensuring the delivery of quality prehospital care (what).

Staffing among agency types varies dramatically based on agency type and many local factors too numerous to list. Usually, a combination of factors results in such staffing challenges. However, any one

factor with significant presence could exert just as much influence. Examples of factors include but are not limited to call volume, geography, organizational culture, leadership, politics, pay, traditions, hours, requirements, benefits, pension, workload, equity, recognition, family, other jobs: anything that could influence an individual, for any one or variety of reasons. Another facet of staffing relates to generational differences among staff.

According to an article on work-life balance by the JP Griffin Group, Boomers (those born between 1946-1964) are now in their 50s to 70s and are considered hard workers who are competitive and loyal to their employer and who prioritize work over other aspects of their lives. Those in Generation X (born between 1965-1980) are now in their 40s-50s and are considered the first to contemplate a work-life balance. While they work hard for their employers, as long as they are recognized for doing so, they attribute a fair level of importance to the quality of family life. Millennials are those born between 1980-2000 and are now in their 20s-40s. This group can be hard working but also expects that they will work at several different organizations or even industries. They self-align to organizations close to their personal beliefs and goals as well. They value flexibility but also value compensation and benefits, believing that social security and pensions will not be around for their retirement years. Work-life balance for millennials can be somewhat blurred if they are in an organization with whom they align deeply, and personal and professional goals match. However, if not, they will do what is required and seek an organization that aligns more closely.

Within agencies, personnel from different generations will not respond similarly to work environments (staffing, workload, compensation, benefits, hours, leadership, management, culture, goals, vision, etc.). This is true of any agency type and could help to explain some of the staffing issues among agencies. Leadership and management must recognize and adapt to the fundamental differences among their personnel and balance the strengths and opportunities among them.

Funding also varies dramatically across agency types. A 2016 National EMS Advisory Council (NEMSAC) committee report indicated that financing of the EMS

system was generally fragmented, conflicted and often underfunded. The report cited the following reasons, which remain unchanged today:

1. EMS is not considered essential and therefore not required to be provided
2. Insurance reimbursement is based on transport and not on services provided
3. Underfunded and inadequate insurance reimbursement rates
4. Funding in a fee for service model instead of a readiness model
5. Widely varied or complete lack of local government subsidy
6. Federal, State, and local grant restrictions based on agency type
7. Uncompensated / charity care provided by EMS agencies is double that of other healthcare provider groups
8. Lack of offset funding for uncompensated / charity care

The report also indicated possible solutions to financing issues:

1. Transport of lower acuity patients to alternate destinations
2. Financing based on services provided and the cost of readiness
3. Shift from supplier of transportation services to provider of healthcare services

While easily stated, the report also documents challenges to system financing:

1. Costs vary significantly based on level of service provided, including but not limited to factors such as, local requirements, service area, compensated or uncompensated labor, response time standards and performance, clinical sophistication, quality of care, and cost per response.
2. Cost of response varies based on population and age, call volume, service area (urban to remote), and number of EMS agencies within a service area.
3. A consensus definition of EMS remains elusive. The current definition of EMS System includes all aspects of emergency care from dispatch services through the 911 response to hospitals and rehabilitation services (ems.gov). There is no clear term specifically identifying “EMS” provided by EMS

personnel in the field outside of a facility setting.

4. There is no accepted definition by Medicare for readiness cost or a current methodology for calculating this cost.
5. EMS response is provided by multiple governmental and non-governmental agencies including city, county, district municipal service, fire-based, hospital-based, law enforcement, private for-profit, community non-profit and others. All entities have different accounting structures and methods to determine costs. For many agencies, costs are bundled with other services and not delineated for EMS functions.
6. Depending on service area and model type, EMS response personnel are either paid career, compensated volunteers, or uncompensated volunteers making it difficult to benchmark true labor costs.

NEMSAC’s report provides three goals for EMS systems, on which their recommendations rest:

1. Improved coordination
2. Expanded Regionalization
3. Increased transparency and accountability

Comments in the Sustainability TAG’s survey and from agencies and providers around the state support such goals citing:

1. The need for accountability at the agency, local, regional, and state level
2. Responsibility of providers, agencies, regions, and the state
3. The use of performance standards for continued authority to operate
4. The need for agency leadership development and succession planning
5. The use of all BLS Adjuncts by all agencies (Aspirin, Naloxone, Albuterol, Epinephrine, Continuous Positive Airway Pressure (CPAP), transmitting EKGs)
6. Transparency of agency performance out in communities

Analysis

Quite a lot of information exists about the current state of the EMS system in news reports, magazines, journals, social media, and through varying anecdotal experiences. Additionally, many local and county governments and agencies have produced reports on the state of EMS in their specific locales. While these reports are valuable, the subgroup also wanted to give all EMS personnel throughout the State the opportunity to provide open and honest feedback based on their individual perspectives without outside influence or the fear of repercussion. To that end, the subgroup, in conjunction with the other subgroups of this TAG, developed a survey to provide such a forum.

The subgroup wanted to reach as many EMS personnel as possible throughout New York State and collect a sample that included all regions, agency types, levels of provided service, primary positions, certification levels, and years of experience. The survey collected data anonymously, however people could provide their contact information if they so wished. Completing the survey was voluntary and the subgroup did not offer any reward or compensation. Many different organizations distributed a link to the survey through their list-servs and the survey was widely distributed through social media and email as well. Bureau leadership also discussed the survey and provided a link to it during their monthly statewide leadership and education meetings. The Bureau maintained the survey on their website, and it was open from the beginning of May through the middle of June 2022. Throughout the survey period and at its close, the Bureau provided all submitted data to the subgroup.

For clarity and standardization, the survey followed the National Scope of Practice model provided by the National Highway Traffic Safety Administration (NHTSA) when asking respondents to identify their level of certification. These levels are Emergency Medical Responder (EMR), Emergency Medical Technician (EMT), Advanced Emergency Medical Technician (AEMT) and Paramedic. An in-depth discussion of scope and definitions from NHTSA can be found in their 2019 publication National EMS Scope of Practice Model.

Respondents also self-selected their primary agency type among 12 base variations of how EMS is delivered across the state. These include collegiate, hospital, commercial, municipal, fire, police, EMS, volunteer, combinations of these, and educational course sponsorships. Respondents further identified the role of the agency and the highest level of care provided. Agencies are either first response only at the EMR, Basic Life Support (BLS), or Advanced Life Support (ALS) level, or are a transporting ambulance service at the BLS or ALS level. Agency base types reflect the primary role of the agency, how the agency is structured, how the agency is legally defined, and how the agency generally operates. Different agency bases have different rules and regulations for financing, operations, and areas of operation. An in-depth discussion about agency types and service delivery models can be found at EMS Agenda 2050 and at NHTSA's Office of EMS. Finally, respondents indicated their primary position within the agency at the various provider levels, management or supervision, or administration.

Separating such information is important to understanding the challenges faced by each different level of individual involved in an agency, and at each different agency level, and within each different region of the state. This survey attempted to do just that.

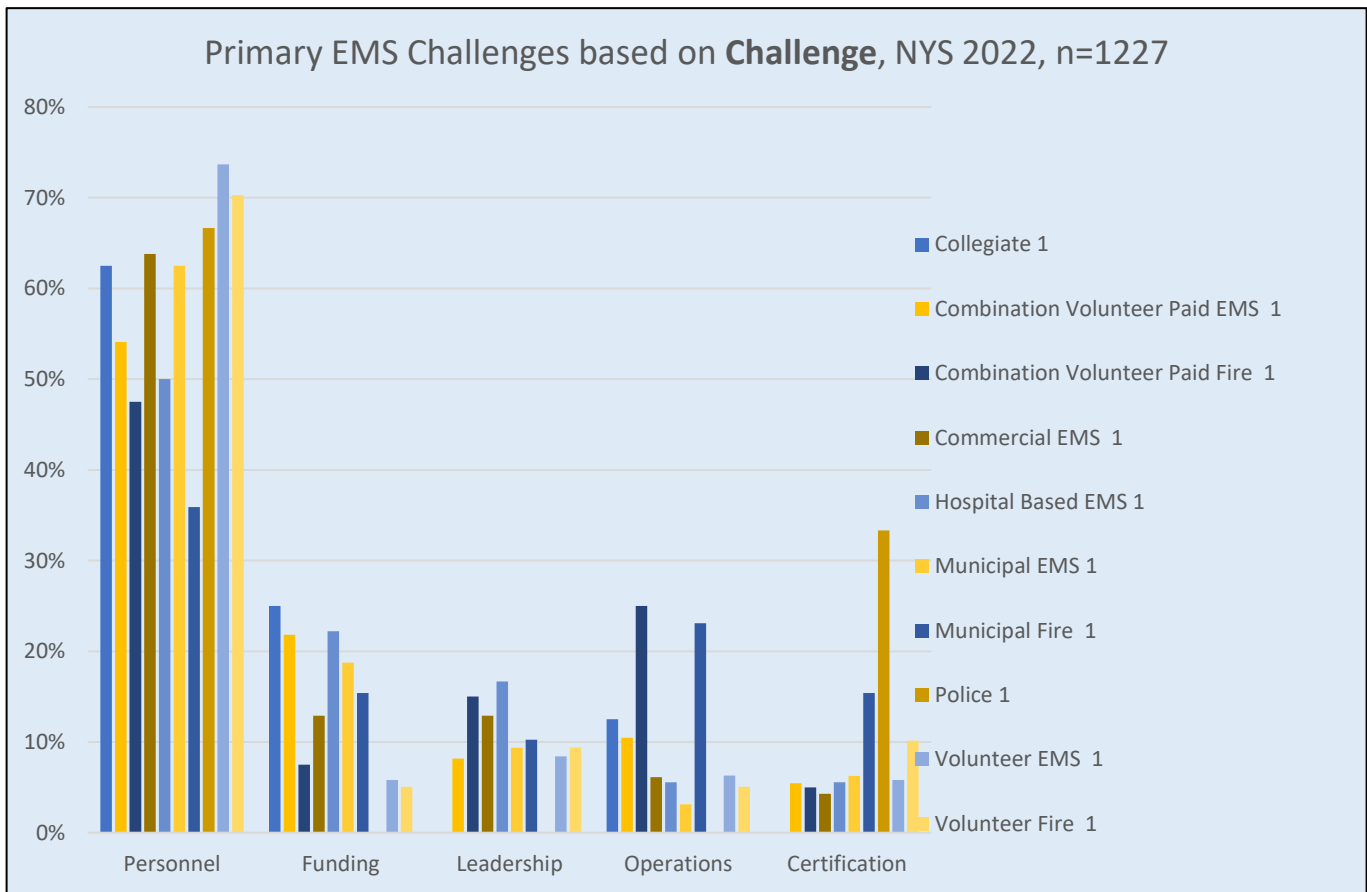
It is also important to note that there are limitations to the survey and the data that it represents. The subgroup received just over 1200 responses, in contrast to the approximately 70,000 certified providers in the State, which is a 2% response rate. A lower response rate leads to lower representativeness, increased bias, and decreased reliability, accuracy, and validity. Another limitation is anonymity. Anonymity allows for greater honesty, increased response rates, and avoids some biases. However, it is also not possible to fully understand the context or frame of reference of a free-form response and there is no possibility for follow-up. Additionally, responses could be unintentionally variable because a question was not completely understood by the respondent, or intentionally variable for unknown reasons, either of which could skew the results of the data.

The survey required respondents to disclose information related to their EMS activity but not to a level that could identify any specific agency, provider,

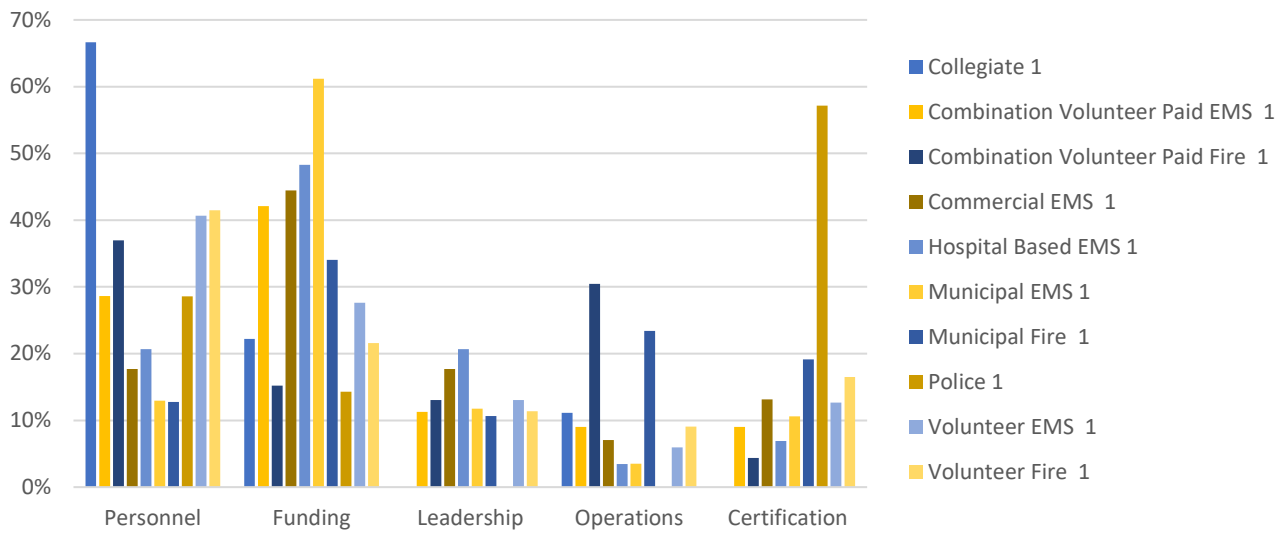
or person. Such questions were in a pre-defined check-box style of reporting. Following these questions, the survey asked an open-ended free-text ranking of what the top challenges and potential solutions were to such challenges. Additional check-box questions asked about staffing, operations, finance, education, and provider and agency certification and sustainability (see attached survey).

The subgroup first analyzed the pre-defined data by response count. To make sense of the free-text information, the subgroup evaluated the ranked challenges and associated solutions and grouped each coupled answer into one of the following categories: Personnel, Funding, Leadership, Operations,

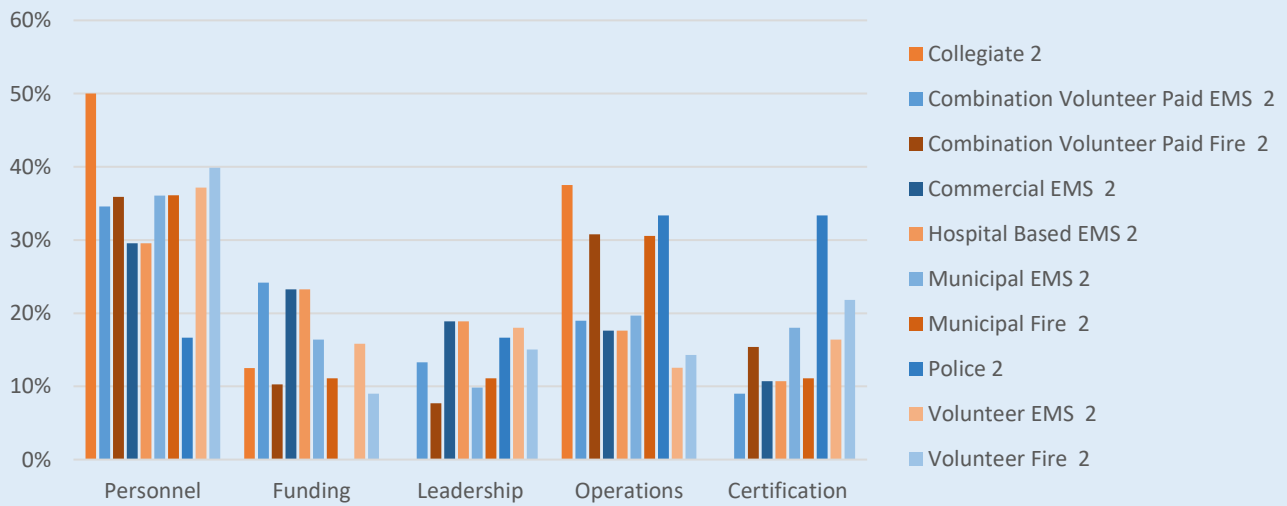
Certification. For a list of representative sub-types per category please see the attached chart. The subgroup then created tables and subsequent graphs based on the counts within the free-text categories against check-box disclosures (see graphs). The subgroup identified primary, secondary, and tertiary challenges by agency position. Further, the subgroup identified primary, secondary, and tertiary challenges by challenge, and by solution based on agency type (see graphs). Very clearly, it appears that the current primary challenge among all agency types is ‘staffing’, and the current primary solution to this challenge is ‘funding’.



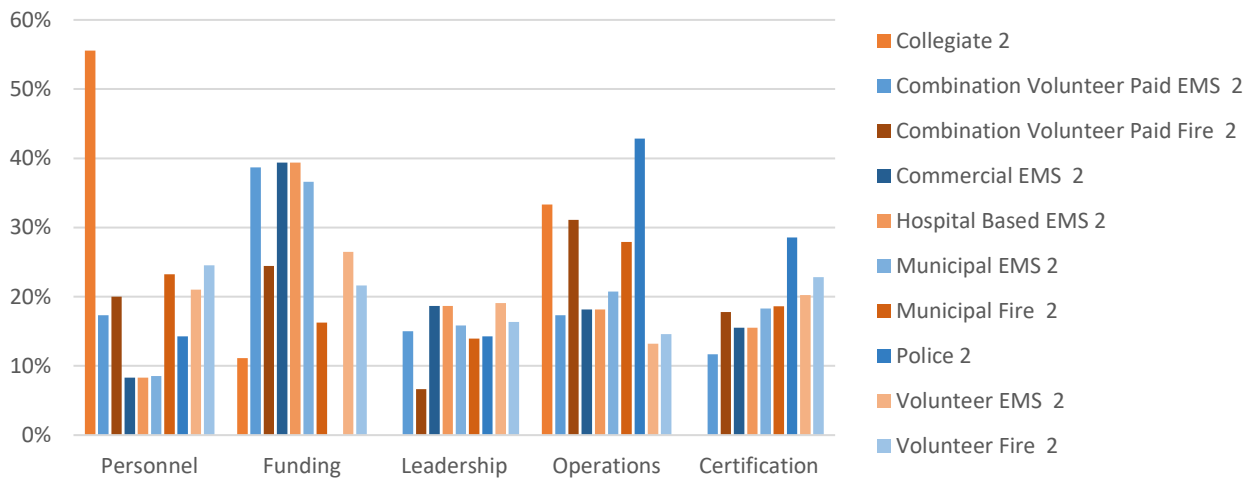
Primary EMS Challenges based on **Solution**, NYS 2022, n=1227



Secondary EMS Challenges based on **Challenge**, NYS 2022, n=1227



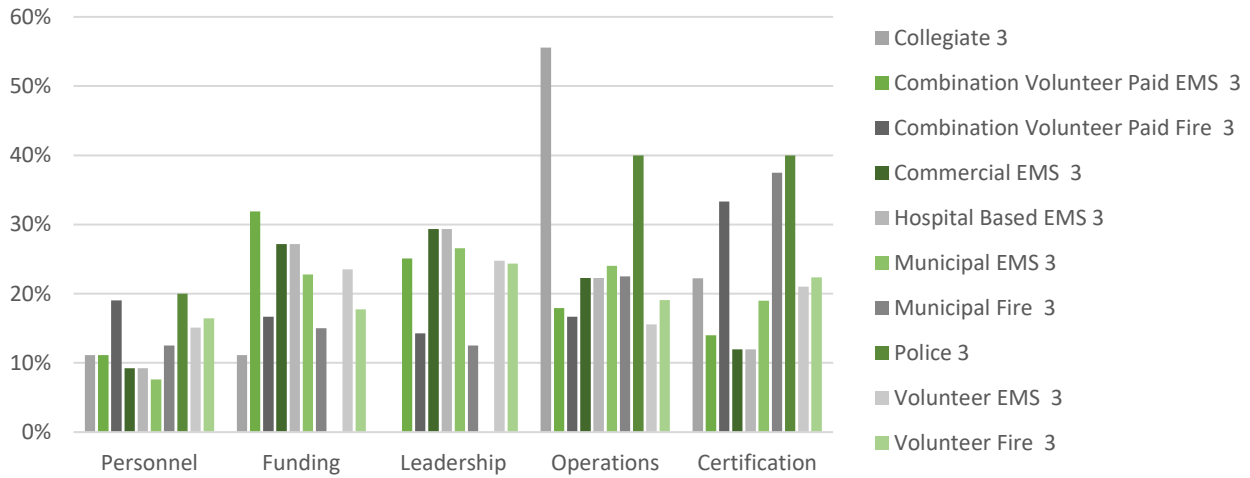
Secondary EMS Challenges based on **Solution**, NYS 2022, n=1227



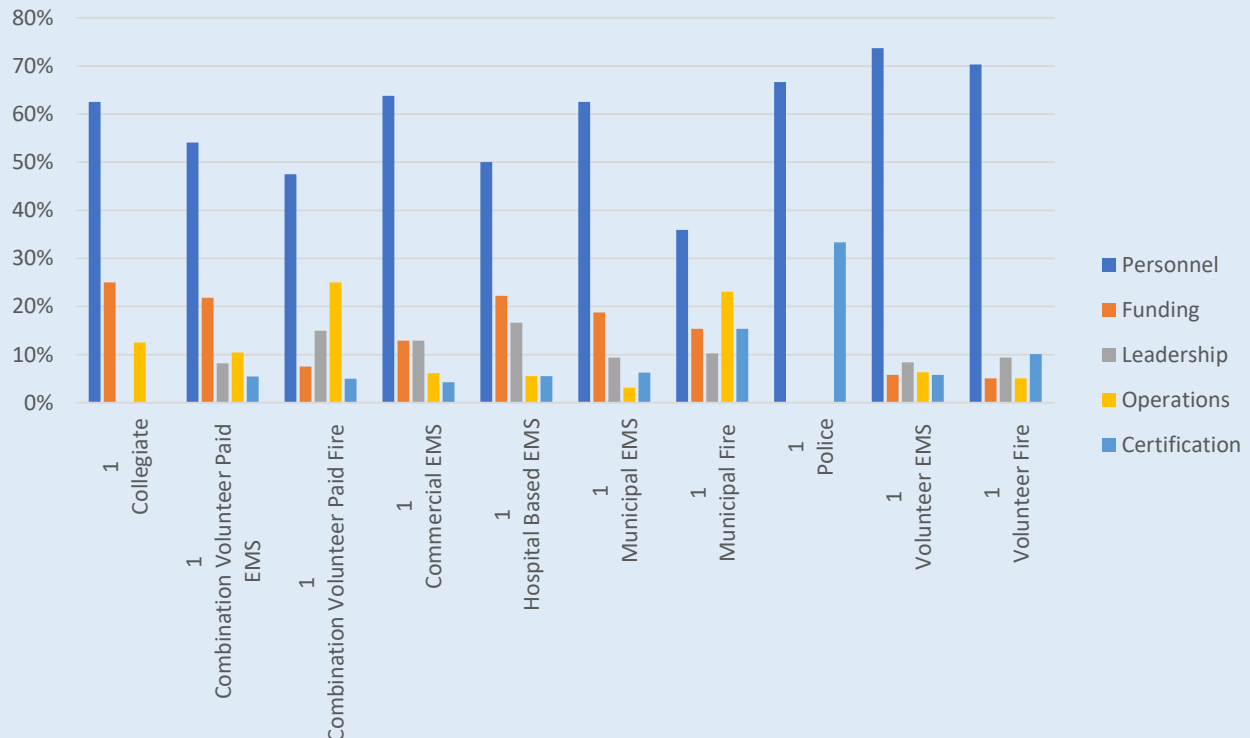
Tertiary EMS Challenges based on **Challenge**, NYS 2022, n=1227



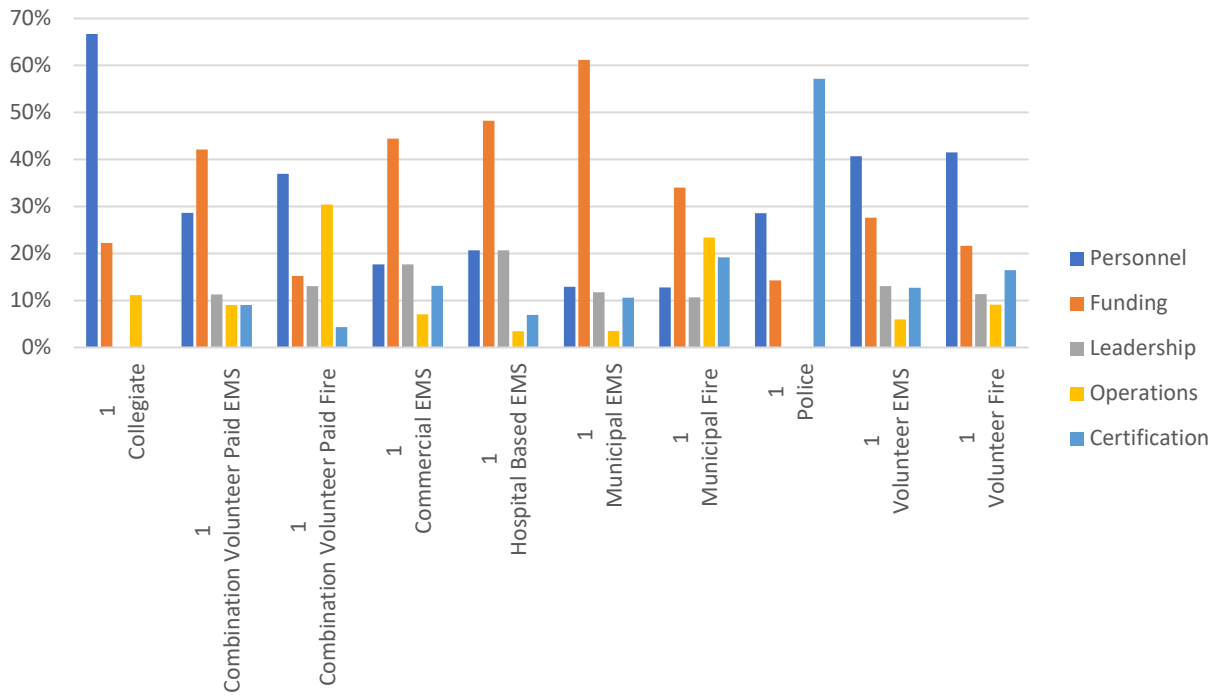
Tertiary EMS Challenges based on **Solution**, NYS 2022, n=1227



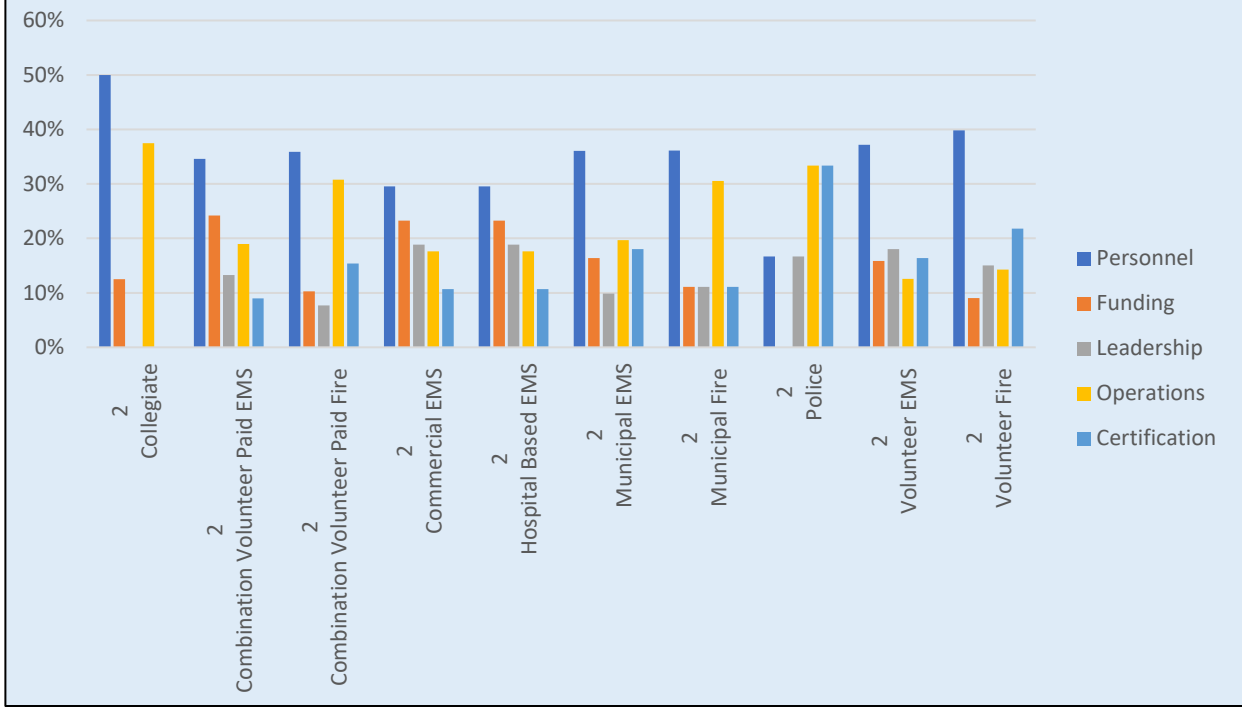
Primary EMS Challenge Areas based on **Challenge**, by Agency Type, NYS 2022, n=1227



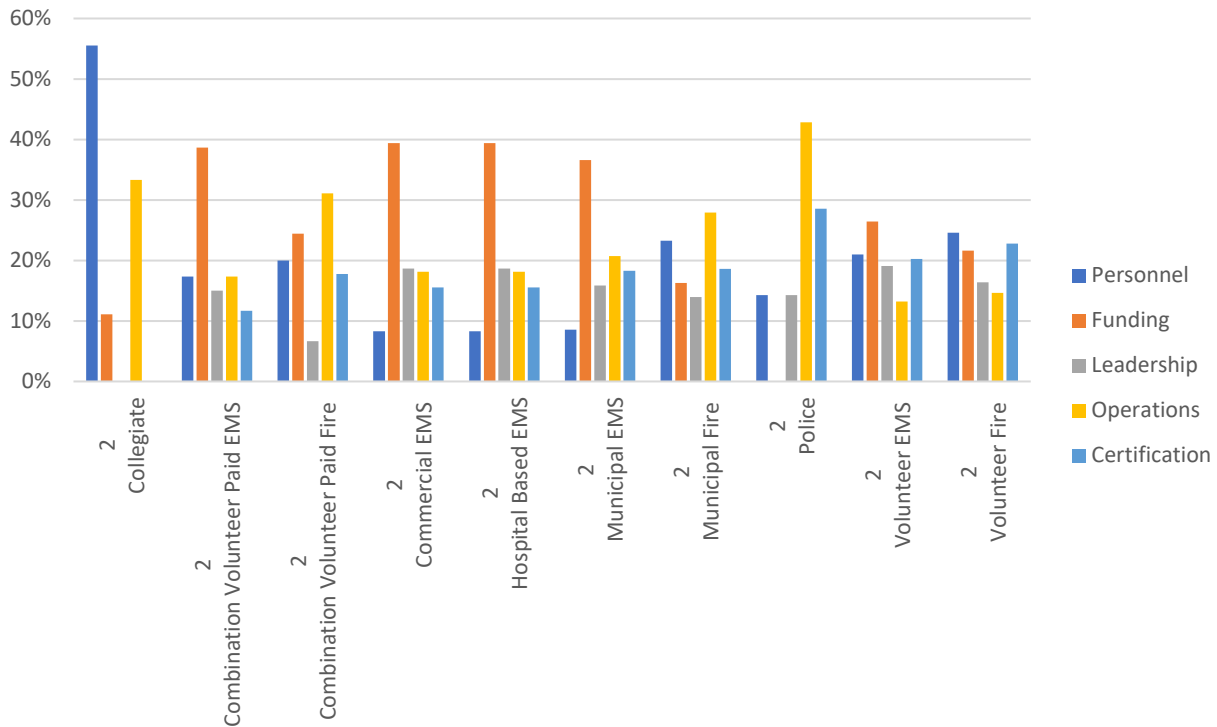
Primary EMS Challenge Areas based on **Solution**, by Agency Type, NYS 2022, n=1227



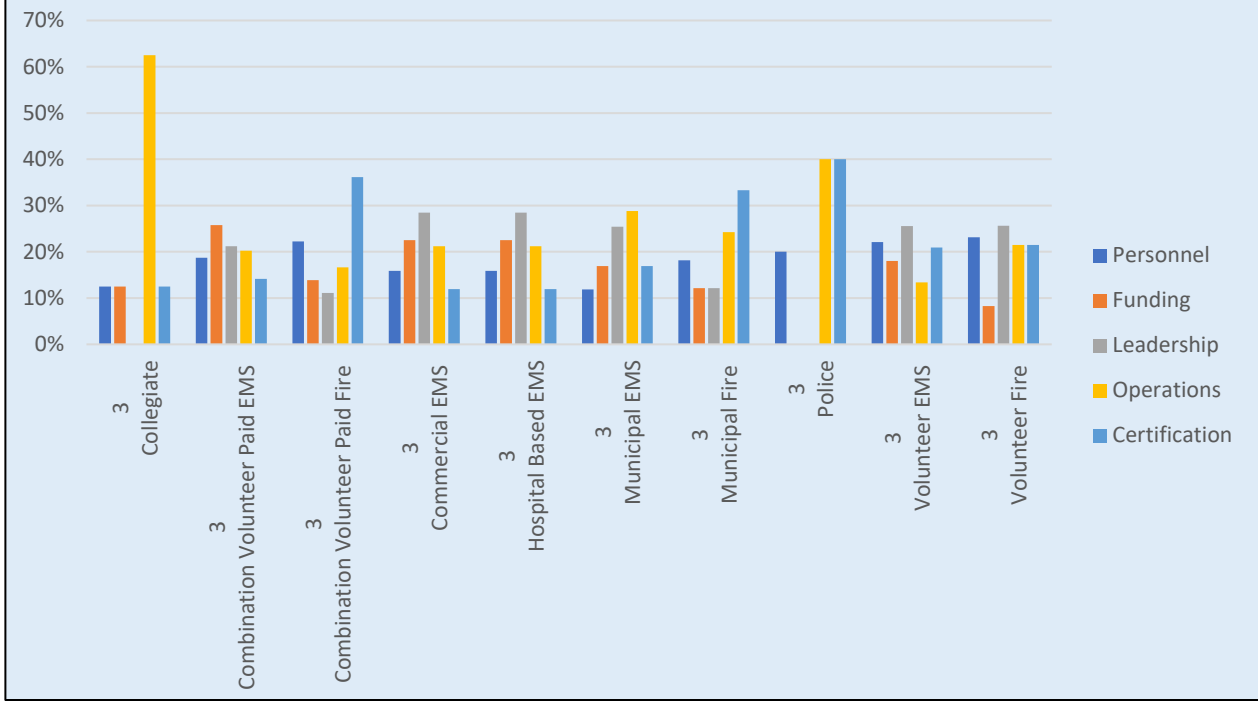
Secondary EMS Challenge Areas based on **Challenge**, by Agency Type, NYS 2022, n=1227



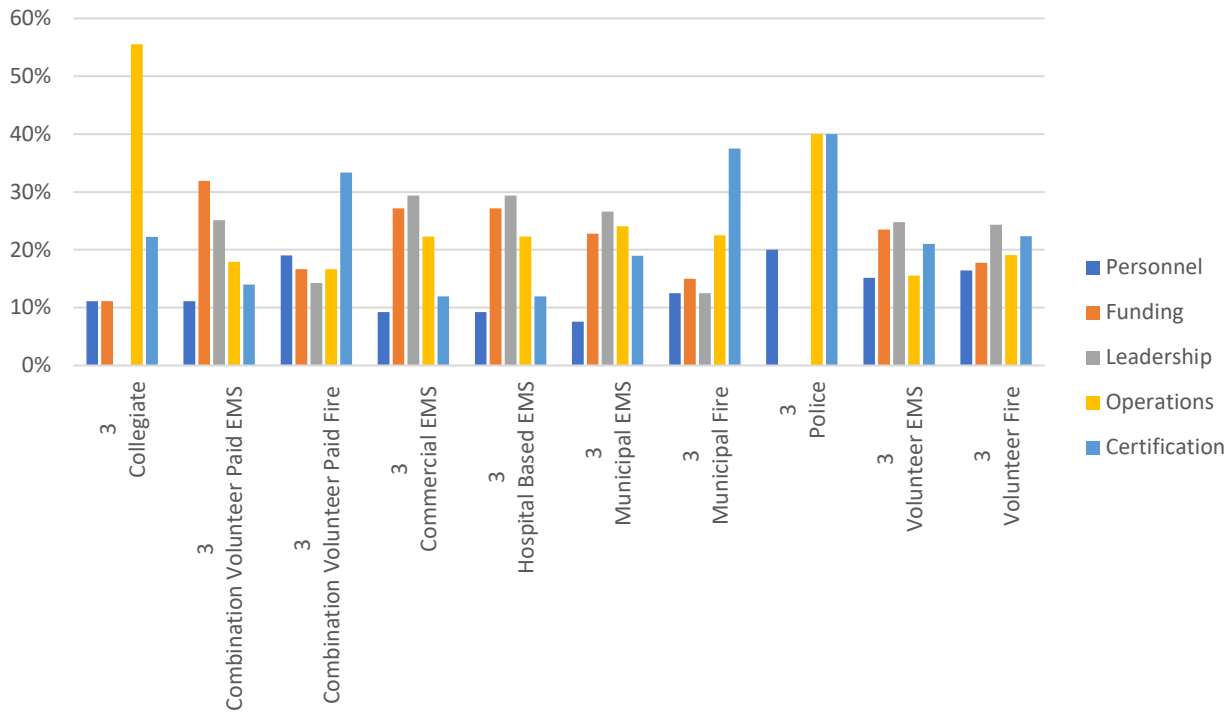
Secondary EMS Challenge Areas based on **Solution**, by Agency Type, NYS 2022, n=1227



Tertiary EMS Challenge Areas based on **Challenge**, by Agency Type, NYS 2022, n=1227



Tertiary EMS Challenge Areas based on **Solution**, by Agency Type, NYS 2022, n=1227



Recommendations

The current state of EMS in the Nation is in crisis, with many factors and issues that have been overdue to correct, causing the convoluted and archaic system that is crumbling. Through many issues like provider burnout, excessive use of mutual aid and difficulty handling primary calls, to a severe lack in funding and understanding of the entire EMS career and community. This has led to years of struggling to get by with little training and leadership requirements, allowing the system to decay further. Agencies that are unable to staff due to the ever-decreasing number of EMS professionals, have caused other agencies to cover the shortcomings which creates a trickle-down effect of call coverage issues, and eventually there will be no agency left when assistance is needed. There are few requirements to hold agencies accountable to the community or to the State Licensing program for maintaining the agency Certification making it difficult to hold agencies accountable as well as allowing multiple agencies to collaborate and overlap to provide additional coverage.

EMS not being named an essential service is a significant challenge for agencies to justify the cost of readiness or staffing measures to meet the needs of emergency and non-emergency calls for service. The cost of staffing to provide services is a growing concern for many agencies and municipalities who are not considered an essential service, meaning there does not have to be tax support for agencies who provide services to the community, relying on funding sources elsewhere. This restricts agencies from paying wages that could bring in additional personnel to help with the shortage of providers, but also not allowing agencies to offer career development and benefits that would promote longevity in a service environment that is needed. Many agencies are unable to offer retirement benefits and struggle to offer any additional benefits to providers.

One of the largest hurdles in the EMS system is that without additional funding and recognition as a mandated and funded service, there will be a continued decay of agency and professional standards. Without proper training and leadership, the mentality of “this is how it has always been done” will continue to hold the entire system from having the much-needed growth and development, also causing the continued burnout of the already depleted provider pool which causes hardship and moral issues in an agency. To say that every agency and every town needs to have a dedicated ambulance would also create a huge unnecessary system with unrealistic expectations. Allowing agencies to work together to provide collaboration and services in rural areas would create a consistent provision for services without unnecessary redundancy and additional cost of readiness. Requiring agencies to report to the public and municipalities that support them will reduce unnecessary spending and ensure proper utilization of funding, within the agreements of services that are required to be provided. Truly a paradigm shift is necessary. **We must all be a part of this change together as a unified group, gifted by the diversity among us and the strength such diversity brings to us to overcome the challenges we face.**

Many of the short-and long-term recommendations of the subgroup mirror those from NEMSAC’s report of three goals for EMS systems:

1. Improved coordination
2. Expanded Regionalization
3. Increased transparency and accountability

Comments in the Sustainability TAG’s survey and from agencies and providers around the state support such goals citing:

1. The need for accountability at the agency, local, regional, and state level
2. Responsibility of providers, agencies, regions, and the state
3. The use of performance standards for continued authority to operate

4. The need for agency leadership development and succession planning
5. The use of all BLS Adjuncts by all agencies (Aspirin, Naloxone, Albuterol, Epinephrine, Continuous Positive Airway Pressure (CPAP), transmitting EKGs)
6. Transparency of agency performance out in communities and the use of self-assessment tools to determine agency efficiencies, strengths, and challenges

Some short- and long-term solutions must be worked out with both immediate effect and additional longer-term sustainability, as do those goals above. These include:

1. Funding and making EMS a mandatory service
2. Recruitment and Retention of quality personnel in volunteer and career ranks
3. EMS Leadership development (current and future) and succession planning
4. Improved communication and the ability to work together among connected agents in the EMS system (PSAPs, Hospitals, Agencies, Coordinators at various levels, Educational Institutions, etc)
5. Developing a strengthened and less-isolated First Response System
6. Facilitating consolidation and mergers when necessary and appropriate

Explanation of Long-Term Recommendations

Recommendation 1 (staffing): Address morale and burnout through leadership development, culture change, better crew utilization, improved benefits, and educational opportunities.

Burnout was seen as a repetitive indication through the survey results. Burnout is difficult to define and additional research into this would be required to develop agency-level solutions to this

problem. Often burnout is interrelated with an agency culture. Some items that indicated burnout were things such as staging, no time for meals, no time to complete charts, no time for restocking, poor pay, poor benefits, and long consecutive hours. Staging is when an ambulance is moved from their station to another place to cover a greater area and provide a quicker response time. This is often referred to as system status management. This becomes an issue as ambulances often stage for long periods of time within the cab of the ambulance which can be uncomfortable.

The rapid pace of a high call volume area or crew relocation for system status management make mealtimes difficult. If a crew member packs their healthy meal and brings it to work with them, but never makes it back to their station, this could lead to either the crew member having to purchase something on the run or not eating for that shift. Charting time, time for restocking and decontamination are typically overlooked by administrators and not accurately factored into the unit hour of utilization. Unit hour utilization is the time that each unit and crew spend on task per hour.

Within the healthcare industry EMS workers are typically underpaid with poor benefits which leads to working long consecutive hours often at multiple jobs. Benefits are items such as health insurance, paid time off, uniform allowances, educational opportunities to retain certification, and retirement benefits. Often EMS workers must work at several agencies just to survive. Some agencies do not hire full time employees to avoid having to provide health insurance benefits. Things like this quickly leads to burnout and providers seeking other higher paying and better benefited opportunities in the healthcare field.

Morale was another common theme in the survey results. Morale can be closely linked with burnout. As a provider becomes burnt out, they tend to affect the morale and positive environment within the agency. Provider burnout and poor morale can spread through an agency like an incurable disease, and it must be recognized and dealt with immediately.

Leadership training and development would give leaders the tools they need to create a positive culture and reduce provider burnout.

Recommendation 2 (operations): Address the issues of overutilization of Mutual Aid by the BEMS holding EMS agencies accountable.

While there is no definition of mutual aid, mutual aid agreement is currently defined in Article 30 of the Public Health Law. There is also mention of mutual aid in General Municipal Law 209, and County Law 223.b.2. Mutual aid should be defined as organized coordinated, cooperative reciprocal mobilization of personnel, equipment, services, or facilities for back-up or support upon request pursuant to a written plan. Currently defined in Article 30 as "Mutual aid agreement" means a written agreement, entered into by two or more ambulance services or advanced life support first response services possessing valid ambulance service or advanced life support first response service certificates or statements of registration, for the organized, coordinated, and cooperative reciprocal mobilization of personnel, equipment, services, or facilities for back-up or support upon request as required pursuant to a written mutual aid plan. An ambulance service and advanced life support first response service may participate in one or more mutual aid agreements.

Mutual aid should be considered when the primary agency is currently on a call and cannot respond to another call within three minutes. It is important to note that mutual aid for an in-service agency be differentiated from an agency being out of service. If an agency is unable to field a first call within their primary response area, then that agency shall be deemed out of service. If an agency is out of service, they shall be reported to the DOH by their PSAP. Agencies shall not have to report out of service status to the NYSDOH if there are limited hours, seasonal or event services and these are defined in the agency's operating certificate. If an agency is not available for their first calls and they are out of service, this agency shall be investigated, and remedial actions will be taken by the Bureau of EMS.

Agencies should be made aware and agree to be part of another agency's mutual aid plan. This should be for routine and regular mutual aid use again, not for out of service ambulance coverage. These arrangements should be done in conjunction with the PSAP, so all involved can ensure that mutual aid is being used equitably.

A way to ensure that the community and agency leadership is aware of their performance is to report such items' performance publicly. The DOH should develop performance standards that are then vetted by local regions to account for variance in population density, geography, distance to hospitals, call volume, and other environmental and local factors.

Recommendation 3 (Staffing Standards): Address and enforce appropriate staffing standards and levels, and support agencies wishing to collaborate or consolidate.

The DOH is interested in helping to build up services not bring them down. Local, Regional, and State EMS Councils, and program agencies, in conjunction with the BEMS staff, should be utilized when issues arise and should be prepared to offer suggestions or advice to work through an agency's problems. All in-service standards, mutual aid standards, and guidelines for appropriate staffing levels must be developed, implemented and enforced by the DOH. An example of such a standard is the AHA rule of students to instructors.

In determining the appropriate staffing levels, the mental health of the provider needs to be considered. EMTs and Paramedics are working long hours without adequate sleep, nutrition and exercise, and are thus taxing their physical and emotional wellbeing. As we cannot anticipate the amount or type of calls they are going to be presented with, perhaps we can present a template of a "healthy" workforce.

The DOH shall also be supportive and able to provide advice to agencies that either wish to or be required to collaborate or consolidate with another agency. The DOH will have the ability to remove an agency operating certificate if they do

not meet the established standards of operation. There should be governmental incentives for these efforts.

Recommendation 4 (Financing): Address EMS system funding by improving reimbursement for cost of readiness versus cost of vehicle transport to the hospital.

While there are many funding streams based on an agency's base type, an improvement in the availability of funds for readiness, for all agencies, is necessary. These can be in the form of grant opportunities, direct billing and payment, increased reimbursement from insurance companies, tax districts, contractual services, etc...

Ambulance services are funded in a number of different ways. For example, a not-for-profit ambulance service may be funded via a governmental tax district, governmental general funds, insurance billing revenues or fundraising, or it may be any or all of those. Municipal ambulance services are funded by the government and insurance billing revenue. Fire District ambulance services are funded similarly as the municipal services but the tax funding comes from fire service taxes. Each all-volunteer ambulance is funded differently. They are able to utilize the same revenue streams as the not-for-profit service. For profit ambulance services are usually funded through billings revenues and contracts for service. Funding streams vary for each agency. These mirror NEMSAC's funding shortfall reasons:

1. EMS is not considered essential and therefore not required to be provided
2. Insurance reimbursement is based on transport and not on services provided
3. Underfunded and inadequate insurance reimbursement rates
4. Funding in a fee for service model instead of a readiness model
5. Widely varied or complete lack of local government subsidy
6. Federal, State, and local grant restrictions based on agency type

7. Uncompensated / charity care provided by EMS agencies is double that of other healthcare provider groups

8. Lack of offset funding for uncompensated / charity care

All constituents must work collectively to reverse these reasons.

Recommendation 5 (Retirement): Assist EMS providers in being able to save for retirement similarly to other uniformed or mandatory services and offer tax relief incentives.

EMS providers (generally) do not have the ability to cover daily costs and must work several different jobs to make ends meet, not including the costs of planning for retirement. Many providers must work well into retirement years or transition to other jobs that provide both livable salaries and savings options and opportunities.

Assist EMS providers, both publicly and privately employed, to be able to fully access retirement programs with an early retirement option, health insurance and other benefits and give tax relief to employers and volunteers that already have existing plans. Dollars spent by the state to bolster these programs should be earmarked for these benefits.

Recommendation 6 (Leadership Training): Establish and develop leadership requirements and training programs.

Similar to police and fire departments, there needs to be a recognized, detailed, statewide officer / leadership development program for all sectors. This program would include a description of the qualifications for each position or rank, and the necessary training or certifications for promotional eligibility. Such programs could be in a variety of venues or delivery schemes, and need to encompass all facets of supervision, management, and administration, and be inclusive of Federal and State regulations, rules, laws, policies and procedures. The program could be modeled after current programs in other public safety institutions. Additionally, the DOH should create

a leadership bridge program to assist those already in such positions. Such education should come before a promotion.

Recommendation 7 (Promote Consensus):

In many ways we are a disparate group by our base organization types, yet similar in the common goal of taking care of other people in need. We need to have one voice in addressing our ability to do just that, with consensus among all involved in those components that will propel EMS forward. We must do so by capitalizing collectively on our strengths to overcome our challenges. This must be done at every level and in every organization.

Education Subgroup

Improving access to consistent, high-quality education will stabilize the EMS workforce in the long term.

Historical Context

EMS has experienced one of the most radical changes from the official beginning with the report “Accidental Death and Disability: The Neglected Disease of Modern Society,”¹ to the modern age of EMS delivery. The earliest ambulances are as far from modern ambulances as horse drawn carts are to F1 racecars. Modern EMS delivers initial treatment and intervention on par with Emergency Departments, literally bringing the Emergency Department to the patient.

The motto of, “you call, we haul,” was an apt description of the first services offered. Volunteers staffed hearses, loaded sick or injured patients, and transported to the nearest hospital. Minimal to no attempts at treatment were made, and the focus was on transport. There was no standard of care, education system, or certification requirements. The Ambulance Association of America was quoted in 1972, “Possibly as many as 25,000 persons a year may be permanently disabled due to mishandling by poorly trained ambulance personnel.”²

A task force by Lyndon B. Johnson recommended the creation of a national certification agency to establish uniform standards for training and testing of EMS personnel. In 1970 a task force was created to begin the process of creating said standard. However, it was dissolved after 3 meetings and transformed into the National Registry of Emergency Medical Technicians.³

Education continued to evolve; however, it was not consistent across the nation. This led to many problems including lack of professional mobility, inconsistent standards, and lack of reciprocity for providers. In 2000 the “EMS Agenda for the Future,”⁴ and, “EMS Education Agenda for the

Future: a Systems Approach,”⁵ led to the creation of a “National EMS Scope of Practice Model.”⁶ The goal was to rectify the problems created by previous inconsistencies.

Issue # 1 Course Sponsors and CIC’s. While education standardization and certification testing have improved the quality of care delivered by EMS professionals, access to education, especially in rural environments is limited. Discussions within the industry of requiring degrees for paramedics could worsen the problem⁷.

Discussion. New York State EMS education happens through Course Sponsors and are the only avenue for EMS education in the State⁸. Further the classes can only be taught by a Certified Instructor Coordinator (CIC). In many rural counties, there are a lack of active CICs, leading to a shortage of EMS classes in those areas. Neither course sponsors nor CICs are actively recruited or sought. The current design hinders the abilities of programs to cultivate their own instructors from experienced personnel who don’t have the time or ability to complete the entire CIC process.

There are a variety of other influencing factors within education, many addressed in other parts of this paper that include lack of volunteers or personnel to send to an educational program, financial ability of agencies to sponsor personnel, time commitments for personnel and education. The scope of this section will remain focused on access to education.

There is significant room for improvement for access to education. Some solutions will not require an increase in funding but simply reallocate existing money to focus on producing quality education. While initially a potential hardship to new students bearing the financial burden, it will produce parity with other Allied Health Professionals, and can be used as leverage in other aspects of EMS such as reimbursement rates, pay, and others.

Recommendations

1. The most immediate problems are lack of CICs, available classes, as well as

financial struggles of Course Sponsors. There are two potential solutions to this problem. First, consolidate Course Sponsors across the state with an emphasis on improving student enrollment numbers in classes and increased offerings by combining resources. Course Sponsors should not be a competitive endeavor for profit. Resources used by Course Sponsors to aggressively advertise and subvert other Course Sponsors should be solely focused on improving education access and quality.

2. Remove student reimbursement and reallocate the funding to focus on supporting Course Sponsors that teach classes with reimbursement based on classes offered and percentage of successful certification. While this does shift the financial burden to the prospective EMS provider, this is standard practice for other Allied Health careers such as CNA, LPN, and others. Studies consistently show that higher budgets and more spending in education improve outcomes, especially in lower income students^{9, 10, 11}.
3. Active cultivation of CICs is paramount. Some process improvements of obtaining ones CIC, such as eliminating the CLI internship, active placement with CIC trainers, and extending time frame for internships, especially in rural areas with low class volume can significantly improve the number of qualified and active CICs. Improving CIC pay through shift of reimbursement mentioned above will increase activity as well.
4. Further, an advanced standing system or similar should be implemented to facilitate licensed teachers becoming CICs. As most of the CIC process is learning material that is already well understood by a licensed teacher, a focus on DOH policies and EMS specific education is warranted. This will

significantly reduce the time it takes to bring a qualified educator online as a CIC.

Issue #2 Degree programs, Certification vs Licensure, and class delivery methods. In order to obtain a thorough understanding of the following topics on degree programs and certification vs. licensure, and class delivery methods the following definitions will prove helpful.

Definitions

Associate degree: a degree that is given to a student who has completed two years of study at a junior college, college, or university in the U.S. (sometimes written as “associate’s degree,” and in the context of this paper, typically refers to an Associate of Applied Science, or A.A.S.)

Asynchronous instruction/learning: An instructional method that allows the learner to use a self-directed and self-paced learning format to move through the content of the course. In this type of instruction, learner-to-learner and learner-to-instructor interactions are independent of time and place. Communications and submission of work typically follow a schedule while learners and instructors do not interact at the same time.

Bachelor’s degree: a degree that is given to a student by a college or university usually after four years of study (in this context, typically Bachelor of Science, or B.S. Used interchangeably with baccalaureate degree)

Blended learning: generally applied to the practice of using both online and in-person learning experiences when teaching students. In a blended-learning course, for example, students might attend a class taught by a teacher in a traditional classroom setting, while also independently completing online components of the course outside of the classroom. In this case, in-class time may be either replaced or supplemented by online learning experiences, and students would learn about the same topics online as they do in class. Also called hybrid learning and mixed-mode learning.

Certification: The issuing of a certificate by a private agency based upon competency standards adopted by that agency and met by the individual

Distributive education: A generic term used to describe a variety of learning delivery methods that attempt to accommodate a geographical separation (at least for some of the time) of the instructor and learners. Distributed education includes computer and web-based instruction, distance learning through television or video, web-based seminars, video conferencing, and electronic and traditional educational models.

Doctor: a person who has earned one of the highest academic degrees conferred by a university (in this context, can refer to a Doctor of Philosophy or PhD, Doctor of Medicine or MD, Doctor of Osteopathy or DO, or other field. Often used interchangeably with doctorate: the degree, title, or rank of a doctor).

Expanded Learning: any educational program or strategy intended to increase the amount of time students are learning, especially for the purposes of improving academic achievement and test scores, or reducing learning loss, learning gaps, and achievement gaps. Also called extended learning time

Licensure: The act of granting an entity permission to do something that the entity could not legally do without such permission. Licensing is generally viewed by legislative bodies as a regulatory effort to protect the public from potential harm. In the health care delivery system, an individual who is licensed tends to enjoy a certain amount of autonomy in delivering health care services. Conversely, the licensed individual must satisfy ongoing requirements that ensure certain minimum levels of expertise. A license is generally considered a privilege, not a right.

In-person learning: any form of instructional interaction that occurs “in person” and in real time between teachers and students or among colleagues and peers. Before the advent of audio, video, and internet technologies that allowed people to interact from different locations and at different times, all instructional interactions

occurred, by necessity, in the same place and at the same time. Also called traditional or face-to-face learning.

Master's degree: a degree that is given to a student by a college or university usually after one or two years of additional study following a B.S. degree (in this context, typically Master of Science, or MS)

Personalized learning: Refers to a diverse variety of educational programs, learning experiences, instructional approaches, and academic-support strategies that are intended to address the distinct learning needs, interests, aspirations, or cultural backgrounds of individual students.

Synchronous instruction: Instructional method whereby learners and instructors interact at the same time, either in the classroom or via a computer driven course. This method allows for more immediate learner guidance and feedback using face-to-face, instant text-based messaging, or real time voice communications.

Discussion:

Degree Requirements - Associate Degree

In “Joint Position Statement on Degree Requirements for Paramedics”, Caffrey, SM, et al. published a position statement for the National EMS Management Association (NEMSMA), the National Association of EMS Educators (NAEMSE), and the International Association of Flight and Critical Care Paramedics (IAFCCP), collectively known as “the associations” and state that:

It is the position of [the associations] that the time has come for paramedicine to join the community of health professions that require a college degree. We believe that a two-year associate’s degree is the appropriate entry level of education for practitioners at the current paramedic level. In addition, we believe that paramedics involved in specialized practice, such as flight paramedics and community paramedics, among others, should be required to complete upper

level undergraduate coursework up to and including a bachelor's degree as a prerequisite to specialty certification. These requirements should apply to paramedics entering our profession and we recommend the EMS community within the United States enact such requirements by 2025.

This position is justified by evidence that indicates paramedics, if well trained, can play a key role in directing patients to the most appropriate and highest value care. Additionally, EMS has become increasingly complex and future paramedics are going to be required to not only exercise high level technical skill, but must also master written and oral communications skills, provide EMS team leadership, and interact with an increasingly complex interdisciplinary and interprofessional healthcare system with rapidly evolving technologies. (Caffrey, 2019)

Within the United States, many clinical allied health professions require at least an A.A.S. degree including registered nurses. Literature from the nursing profession has demonstrated that increased educational preparation can lead to improved outcomes. Furthermore, nursing, medicine, and many allied health professions have demonstrated that the enactment of degree requirements is both possible and beneficial to the work force over time. (Caffrey, 2019)

Per Caffrey, et al., the associations recognize that this position represents a significant step for the profession that demands thoughtful implementation and suggest:

1. The National EMS Scope of Practice Model and the National EMS Education Standards should continue to be used as the basis of paramedic education.
2. Consensus among the EMS educational community on the elements of appropriate degree programs for paramedics should be developed through an effort led by NAEMSE.
3. EMS employers and NEMSMA members should lead this effort by immediately adopting "degree required"

4. Degree requirements should be established by CoAEMSP and NREMT as a condition of educational Program accreditation and national provider certification by 2025.
5. Paramedic specialty certification boards (i.e., the International Board of Specialty Certification (IBSC)) should establish educational requirements at the upper level undergraduate level (post-A.A.S. degree) as a condition of specialty certification by 2025.
6. Following the lead of Kansas and Oregon, state requirements for new paramedics to hold A.A.S. degrees should be established within statute or regulation as state-level political conditions allow.

Per Caffrey, et al., the associations also provide the following additional considerations:

1. The transition to the new requirements should be specifically applied only to new paramedics as of a specified date.
2. Currently licensed paramedics should not be required to retroactively obtain a degree or be made to undergo substantial transition education.
3. Maintaining a certificate or technician level provider option should be seriously considered by the national EMS community, certificate level provider of this type may be particularly useful to rural, volunteer, and non-transport services.
4. Institutions of Higher education should be encouraged to experiment with B.S. and/or M.S. level programs such as those currently being developed internationally.

The Technical Advisory Group's survey results (n = 958), as shown on table 1, tend to agree with the findings of Caffrey et al.

- 95.9% of respondents state that CFRs should have no degree requirement (n = 919) with 3.9% stating that CFRs should have an A.A.S. or B.S. (n = 38),

- 79.2% of respondents state that EMTs should have no degree requirement (n = 759) with 20.6% stating that EMTs should have an A.A.S. or B.S. (n = 197),
- 65.4% of respondents state that AEMTs should have no degree requirement (n = 627) with 34.0% stating that AEMTs should have an A.A.S. or B.S. (n = 326).
- There is less consensus on the degree requirement Paramedics with 37.6% (n = 360) for no degree requirement, and 59.9% (n = 574) voting in favor of an A.A.S. or B.S. minimum. These results show a significant preference for minimum degree requirements for Paramedics when compared to the lower levels of prehospital care. Graduate degrees, such as master’s or doctorates, were disregarded as being out of bounds for the purposes of this survey (n = 1 for CFRs, 2 for EMTs, 5 for AEMTs, and 24 for Paramedics)

Degree Requirements - Baccalaureate Degree

The previous section discusses the importance of an A.A.S. level minimum for newly certified Paramedics, but there is also a growing body of evidence supporting a baccalaureate degree for EMS providers. One study noted that paramedics who held degrees, although not EMS degrees specifically, were better able to calculate drug dosages than nondegree paramedics. There is also evidence that students who attend an accredited program are more likely to pass the National Registry of EMT-Paramedic exam, and by extension, are better prepared for roles as field clinicians. (Hubble, 2007)

Leggio, et al. discuss how EMS has served an increasingly broad clinical role to meet the health care and public health needs of communities, a role solidified by the events of 2020 and how the requisite knowledge, awareness, and competencies to adequately prepare EMS clinicians to meet these dynamic roles remains absent from the technician- focused EMS curricula. The Education Committee of the National Association of EMS Physicians

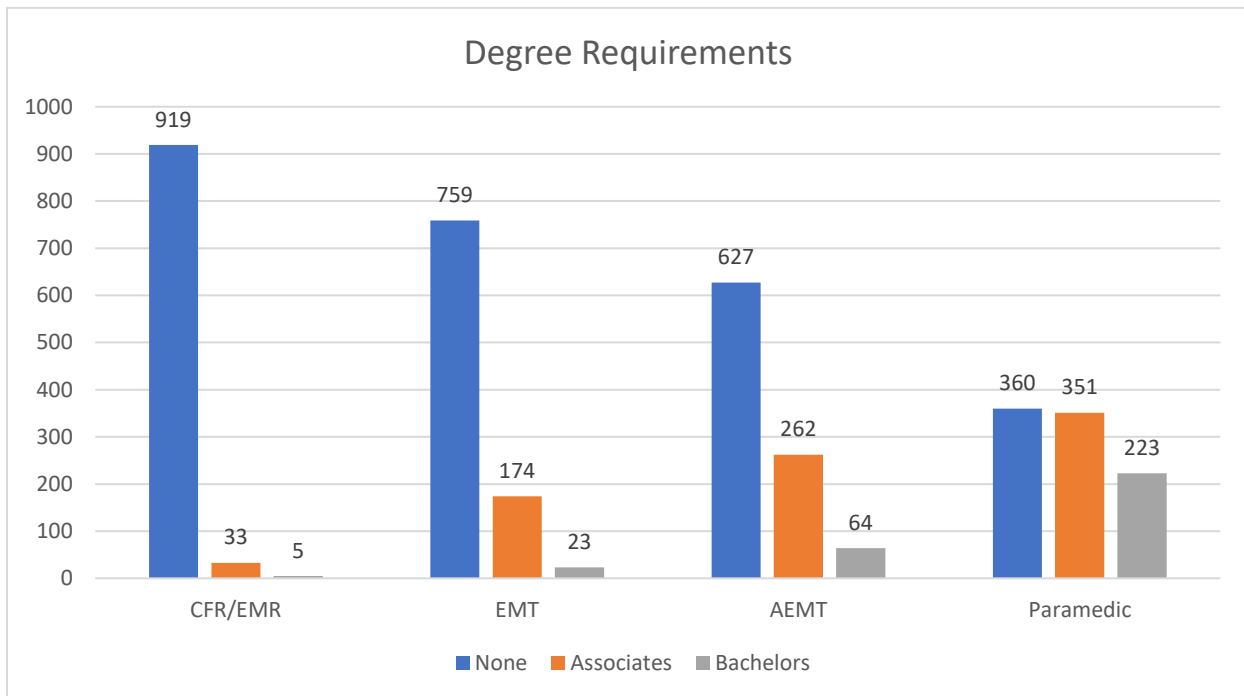


Table 1: Survey results for CFR, EMT, AEMT, and Paramedic Degree Requirements

(NAEMSP) believes that graduates of EMS programs must now meet the rigors of EMS practice as clinicians, being prepared for higher

order thinking and lifelong learning. They recommend:

- Clinical decision making grounded in higher order thinking skills and evidence-based practice is fundamental to the provision of optimal patient care in the out-of-hospital environment.
- EMS curricula must expand beyond core content required for the scope of practice at each level for technical skills and focus on developing a competency framework aligned with the role and need for EMS medicine as a versatile community health care resource. A comprehensive curriculum for EMS clinicians should align with the vision outlined by EMS Agenda 2050 by addressing the following areas:
 - Public health & epidemiology
 - Social determinants of health
 - Social equity and bias
 - Mental & behavioral health
 - Culture of safety and human factors science
- Quality improvement
- Health care business & finance
- Leadership and change management
- Evidence-based practice
- Effective communication skills

- The depth and breadth of the additional content should increase along each level of licensure, which supports the formation and maturation of a clinician. At the paramedic level, this supports an academic and interprofessional approach in forming the degreed paramedic clinician.

The provision of out-of-hospital care encompasses more than traditional emergency transport. Modern day EMS personnel function as clinicians rather than technicians. Technicians are strictly protocol driven, thinking in terms of “if-then” logic that lacks adaptability. Clinicians understand the “why” and acknowledge complexities; they gather, evaluate, and apply information with consideration to patient benefit. The clinician role requires knowledge beyond pathophysiology and protocol; it requires effective communication skills, understanding of situational dynamics, and the ability to incorporate new information and apply best evidence. The education of EMS clinicians must therefore extend beyond technician-focus EMS curricula to prepare them for their increasingly broad clinical roles as medical professionals. (Leggio. 2021)

The ability to prioritize interventions is a distinctly different skill than performing the interventions themselves and is part of what distinguishes EMS clinicians from technicians. Optimizing patient outcomes requires understanding and acceptance of evidence-based practice; examples include identification of rapid transport to a trauma center as a priority before intravenous access, optimizing phases of care to minimize time to reperfusion for stroke and STEMI, prioritizing on-scene resuscitation for the majority of patients in cardiac arrest, and honoring patient values when resuscitation is not desired. (Leggio. 2021)

In addition to the perceived clinical advantages of EMS degrees, degree programs also prepare the future generation of EMS leaders including researchers, administrators, educators, advanced practice clinicians (Critical Care Paramedics, Flight Paramedics, Community Paramedics, etc.).

To achieve these goals, the curriculum requires two years of general education and preprofessional coursework followed by two years of the paramedic core curriculum and area of concentration. (Hubble, 2007) It is the position of the National Association of EMS Educators (NAEMSE) is that Critical Care Paramedicine is a specialty area of EMS practice that includes a B.S. degree amongst other requirements. (Stuhlmiller, 2019)

The general education component of a baccalaureate degree helps develops skills in writing, thinking, and analyzing. The science classes include upper level courses similar to pre-medicine concentrations, and the management classes prepares graduates to assume management roles and incorporates courses in business administration and organizational leadership. Students can also be introduced to epidemiology, injury and illness prevention, and occupational health. A baccalaureate student would also benefit from an extensive and robust clinical program that includes additional clinical rotations through various hospital departments and ambulance apprenticeships. (Hubble, 2007)

The US Fire Administration’s Fire and Emergency Services Higher Education model course provides an example of a robust national model curriculum of fire-related and EMS management courses for colleges and universities to adopt as their own. These courses were produced, through consensus, as a standardized undergraduate curriculum that is national in scope, content, and outcomes. It outlines and provides recommendations for a baccalaureate degree in EMS including six core courses and six non-core courses that can be offered as core and/or electives and should be consulted when designing baccalaureate programs in EMS.

Recommendations: Degree Requirements

The Educational Subgroup agrees with the associations in the position statement of Caffrey et al. and believe the time is overdue to offer the high-level paramedic practitioners within our

field the opportunity to be recognized as degreed medical professionals. While this does not take away from the professionalism of providers at all levels, it does create pathways necessary for future generations of paramedics to succeed and excel in an increasingly complex healthcare environment and can lead to increases of parity in esteem from other healthcare providers as well as salary.

Through consensus, the Educational Subgroup recommends that all newly credentialed Paramedics in New York State, effective 2025, should have a minimum of an A.A.S. degree in paramedicine.

We also recommend that as a best practice, field supervisors and advanced practice clinicians (Critical Care Paramedics, Flight Paramedics, Community Paramedics, etc.) should have a minimum of a B.S. in paramedicine or a related field, and that EMS leaders including administrators, managers, researchers, educators should have graduate level degrees as appropriate.

1. Access to EMS Education and Class Models

One perceived barrier to EMS education is access. Tables 2 and 3 show the Technical Advisory Group’s survey results (n = 886) shows 73.7% of respondents traveled fewer than 20 miles for their original EMT course (0-10 miles n=346, 11-20 miles n=307), 20.7% of respondents indicated traveling 21-40 miles

(n=184), and 3.3% of respondents indicated traveling more than 40 miles (61-80 miles n=18, 80-100 miles n=10, and >100 miles n=1).

Recertification courses (n=661) have a similar distribution with 72.6% of respondents indicating traveling fewer than 20 miles (none/online n=200, 0-10 miles n=280, 11-20 miles n=0), 24.1% of respondents indicated traveling 21-40 miles (n=159), and 3.6% of respondents indicated traveling more than 40 miles (61-80 miles n=12, 80-100 miles n=10, and >100 miles n=0).

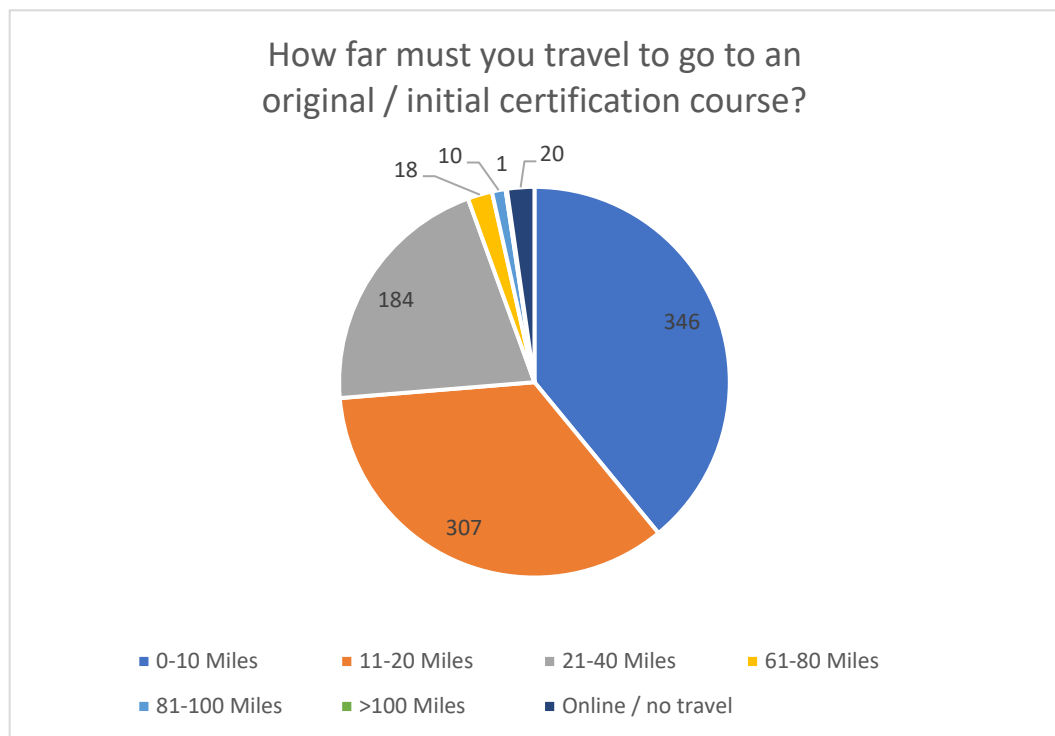


Table 2: Survey results for travel distance for an original certification course

How far must you travel to go to a re-certification course?

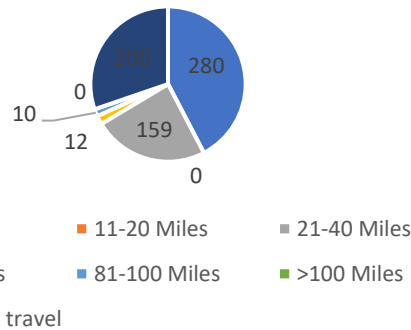


Table 3: Survey results for travel distance for re-certification courses

While these results indicate an overall good access to courses, especially continuing education, they do not offer insight into other potential barriers to education. EMS students, especially those seeking higher levels of care, can often be described as “nontraditional” students, who tend to be older and more established than “traditional” college aged students or have had a period of time in between portions of their education.

Nontraditional students often are faced with the challenges of achieving their educational goals while trying to balance the responsibilities of a job and supporting a family. Nontraditional students need flexibility to work around their varied schedules and added academic workload. These students benefit from blended learning, or the practice of using both synchronous and asynchronous learning experiences when

teaching students. Lastly, using distance learning technologies will enable EMS personnel to access the educational programs without displacing them from the communities in which they serve. (Hubble 2007).

Table 4 shows the Technical Advisory Group’s survey results (n = 958) for which style of course providers would be most interested in taking. 52.3% of

respondents (n=501) indicated that they prefer a hybrid style course, 31.6% of respondents (n=303) prefer a traditional style course, and 16.1% of respondents (n=104) prefer an intensive academy style.

As a provider, which style of course would you be most interested in taking?

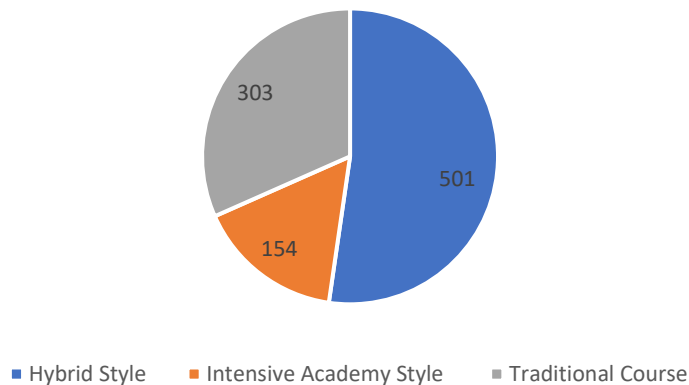


Table 4: Survey results for which style of course providers would be most interested in taking

For an EMT original course, an intensive academy style would consist of an approximately 40 hours per week course, running approximately 4 weeks in duration to cover the entirety of the 150-180 hour curriculum. This style has its own

distinct advantages and disadvantages, and is ideal for students with fewer outside responsibilities, especially those who are receiving this training as part of a job requirement and are being financially compensated for their time.

EMS curricula have a significant clinical portion which must be done in person, whether in classroom, laboratory, or hospital, clinic, or field. However, the didactic portions can be done in a more personalized or blended format as a combination of synchronous, asynchronous, in person, and remote learning with and expanded learning for remediation as necessary. These changes will allow for greater flexibility in course administration and increased student access when compared to a more traditional, strictly in person paradigm.

A best practice to increase student access would be to substitute mandatory in person lectures with asynchronous, remote assignments that can cover the same material. These assignments can include reading assignments, interactive review activities, adaptive quizzes (a formative assessment tool that serves up personalized questions to help students to study more effectively in their courses and for high-stakes exams such as the NYS or National Registry Paramedic exam) or more traditional online examinations. These can all be completed at the students' convenience, but also within established due dates, with the lead instructor acting more as a "guide on the side" than a "sage on the stage."

2. Licensure vs Certification

The National Highway Traffic Safety Administration's 2021 National Emergency Medical Services Education Standards and NAEMT's Legal Differences Between Certification and Licensure both differentiate between the legal definitions of certification and licensure. Both state that certifications are granted by a private agency based upon competency standards adopted by that agency and met by the individual, and licenses are

granted by a governmental body to practice a profession within a designated scope of practice. Under this system, the tasks and function or scope of practice of a profession and provide that these tasks may be legally performed only by those who are licensed. NAEMT argues that "regardless of what descriptive title is used by a state agency, if an occupation has a statutorily or regulatorily defined scope of practice and only individuals authorized by the state can perform those functions and activities, the authorized individuals are licensed. It does not matter if the authorization is called something other than a license; the authorization has the legal effect of a license."

It is the opinion of the Educational Subgroup that the nomenclature used to describe the legal authority of EMS providers to practice our vocations should be changed from "certification" to "license" to describe our place in the healthcare system more accurately and enhance parity with nurses and other medical professionals. Amend New York State law to recognize EMS certifications as professional licenses regulated by the Department of Health and issued by the Commissioner.

- Education Recommendations
- First, consolidate Course Sponsors across the state with an emphasis on improving student numbers in classes and increased offerings by combining resources.
- Second, remove student reimbursement, and reallocate the funding to focus on supporting Course Sponsors that teach classes with reimbursement based on classes offered and percentage of successful certification.
- Active cultivation of CICs is paramount.
- Further, an advanced standing system or similar should be implemented to facilitate licensed teachers becoming CICs.
- Through consensus, the Educational Subgroup recommends that all newly

credentialled Paramedics in New York State, effective 2025, should have a minimum of an A.A.S. degree in paramedicine. We also recommend that as a best practice, field supervisors and advanced practice clinicians (Critical Care Paramedics, Flight Paramedics, Community Paramedics, etc.) should have a minimum of a B.S. in paramedicine or a related field, and that EMS leaders including administrators, managers, researchers, educators should have graduate level degrees as appropriate.

- A best practice to increase student access would be to substitute mandatory in person lectures with asynchronous, remote assignments that can cover the same material.
- It is the opinion of the Educational Subgroup that the nomenclature used to describe the legal authority of EMS providers to practice our vocations should be changed from “certification” to “license” to describe our place in the healthcare system more accurately and enhance parity with nurses and other medical professionals.

References:

AlShammari, T., Jennings, P., & Williams, B. (2019). National study of emergency medical services core competencies: a confirmatory factor analysis. *Australasian Journal of Paramedicine*, 16.

Associate's Degree. In Merriam-Webster.com. Retrieved June 2022, from <https://www.merriam-webster.com/dictionary/associate%27s%20degree>

Bachelor's Degree. In Merriam-Webster.com. Retrieved June 2022, from <https://www.merriam-webster.com/dictionary/bachelor%27s%20degree>

Blended Learning. In The Glossary of Education Reform. Retrieved June 2022, from <https://www.edglossary.org/blended-learning/>

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Registered Nurses, Retrieved June 2022 from <https://www.bls.gov/ooh/healthcare/registered-nurses.htm>

Caffrey, S. M., Barnes, L. C., & Olvera, D. J. (2019). Joint Position Statement on degree requirements for paramedics. *Prehospital Emergency Care*, 23(3), 434-437.

Devergie, J., O'Regan, A., & Hayes, P. (2021). Beyond STEMI: paramedics' views on how to improve their ability to interpret ECGs. *Journal of Paramedic Practice*, 13(12), 514-522.

Doctor. In Merriam-Webster.com. Retrieved June 2022, from <https://www.merriam-webster.com/dictionary/doctor>

Expanded Learning Time. In The Glossary of Education Reform. Retrieved June 2022, from <https://www.edglossary.org/expanded-learning-time/>

Fire and Emergency Services Higher Education. (2021, May). National Fire Academy FESHE Model Curriculum EMS (Core). Retrieved June

2022, from https://www.usfa.fema.gov/downloads/pdf/nfa/higher_ed/ems_curriculum_core.pdf

Fire and Emergency Services Higher Education. (2021, May). National Fire Academy FESHE Model Curriculum EMS (Non-Core). Retrieved June 2022, from https://www.usfa.fema.gov/downloads/pdf/nfa/higher_ed/ems_curriculum_noncore.pdf

Hubble, M. (2007). Baccalaureate emergency medical services education in North Carolina: history, challenges, and opportunities. *North Carolina Medical Journal*, 68(4), 255-258.

Hunter, J., Porter, M., Cody, P., & Williams, B. (2022). Can a targeted educational approach improve situational awareness in paramedicine during 911 emergency calls?. *International emergency nursing*, 63, 101174.

In Person Learning. In The Glossary of Education Reform. Retrieved June 2022, from <https://www.edglossary.org/in-person-learning/>

Institute of Medicine. 2011. *The Future of Nursing: Leading Change, Advancing Health*. Washington, DC: The National Academies Press.

Leggio, W. J., Grawey, T., Stillely, J., Dorsett, M., & Education Committee of the National Association of EMS Physicians. (2021). EMS Curriculum Should Educate Beyond a Technical Scope of Practice: Position Statement and Resource Document. *Prehospital Emergency Care*, 25(5), 724-729.

Leggio, W. J., Rosenberger, P., & Perdziola, S. (2020). Position paper on degree requirements for EMS educators. *Prehospital Emergency Care*, 24(5), 730-732.

Master's Degree. In Merriam-Webster.com. Retrieved June 2022, from <https://www.merriam-webster.com/dictionary/master's%20degree>

National Association of Emergency Medical Technicians Legal Differences Between Certification and Licensure. Retrieved June 2022

from
https://www.nremt.org/Document/certification_li_censure

National Highway Traffic Safety Administration
National Emergency Medical Services Education
Standards (2021). Retrieved June 2022, from
https://www.ems.gov/pdf/EMS_Education_Standards_2021_v22.pdf

Personalized Learning. In The Glossary of
Education Reform. Retrieved June 2022, from
<https://www.edglossary.org/personalized-learning/>

Sarver, W., Cichra, N., & Kline, M. (2015).
Perceived benefits, motivators, and barriers to
advancing nurse education: Removing barriers to
improve success. *Nursing Education
Perspectives*, 36(3), 153-156.

Stuhlmiller, D. F., Clark, J. R., Caffrey, S.,
Betterton, M., Nollette, C., & Raynovich, W.
(2018). National Association of EMS Educator's
Position Paper on the Critical Care Paramedic.
Prehospital Emergency Care.

Reed, B., Cowin, L. S., O'Meara, P., & Wilson, I.
G. (2019). Professionalism and
professionalisation in the discipline of
paramedicine.

Van Milligan, M., Mitchell III, J. P., Tucker, J.,
Arkedis, J. C. D., & Carvalho, D. (2014). An
analysis of prehospital emergency medical
services as an essential service and as a public
good in economic theory. *Report No. DOT HS,
811*.

⁹Abott, C., Kogan, V., Lavertu, S., & Peskowitz,
Z. (2020). *School District Operational
Spending and Student Outcomes:
Evidence from Tax Elections in Seven
States* [Educational Working Paper].
<https://edworkingpapers.com/sites/default/files/ai19-25.pdf>

¹*Accidental Death and Disability: The Neglected
Disease of Modern Society*. (1969).
[https://www.ems.gov/pdf/1997-](https://www.ems.gov/pdf/1997-reproduction-accidentaldeathdissability.pdf)

reproduction-
accidentaldeathdissability.pdf

¹⁰Baron, J. (2019). *School Spending and Student
Outcomes: Evidence from Revenue Limit
Elections in Wisconsin*. shorturl.at/jmu57

⁷*Do we really need degrees in EMS?* (n.d.).
EMS1. Retrieved June 23, 2022, from
<https://www.ems1.com/ems-education/articles/do-we-really-need-degrees-in-ems-asWMDNDcKXRZBw9/>

⁴EMS *Agenda for the Future*. (1996).
https://www.ems.gov/pdf/advancing-ems-systems/Provider-Resources/EMS_Agenda_For_The_Future_2010.pdf

⁵EMS *Education Agenda for the Future: A
Systems Approach*. (1996).
https://www.ems.gov/pdf/education/EMS-Education-for-the-Future-A-Systems-Approach/EMS_Education_Agenda.pdf

¹¹Kriesman, D., & Steinberg, M. (2019). *The
Effect of Increased Funding on Student
Achievement: Evidence From Texas's
Small District Adjustment* [Educational
Working Paper].
https://edworkingpapers.com/sites/default/files/ai19-58_v1.pdf

⁶*National EMS Scope of Practice Model*. (2000).
https://www.ems.gov/pdf/education/EMS-Education-for-the-Future-A-Systems-Approach/National_EMS_Scope_Practice_Model.pdf

^{2,3}*The history of the national registry and ems in
the united states | national registry of
emergency medical technicians*. (n.d.).
Retrieved June 23, 2022, from
<https://nremt.org>

⁸*Where to obtain ems training in new york state*.
(n.d.). Retrieved June 23, 2022, from
<https://www.health.ny.gov/professionals/ems/training.htm>

Government Support Subgroup

As part of the TAG a subgroup was formed to discuss strategies with government involvement. This includes evaluating the role of government at both the state and local level, reimbursement challenges, support from elected officials, collaboration among stakeholders, and the role of the Bureau.

The lack of an organized comprehensive statewide EMS system that is patient centered, consistent, and reliable, has created a fragmented dysfunctional EMS system. While there are many different service models the state lacks a statewide EMS plan. The SEMSCO should involve stakeholders such as hospitals, public health, law enforcement, the public and many others in creating a statewide EMS plan. New York is a vast state with many different geographies, population distributions, and facility distributions. One of the key and strongly held beliefs of this subgroup is the need to maintain and expand the role of the Regional Emergency Medical Advisory Committees (REMACs), Regional Emergency Medical Service Councils (REMSCO), and Program Agencies. There is a need to change the deliverables to accurately reflect what is currently being done by the REMSCOs and Program Agencies and what additional charges they should have moving into the future. Improving funding to the REMSCO's and Program Agencies could improve coordination, education, and accountability among EMS organizations, at the regional level.

For EMS systems to be financially sound and meet public need, cost of readiness funding needs to be established. To be cost effective the TAG supports County or other regional approaches to care delivery. Another limiting factor for fee-based services is the need to accept the insurance payment plus co-pay amounts as payment-in-full. This limits their ability to cover the costs associated with the care and transportation provided.

Funding challenges play a significant role in the sustainability of EMS agencies in the future.

Historically EMS services have received little financial support.

1. Medicaid - New York Medicaid rates fall way short of the response cost. Medicaid on its own admission in 2017 said they underfund EMS by \$31.4 Million annually. Five years later one could assume that number is closer to \$40 or 50 million. We encourage the state to perform an EMS cost collection project to re-evaluate the Medicaid rate. While we appreciate Medicaid's efforts to increase the Medicaid funding in recent years, with the increasing numbers on Medicaid it continues to significantly be underfund. Some reports indicate that up to 42% of New York residents receive Medicaid or Medicaid funded programs. Increasing the Medicaid rate to the Medicare rate could provide some needed relief. EMS fits the definition of a "Safety Net Provider", allowing EMS to become a "Safety Net Provider" could offset the losses associated with providing care to underserved communities.
2. Direct Pay Legislation - Another substantial issue is the lack of direct pay legislation. Without it, insurance companies frequently send the check to the patient, rather than the provider. This is an effort by the insurance company to force the provider to accept lower reimbursement to avoid "chasing the check".
3. Treat but not transported - Neither Medicare nor Medicaid have a sustainable payment model for patients who are not transported to a facility. Most ambulance services average 20% of their responses that are not transported to a hospital. Grant opportunities - Another possibly needed "Band-Aid" that some states have done is offering an EMS Grant program. This program could allow for funding to agencies who are financial need to purchase equipment,

manpower, education etc.

4. The TAG recommends the implementation of other tax sources to support EMS. These funding sources could then be routed to Counties for the provision of Emergency Medical Services. Other suggestions for revenue generation could be a court surcharge for EMS, or a KPI based “value based” Medicaid reimbursement structure and increasing access to the NYS Emergency Services Loan Program through DHSES.

The TAG supports funding for a Statewide EMS marketing campaign. The Department, SEMSCO and Commissioner in collaboration with advocacy organizations such as UNYAN, FASNY, NYSVARA, American Paramedic Assn., and NAEMT need to develop a statewide marketing campaign using social media and technology portraying a positive united voice about Emergency Medical Services in NYS in an attempt to raise awareness of the role EMS plays and to serve as a marketing and recruitment tool to encourage people to enter the EMS profession.

As part of this comprehensive review of the EMS System in New York State the TAG evaluated the organizational structure of the existing system. As part of the charge the government subgroup conducted an analysis of the organizational position of the BEMS. With the proposed changes to Part F 2023-2024, *"Emergency medical service" means a coordinated system of health-care delivery that responds to the needs of sick and injured adults and children, and includes community education and prevention programs, mobile integrated healthcare programs, centralized access and emergency medical dispatch, communications networks, trained emergency medical services personnel, medical first response, ground and air ambulance services, trauma care systems, mass casualty management, medical direction, and quality control and system evaluation procedures* it is essential to evaluate where EMS falls within the areas of responsibility at the state level.

Upon evaluation the current alignment of the Bureau of EMS within the Department of Health is appropriate. While discussions about possibly aligning the BEMS yielded a number of questions it was agreed that EMS aligns more with healthcare and public health, as opposed to emergency services.

The role of the BEMS shall be defined by the SEMSCO, the Commissioner, and the Bureau. Deliverables and tasks given to BEMS determine the staffing needs of the department. The duties of the SEMSCO have outgrown the current structure of the statute. Consideration needs to be given to having full-time staff within the BEMS assigned to carrying out the routine business of the SEMSCO. The members of the SEMSCO volunteer to serve in this capacity. As the governing body of EMS in New York State they take on a role like that of a Board of Directors. Full-time staff embedded in the BEMS to support the SEMSCO is essential.

Role of the Regional EMS Councils and Program Agencies - Consideration should be given to other alternatives such as expanding the roles of the Regions and Program Agencies. It is noted that most Program Agency Directors have a better understanding of their region than the Bureau typically does.

In order to have a thorough understanding of the EMS system it is critical that the EMS community develop and provide informational information to elected officials. Education of the elected officials is paramount. This white paper will provide a solid foundation about the EMS system. One struggle in all levels of government is the changing landscape of elected officials, they may change every few years. This requires agency leaders to spend time educating elected officials across the state. With varying service types and leadership abilities, officially developed resources which agency leaders could use to educate their locally elected officials would be highly beneficial.

Developing resources for agencies to discuss response models is needed. For example, does a community need 24/7 ALS, or would EMT or AEMT be adequate based of other available

resources? In rural and super-rural settings one focus should be on consolidation with increasing the number of fire and law enforcement based first responders.

With the emphasis on creating economies of scale at the County or Regional level, each County should establish a County Office of Emergency Medical Services and employ a County EMS Coordinator. Deputy County EMS Coordinators should be appointed as necessary to assist in this role. An EMS Coordinator is responsible for coordinating EMS among the ambulance services, fire departments and other EMS providers. The EMS Coordinator oversees a comprehensive response to major emergencies and disasters. The EMS Coordinator provides data to the agencies and other stakeholders, “Back-office” support to the agencies and manages the day-to-day EMS operations within the County. The EMS coordinator should have a set of State approved standards for them to evaluate the effectiveness of their EMS system. The EMS Coordinator provides routine reports to County Elected Officials on EMS Agency performance. Legislation to require EMS to become an essential or mandatory service at the county level could drive the counties to provide the support and assistance needed to agencies. The EMS Coordinator in conjunction with the Region or Program Agency and the Department will facilitate communications between all levels and should also be organizing “Town hall” like sessions for EMS leaders and providers to openly exchange ideas and share information.

While this white paper discusses many of the challenges facing EMS today and offers recommendations for effective change, it will be the responsibility of the SEMSCO, the Department and the Commissioner to execute changes. A solid foundation to effect recommendations across NYS is essential. An effective system needs to be established which takes into consideration components of the **EMS Agenda 2050**, which describes six guiding principles to help individuals, EMS leaders and

communities in creating a more people-centered EMS system. The system needs to be.

- Inherently Safe & Effective
- Integrated & Seamless
- Reliable & Prepared
- Socially Equitable
- Sustainable & Efficient
- Adaptable & Innovative

Consistent with the recommendations in the revised Part F, the State Emergency Medical Services Council (SEMSCO) develop a Statewide EMS plan by December 31, 2023. The state emergency medical services council, in consultation with the department, shall develop and maintain a statewide comprehensive emergency medical system plan that shall provide for a coordinated emergency medical system in New York State.

Prior to the formation of the EMS Sustainability TAG various attempts to advocate for change in EMS in NYS such as increased funding, organization, structure, tax incentives and other potential solutions, have often been blocked by advocacy organizations and other agency types. With the existing fragmentation in the EMS System, New York State does not benefit from a united voice for EMS, with each agency type and advocacy group having different priorities and operating objectives. The lack of a united voice has led to inconsistent messaging creating confusion amongst elected officials, EMS agencies and the public. A Unified EMS voice, creating accurate fact-based educational material can be distributed to elected officials, the public, and the media so there is a clear understanding of the issues at hand. The EMS Sustainability TAG, which consisted of diverse representation across all EMS disciplines in NYS, successfully collaborated and developed this single white paper as a united voice.

With an electorate which is typically ill informed on EMS at the local, state, and national level, change and legislation is not well received. EMS has not done a good job marketing the role of EMS and their

involvement in the stability of the local community. Likewise, EMS agencies, each in competition for political attention, status, and community support, often cause conflict between each other. This competition often discourages elected officials from supporting the EMS initiative. There is a need for a single voice of EMS with a united marketing message, the EMS Sustainability TAG endorses that the NYSESMCO fill this role. In order for legislation to be effective our elected officials are being asked to work all legislative efforts through the SEMSCO as by its organizational structure equally represents all disciplines.

Operations Subgroup

The core of Emergency Medical Services delivery in New York State is the day-to-day operations where Primary Safety Answering Points (PSAP's) receive 911 calls for Emergency Medical Services and dispatch local EMS Agencies to respond. In many geographical areas across NYS the call is handed off to a local dispatch agency to manage the response. These delivery models are how EMS response is coordinated across the State. As with all other facets of healthcare and EMS, operations are in a critical crisis.

Across NYS PSAPs operate based on local policy, without a statewide approach to managing EMS response. This leads to some County PSAPs managing EMS calls they receive, while other PSAPs don't believe that it is their responsibility to manage the calls, allowing "home rule" agencies to decide on the response plan. In some areas of the state the PSAP exercises the authority to ensure that an appropriate EMS response occurs.

How did we end up in this environment? A multitude of issues lead us to where we are now. Staffing. Education. Agencies. These three areas which are also discussed in this document. This sub-group examined all areas involved in the delivery of EMS.

With the increase in call volume and decrease in both paid staff and volunteer staff, delivery of EMS operations has become more challenging than ever. For over two decades EMS has steadily been dealing with an increasing trend of doing more with less which has brought us to this critical juncture.

One reason for a decline in available personnel is education. As the demand for EMS increases, so does the scope of practice for each level as well. With that, there is an increase in hour requirements for initial certification and recertification. The other issue surrounding education impacting operations is the curriculum needs to be increased due to the increased

demand for EMS and the increasing role EMS is taking among allied healthcare professionals.

Reimbursement affects staffing, education, agencies, and operations. Without increased, appropriate reimbursement, there cannot be an increase in staffing, an increase in accessibility and funding for education, nor sustainability of the existence of current or future EMS agencies.

Discussion

When the public has a need for Emergency Medical Services, they most often dial 911 from a landline or cellular phone. "Public Safety Answering Points (PSAPs) are the centers where 9-1-1 calls are taken and emergency personnel are dispatched. PSAPs used to exist in multiple municipalities within each county. Across most of New York State, the majority of PSAPs have been consolidated over the last 10 years. Where once there were multiple PSAPs operated by several jurisdictions within a county, now most counties have a single PSAP, which accepts 9-1-1 calls placed anywhere within that county. From the primary PSAP, local police stations, sheriff road patrol, EMS, State Troopers, Park Police and other agencies are dispatched to the location of the call, depending on the nature of the emergency. PSAP consolidation in New York has provided more efficient 9-1-1 operations and help law enforcement adapt to the changing nature of 9-1-1 calls." SOURCE [NYSAC 911 WhitePaper.pdf](#) Funding 9-1-1 Services in NYS, August 2019

Once an EMS call for service is received at a PSAP highly trained telecommunicators begin an interview of the calling party to determine the address of the emergency, the nature of the emergency, callers name and phone number, and additional information that will aid EMS in finding the location. Using Computer Aided Dispatch (CAD) the telecommunicator determines the primary EMS agency to dispatch to the emergency call. In many PSAPs telecommunicators are trained in Emergency Medical Dispatch (EMD). Dispatchers who work in PSAPs with an EMD program receive training in effectively handling medical

emergencies. Telecommunicators, through a series of pre-scripted questions then determine the required level of response based on the caller's response to the questions, this is referred to as priority-based dispatch. Generally, the calls are categorized into 3 to 5 different recommended response determinates which may range from Critical calls to calls which can be handled by telehealth. In addition, telecommunicators are trained to provide pre-arrival instructions to callers. Telecommunicators offer such instructions as telephone CPR, abdominal thrusts for choking, childbirth, burn management, and bleeding control.

Once the determinant for the level of call has been made the PSAP needs to dispatch the appropriate resource(s) to the scene of the emergency. In different geographical areas of the state the response is either determined by the local EMS agencies having jurisdiction for that area, a local municipality or the County PSAP. The process of beginning to dispatch the appropriate EMS agency(ies) begins. In many areas of the state local volunteer agencies are initially dispatched to the call, and when appropriate, an Advanced Life Support agency is simultaneously dispatched. The clock then begins for the local volunteer agencies to begin a response to the emergency call. When after a predetermined time elapses, and the agency does not respond, the call is then passed onto another neighboring agency. Often times the "mutual aid" agency is selected by the "home" agency, based on local politics. When this occurs, it is often referred to as mutual aid, however, mutual aid was designed for when localities exceeded their resources and needed assistance from a neighboring agency. Today mutual aid is abused by the lack of performance by agencies who have inadequate personnel resources to respond to their own calls. There are often times when two or more agencies are unable to assemble a crew capable of responding. This leads to long waiting times for patients.

Failure to respond to dispatched calls not only creates a burden on neighboring communities

who are also struggling to answer their own calls, but also creates mistrust in the community that financially supports the EMS agency(ies). Today there are no requirements for EMS agencies to track or report calls that they do not respond to due to inadequate staffing or vehicle shortages. As part of this discussion, it has become clear that some PSAPs and County EMS Coordinators actively manage the deployment of EMS resources based on the performance of the home agency, while others allow the home agency to dictate the response plan. PSAPs often are not a part of the decision-making process, they need to be more a part of the EMS system.

Dispatch agencies are challenged with finding the patient an ambulance, often pulling them from long distances.

We have placed an undue burden on our 911 Dispatch centers. Every minute of everyday dispatchers handle calls of all types where the public has a need.

Dispatchers are unaware at the time the call is received that they will be able to get an ambulance to the patient in a reasonable amount of time. Dispatchers tirelessly continue to be creative in finding an ambulance that they can send. Many times, the patient waits are excessively long.

We need to work with our dispatch agencies to provide guidance and education on responsibilities they face. We need to provide clear direction on difference between Staffing and Equipment Shortages (of taking equipment out of service due to staffing) and mutual aid when call volume exceeds the home agencies routine call volume. There are proceeds implemented by a County which identifies that Alpha calls are held for the "home agency", for however long it takes rather than sending mutual aid.

Another challenge continues to be the burden placed on other agencies in that geographical area as they will not be familiar with the current daily staffing levels of the agencies in the area. Why should the commercial ambulance provider send a resource to another agency for which they have not contracted with, and yet then not have the

proper resources to be able to respond to their contracted area?

There is a need to educate dispatch and EMS agencies on the difference between staffing and equipment shortages (or taking equipment out of service due to staffing) and mutual aid when call volume exceeds the home agencies routine call volume.

A. Recommendations – Short Term

Recommendation 1 - Improve Response Standards:

Only agencies with a full crew that are known to be available, scheduled and committed to responding on every emergency call during the defined time period, will be dispatched to a request for service. This will shorten response times and provide patients with expeditious care. This is referred to as an “In Service” unit.

Failure to meet this response metric will result in the PSAP and EMS Coordinator removing the agency from being dispatched to future EMS calls until the situation has been resolved.

Recommendation 2 - Establish Metrics for Call Coverage:

Agencies have a responsibility to respond to requests for service in their primary response area. For an agency to maintain their CON they will have to respond to a percentage of their dispatched calls. In 2024 agencies will be required to respond to 80% of dispatched calls in their primary response area.

Recommendation 3 - Oversight of 911 Centers:

PSAPs need clear authority to manage all EMS calls for service within the defined scope as defined by the SEMSCO and the Department.

The Bureau of EMS will ensure all 911 centers (PSAPs) in NYS are dispatching EMS resources appropriately and in accordance with the above-mentioned response standards. 911 centers (PSAPs) will also be required to follow IAEMD protocols, or equivalent, to appropriately

determine the resource needs and priority for calls.

The standard across NYS should be that all PSAPs adopt EMD programs which include priority-based dispatch and pre-arrival instructions.

We need to engage our County 911 Centers and work with them on the EMS Crisis.

Recommendation 4 - Establish Metrics for Documentation:

All agencies operating in NYS (CON holders) will complete electronic pre-hospital care reports to facilitate the highest level of reimbursement, data collection, and agency performance determination. A PCR will be completed for all calls an agency is dispatched to, regardless of if they responded or not. Agency and system performance cannot be evaluated without accurate data.

Recommendation 5 – Tiered response

Based on other discussions in this document not every community can afford to and effectively maintain a healthy EMS agency. As part of the recommendations and organization in NYS, the TAG recommends communities consolidate and merge with each other in a cooperative fashion. Each community CON holder should evaluate the needs of their community and their agency to ask “do we need to be in the ambulance business?”.

To ensure an appropriate response time, communities are encouraged to establish a First Response system, where EMS members respond in an Emergency Ambulance Service Vehicle (EASV) and arrive within 4 – 6 minutes of the call to provide life-saving care and intervention. A BLS transporting ambulance would respond and arrive within a reasonable time, followed by an ALS provider, either in an EASV or an ambulance. As discussed in this document the costs associated with readiness need to be clearly identified. As an example, when a BLS unit summons an ALS unit and subsequently cancels their response, the costs of the ALS response are unreimbursed. Who is paying for this cost of

readiness?

Recommendation 6 – Transporting patients to appropriate destinations

In certain cases, based on patient presentation and clinical treatment protocols, patients need to be transported to specialty care hospitals. On occasion local EMS agencies choose to transport the patient to the local emergency department rather than to follow the appropriate treatment protocols and transport the patient a greater distance. All agencies need to be held accountable to the medical treatment standards and ensure that patients receive the appropriate level of care and delivery to the appropriate destination.

Recommendation 7 – contract for ALS services

Today we continue to have BLS agencies that do not contract with ALS providers for the provision of 24-hour ALS care. All agencies need to have a contract for service for ALS services which is signed by all agencies involved. This needs to be filed with the County, Regional Office and the Department.

B. Recommendations – Long Term

Recommendation 1 - Continue Metric for Call Coverage:

This will be an extension of short-term recommendation 2. Call coverage for agencies will increase over time.

- 2024: 80% of dispatched calls in primary response area.
- 2025: 85% of dispatched calls in primary response area.
- 2026: 90% of dispatched calls in primary response area.
- 2026: 95% of dispatches calls in primary response area.

Recommendation 2 - CON Renewal:

Agencies must meet the requirements and timeline in long-term recommendation 1 in order to renew their CON, apply for expansion, or any other CON action.

Recommendation 3 – Response Times:

Dispatched agencies must respond to a call for service within 5 minutes of being dispatched. The response metric must be demonstrated by the agency in order to renew their CON.

Recommendation 4 – Definition of Mutual Aid

The SEMSO, working with the Department and the Commissioner, need to update and revise the definitions and use of Mutual Aid.

Over the years there has been increased use of Mutual Aid as the result of an EMS agencies continued, routine, ongoing or frequent inability to provide EMS response due to staffing and/or equipment shortages. However, the BEMS clearly states that this is not the intention of Mutual Aid.

Service, Staffing, and Equipment shortages have led to the collapse of the EMS system as formal written agreements have not been established to cover these gaps in service.

The gaps in coverage need to be covered by contracts.

Hospital Subgroup

EMTs and Paramedics are the anchor of the medical transportation system that keeps our health care system functioning. Access to transportation has been a long-standing issue impacting health care in New York and the United States. The American Heart Association estimates that 3.6 million people do not obtain medical care due to transportation issues. Urban, suburban, and rural communities across New York State does not have sufficient infrastructure and medical transportation personnel across the diverse and vast geography to meet the current needs. EMS agencies are often called to bridge the transportation gap. Today's EMS agencies are providing more than 911 emergency response services; they are the mainstay of both emergent and nonemergent inter-facility hospital transports and routine transport of patients to their home or other post-acute setting after a hospital inpatient stay.

The Sustainability TAG Hospital Workgroup has identified the following issues and makes accompanying recommendations:

ISSUE #1: Transfers between hospitals, and to and from skilled nursing facilities are delayed each day because of the shortage of EMS personnel and transportation resources. These shortages have negatively impacted emergency ambulance responses, hospital operations, and throughput throughout New York State. In this regard the hospital and EMS communities are inextricably linked and have a mutual opportunity to bring stakeholders together in search of solutions.

- **DISCUSSION:** EMS workforce shortages limit the number of units ambulance services can have staffed to meet the demand for 911 and interfacility service. When an ambulance service cannot staff enough units to meet daily interfacility needs, critical care transports can be delayed. On a non-emergency basis, hospital discharges are further delayed. This hampers the ability of hospitals to move admissions from the emergency department to inpatient beds,

resulting in admitted inpatients being held in emergency room beds for an extended period of time. This cuts down on the number of available emergency department beds, backing up emergency rooms and resulting in hours-long waits for emergency room care. Long waits for ambulance crews to turn over patients to crowded emergency departments further impacts the ambulances return to service, further perpetuating system problems.

- **RECOMMENDATION:** Systemic solutions that bring together all stakeholders are necessary, as the EMS field does not have the ability to add units of service on demand. Any solution will require a financial investment in EMS as an essential societal priority and career of choice that will allow ambulance services to increase the size of the workforce to achieve the necessary unit staffing. The “cost of readiness” for both emergency responses and interfacility transfers must be borne by the system. In addition, EMS payments must incorporate a capital component to recognize the recurring capital investments necessary to provide safe and modern vehicles and equipment.
 - Policymakers are an important stakeholder, as they are key to making the financial investments necessary to build sustainable EMS organizations with stable workforces that can meet the demand for service. An important start would be increasing ambulance payments to cover the full cost of delivering the service, adding a capital component to ambulance payments.
 - Critically ill or injured patients often need to be transferred between local access hospital and tertiary hospitals emergently, which primarily occurs by ground ambulances and aeromedical helicopters. The challenge of interfacility critical care transfers is particularly daunting.

They require rapid deployment of highly skilled personnel and resources, the cost of readiness and training is extensive. There needs to be discussion about how the health care system will support access to, quality of, and financing for this vital service. All stakeholders must understand that emergency ambulance services are not able to independently finance the readiness of resources for interfacility critical care transportation. Material to this discussion is who should bear the cost of this readiness, especially in light of the fiscal and workforce challenges facing the EMS profession. A legitimate discussion should be whether hospitals should provide financial support, in the form of fee for service contracts for these services or whether these services should be considered a “public good” and financed as such.

ISSUE #2: Hospital Emergency Departments across NYS are routinely bogged down with boarding patients awaiting an inpatient bed, reducing the number of available beds for arriving ill and injured patients. In addition, hospital staffing shortages do not allow hospitals to staff up the physical capacity. This has created extensive delays in turning over the care of arriving ambulance patients to hospitals. This offload delay creates long wait times for patients and EMS crews.

- DISCUSSION: Offload delay, sometimes known as “wall time,” negatively impacts patients and the local EMS system. Extended wait time is uncomfortable for patients being held on an ambulance stretcher in an ambulance, foyer, or hallway. The confinement to an ambulance stretcher is physically uncomfortable, the public exposure and lack of privacy is emotionally difficult for patients. This is a customer service and patient treatment failure for both hospitals and EMS. Holding patients in

ambulances on their arrival at the hospital is not a solution and is both burdensome on EMS and legally questionable under EMTALA. Extending the length of time an ambulance is committed to a call, increased time-on-task, leaves communities without adequate EMS coverage. Ambulance services cannot charge additional fees for these delays. New York communities are already facing a shortage of staffed ambulances ready for emergency calls. Increasing the time-on-task due to offload delays exacerbates the already difficult situation.

- RECOMMENDATIONS: Hospitals and EMS agencies must work together to reduce delays in offloading time. A joint hospital-EMS task force should be formed and report back to the SEMSCO/SEMAC/Department of Health on strategies to decrease offload delay. Fortunately, there are many resources to draw on. The California Hospital Association and California Professional Firefighters Association worked together to develop extensive recommendations that would be valuable for review.
 - [Ghaly Basnett Letter 2.7.pdf \(calhospital.org\)](#)
 - <https://emsa.ca.gov/wp-content/uploads/sites/71/2017/07/Toolkit-Reduce-Amb-Patient.pdf>

The law firm of Page, Wolfberg & Wirth, a leading national EMS law firm, has done considerable work in this area that merits review.

We also recommend that each hospital have a staff member designated as the EMS Outreach Coordinator to facilitate day-to-day communication and collaboration with ambulance services.

ISSUE #3: Due to the limited number of hospital beds and EMS resources in a given community, resource coordination is vital for system success and balance. Hospitals systems rely on EMS

agencies for more than just 911 emergency response. EMS agencies move patients around the clock between facilities for emergency care, admission, transfer, diagnostic testing, and discharge. EMS agencies often are faced with multiple requests from within the same hospital, competing for the same ambulance resources. Similarly, multiple hospitals request multiple ambulance transports from an ambulance provider that has a limited number of units available.

Hospitals & their local ambulance (transport providers) must improve communication in order to facilitate coordination of resources.

- Discussion: With the limited ambulance transportation resources available, hospitals should work collaboratively within their own facilities and across their regions to monitor and allocate capacity for interfacility ambulance transportation requests. A single hospital may have many different floors and specialty units (ICU, CCU, Progressive care, surgical, etc.) that could be requesting an ambulance simultaneously. For example, within the same hospital, an inpatient unit could be requesting an ambulance to take a patient to a rehabilitation hospital, an emergency room could be requesting an ambulance to take a patient to a nursing home, and an intensive care unit could be requesting an ambulance to transfer a patient to another hospital for critical care, all at the same time. When this occurs simultaneously at several hospitals in the same region, the system can become overwhelmed. Without a coordinated approach it is difficult to appropriately triage the patients and determine the most effective method to facilitate transportation.
- Recommendation: Ideally each hospital system would have a single coordinating center for ambulance requests and those coordinating centers could work together at a regional level to assist with the management and prioritization of hospital requests for ambulance transportation. Similar to above, we recommend that each hospital have a staff member designated as the EMS Outreach

Coordinator / Ambulance Discharge Coordinator to facilitate day-to-day communication, planning, and collaboration with ambulance services.

Through newly designed innovation programs there are opportunities to allow low acuity patients to be evaluated and treated in the community in lieu of transporting all patients to the hospital. The TAG recommends developing load balancing by expanding EMS system capacity through Community Paramedicine and programs such as alternate destinations, treat-in-place, and 911 diversion programs.

ISSUE #4: Access to specialized inter-facility critical care transport services is varied across NYS and many communities do not have ambulance services with equipment and personnel to meet critical care needs on an ongoing basis. These transports often occur when a patient with emergency health care needs must be rapidly moved from a community hospital to a trauma center, stroke center, or academic medical center for lifesaving care. These are true emergencies and the quality of care provided during transportation impacts both morbidity and mortality. Some transporting EMS agencies have developed some form of limited capability to support their community's critical care transportation needs, however the service level is inconsistent.

- DISCUSSION: There are no clearly defined criteria for critical care transportation. At the same time, the level of interventional care provided by hospitals grows increasingly sophisticated on both ends of the transport, meaning the complexity of care during transport has increased and will continue to increase with the lifesaving capacity of our health care system. Patient safety and survival is at stake, as the advances in critical care are only as powerful as the weakest link in the patient's health care journey.
- RECOMMENDATION: Collaboration between the EMS and hospital communities is necessary to determine the best way to

ensure that interfacility critical care transportation meets the needs of our health care system. Education standards, response guidelines, clinical guidance, medical control protocols, and equipment specifications should all be considered. Unique consideration should be given to cardiology, pediatrics, trauma, and stroke. A collaborative effort between EMS and hospital representatives should develop a set of standards for critical care transportation that could be recommended to the SEMSCO/SEMAC for adoption. This collaborative effort must include recognition of the cost of on-demand emergency critical care transportation, such that EMS agencies are reimbursed the full cost of being prepared for and providing such services. The cost or readiness to provide for critical care transportation will require a significant investment.

Staffing Subgroup

Emergency Medical Service (EMS) staffing in New York State is in crisis. This systemic workforce shortage is a threat to public health and requires aggressive public policy action. The Sustainability TAG recognizes the danger to New Yorkers and wishes to educate New York State’s elected officials, public policy leaders, health care system leaders, and the public about the gravity of the situation and need to act.

The number of career and volunteer Emergency Medical Technicians and Paramedics is insufficient to meet the needs of communities. Current day EMS began in the late 1960’s as a solution to the country’s growing motor vehicle trauma problem. EMS has grown over the decades and today has vital societal responsibilities in health care, public safety, public health, and disaster response. In addition to providing 911–emergency response and transport services, today’s EMS agencies are the mainstay of both emergent and nonemergent inter-facility patient transportation. EMS has evolved to become a safety net supplier, whether intended or unintended, and has the responsibility of providing care to all commers, regardless of one’s ability to pay for services.

Prior to the COVID-19 pandemic, a majority of New York State volunteer and career (paid) EMS agencies reported that staffing shortages impacted their ability to adequately serve their communities. (EMS Workforce Shortage in NYS: Where Are the Emergency Medical Responders -- <https://ubmdems.com/wp-content/uploads/2020/01/Download-2019-NYS-EMS-Workforce-Report.pdf>).

Since that time the situation has continued to deteriorate. Data provided by the NYS Department of Health shows that the number of certified EMS personnel declined from about 80,000 to about 70,000 between 2019 and 2021, a decrease of approximately 13%. Equally troubling, less than half of these 70,000 certified providers were working in EMS, as only 30,000 of them were named on a pre-hospital care report (PCR) during 2021.

When the Sustainability TAG surveyed the NYS EMS community in 2022 to learn about the problems facing EMS, the workforce was identified as the largest challenge by every cohort of the EMS community.

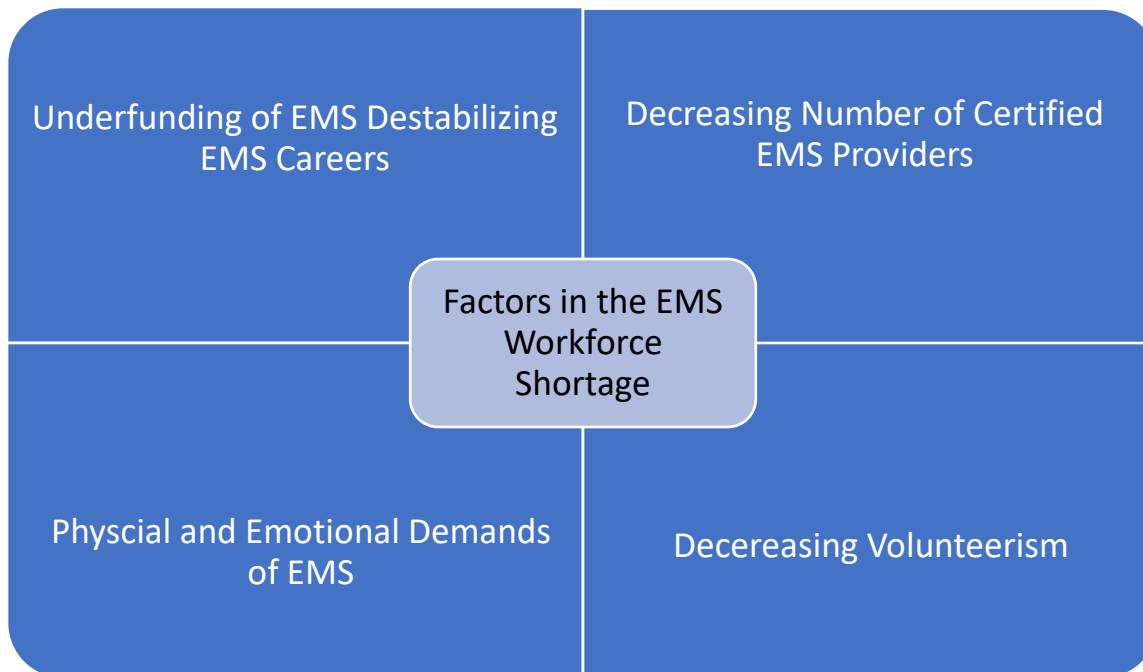
There are widespread reports of EMS agencies unable to provide staffing to meet community needs. Many ambulance services can’t staff

SALARY COMPARISON DATA — EMS/FIRE/POLICE/NURSING

2017 U.S. Bureau of Labor Statistics Data

www.bls.gov/oes/current/oesrcma.htm

	EMT/EMT-P	Firefighter	FF % Higher	PD Patrol Officer	PD % Higher	Registered Nurse	RN % Higher
Albany-Schenecady-Troy	\$40,310	\$56,720	141%	\$68,110	169%	\$66,980	166%
Binghamton	\$35,230	\$65,970	187%	\$65,130	185%	\$62,320	176%
Buffalo-Niagara Falls	\$33,040	\$67,090	203%	\$66,280	201%	\$73,250	222%
Syracuse	\$34,760	\$48,860	141%	\$63,260	182%	\$64,750	186%
Rochester	\$35,180	\$68,360	194%	\$67,960	193%	\$64,280	183%
Utica-Rome	\$31,430	\$56,570	180%	\$57,580	183%	\$65,080	207%



the necessary number of units, even with extensive use of overtime, resulting in delays in both emergency and non-emergency responses, including interfacility transportation. With EMS agencies forced to rely on an undersized number of responders, the workforce feels the stress of the increased workload and pressure to work overtime. Today it is commonplace for an EMS worker to leave the profession for less stress and often better pay, adding to the negative workforce environment.

ISSUE #1: EMS is grossly underfunded, leading to an inability to pay adequate wages

DISCUSSION:

A comparison of U.S. Bureau of Labor Statistics data shows that EMS providers earn far less than firefighters, police officers, and registered nurses.

Source: EMS Workforce Shortage in NYS: Where Are the Emergency Medical Responders, December 2019

There are several factors that prevent EMS providers from increasing wages. The rates paid to ambulance services by all payers are under the same compression as payments to hospitals, physicians, and other healthcare providers. Neither government payers nor private insurers are willing to raise ambulance payments to increase wages. Recent NYS retention dollars are an appropriate response to service during the COVID-19 pandemic, but do not address the underlying wage insufficiency. Direct government EMS subsidies are difficult to obtain from localities managing multiple priorities and living under a tax cap. Communities expect a robust response for public health emergencies and disasters, but generally only provide a fraction of the funding needed to maintain continuous readiness. Readiness funding also comes in the form of grants, more often than not, which are short-term, focused and do not support long-term planning. Health care facilities desire on-demand interfacility transportation, but do not wish to share in the cost of maintaining the capacity that supports their needs.

In NYS, EMS is not considered an

essential service. With a myriad of funding streams – health insurance payment, grants, fundraising, and inconsistent subsidies from a local municipality – EMS does not have the funding needed to pay adequate salaries.

Many insurers – including Medicare and Medicaid – pay EMS agencies far less than their actual cost of transporting a patient. Since the ability to cost shift to other payers is long gone, government payment shortfalls are a significant impediment to ambulance services giving wage increases. According to the NYSDOH 2017 Medicaid Ambulance Rate Adequacy Review, ambulance agencies – volunteer and for-profit are paid much less than it costs to transport a Medicaid patient.

Salary inequity undermines EMS as a career choice. EMTs and Paramedics receive extensive training, work in high-risk, high call volume, and high-stress situations and have great responsibility for the well-being of the people they serve. Yet, they are paid far less than other public safety and healthcare professionals. EMTs and paramedics often leave their jobs to become firefighters, police officers or registered nurses. Burnout is commonplace, as EMS providers often need to work two or three jobs to support a family. EMTs can often receive a pay raise by leaving EMS for a position in retail sales at a chain store. EMS salaries must increase to provide parity with other like professions and support EMS as a career choice and ensure the workforce can meet the demands of the EMS system.

RECOMMENDATIONS: The Staffing Sustainability TAG recommends:

- 1) The NYS Department of Health complete an updated 2022 Medicaid Rate Adequacy Review that can provide up-to-date data on the gap between Medicaid payments and the

cost of providing ambulance services.

- 2) Increasing Medicaid ambulance rates until they equal the rates paid by the Medicare program.
- 3) Providing permanent and on-going funding to support the cost of continuing EMS agency disaster preparedness as a public utility.
- 4) Making statutory changes to establish EMS an essential service in NYS and requiring the beneficial stakeholders – local government, county government, state government, health insurers, and hospitals – to share in both the cost of adequately funding the service and the cost of continuous disaster readiness.

ISSUE #2: The number of EMS providers in NYS is decreasing at an alarming rate, as described in the opening summary. EMS education is grossly underfunded at a time when NYS needs a massive influx of new EMTs and Paramedics.

DISCUSSION: NYS desperately needs new EMS responders and public policy should support comprehensive recruitment initiatives and bringing education to perspective volunteer or career EMTs and Paramedics at the lowest possible cost.

There is a perception among EMS providers that EMS is viewed as ‘second class citizens’ in the health care and public safety professions. Recruitment initiatives can be framed to also change perceptions and promote the equal and essential status of volunteer and career EMS professionals.

The current NYS rates for EMS education course reimbursement were established in 1992 and do not

adequately cover the actual cost of providing the training. This places an increased cost burden on perspective EMTs. Course sponsors are contending with consistently increasing costs and a declining number of available faculty. Low reimbursement rates directly impact the ability to secure adequately paid qualified faculty to teach EMTs and Paramedics

RECOMMENDATIONS: The Staffing Sustainability TAG recommends aggressive action to increase the number of NYS certified EMTs by at least 10,000 for a total of 80,000 by 2025. A comprehensive recruitment plan should be developed and implemented that should include:

1. The NYS Department of Health studying the cost of delivering EMS education and increasing course payments to cover the full cost of retaining quality faculty and lowering student costs.
2. Expanding the number of academy-style free-tuition EMT classes, as piloted during 2022.
3. Studying the use of non-traditional EMS training programs around the nation and replicating successful initiatives to develop additional innovative educational and certification opportunities.
4. Starting and funding an “EMS Across NY” program, built on the model of Doctors Across NY and Nurses Across NY, to support increased Paramedic education.
5. Developing non-salary incentive systems for both career and volunteer EMS responders, such as scholarships, tuition reimbursement, college internships/credit, and reduced cost mortgages, to provide community, employer, and university support for EMS service.
6. Funding a three-year \$5 million campaign to promote EMS volunteerism and careers in EMS.
 - a. Partnering the campaign with a centralized “Recruit NY EMS” program, similar to the FASNY fire department program, to help individuals get matched with agencies and education.
 - b. Study the US Army Talent Management Taskforce and develop a like program for EMS in NYS to follow individuals in their career, seek talent, provide guidance to members on how to achieve their goals, and establish an EMS provider talent data base that can be used for recruitment.
 - c. Targeting diverse communities within NY, including those that are underrepresented in the EMS profession.
 - d. Adding a matching service for college EMS professionals to serve

with local EMS agencies when home for school breaks.

7. Encouraging EMS careers among younger individuals through the establishment of youth recruitment initiatives, including expanding EMT training in high schools and both clinical and leadership apprenticeship programs.
8. Funding evidence-based research on NYS EMS providers that have left the profession (or are no longer active) to understand the reasons behind their departure.
9. Developing and funding statewide EMS management and leadership education to help improve workplace culture and satisfaction across generations in a stressful profession.
10. Establishing a statewide EMS workforce data collection initiative, potentially with the SUNY Center for Health Workforce Studies (<https://www.chwsny.org/>), to document the size, strengths, and vulnerabilities of the EMS profession in NYS.

ISSUE #3: The job of the EMT and Paramedic is both physically stressful and emotionally taxing. The physical and emotional demands of EMS on the human body is a limiting factor in EMS careers. EMS providers are exposed to the same level of emotional trauma as if they were in combat, with substance abuse and dependence, PTSD, and suicide rates higher than average.

Suicide and self-harm are far more prevalent in the emergency responder community than

society at large, with EMS providers rates of contemplating or attempting suicide being ten times higher than the general population.

DISCUSSION: The development of mechanisms that address the overall health of the EMS professional will have a positive impact on the length and sustainability of EMS careers. However, it is important to note that having adequate staff and reducing the excessive scheduling pressure on today's EMS responders is critical to reducing excessive hours on duty, work-life balance, and a healthier EMS community.

The EMS community has worked diligently to create new career opportunities and career ladders through mobile integrated health care and community paramedicine. These initiatives will benefit patients and present a variety of less demanding physical working conditions and new opportunities for emotional fulfillment for EMS providers.

New York State is unfortunately trailing the nation in this area, with opposition from the NYS Nurses Association (NYSNA) thwarting the passage of enabling legislation. Ultimately, a collaborative framework must be developed to allow these patient-centered innovations that will fill gaps in the health care system to proceed. This could be combined with broadening EMS opportunities to other clinicians – registered nurse, nurse practitioner, physician assistant -- in the pre-hospital care paradigm.

RECOMMENDATIONS: The Staffing Sustainability TAG recommends:

1. Pass enabling legislation to allow the creation of new career positions in mobile integrated health care and community paramedicine. This includes integration of EMS with public health and mental health treatment modalities.
2. The development and broad sharing of healthy lifestyle and resiliency initiatives for EMS responders that can improve the overall mental and physical health of EMS responders.
3. The NYS Department of Health establish a public-private partnership with EMS community stakeholders to identify and spread technologies that will reduce the physicality of being an EMS responder.

RECOMMENDATIONS: The Staffing Sustainability TAG recommends:

1. Increasing the NYS Volunteer Ambulance Workers Tax Credit from \$200 to at least \$500 annually, to expand retention initiatives to volunteers. This tax credit should be allowed independent of any local property tax exemptions for EMS volunteers.

ISSUE #4: Volunteers are an important part of the emergency medical services system, especially in rural communities. Volunteers achieve EMS certification, give of their time, and serve their communities without expectation of a salary. They take the same risks as career EMS professionals, especially in light of the hazards presented by the COVID-19 pandemic.

DISCUSSION: The sacrifices being made by volunteers are significant and volunteerism is under stress amid the sophistication of life in American society. This is not unique to EMS. More two-worker households, children having many activities and the rise of youth sports clubs leaves less time for parents to volunteer. In addition, people move more frequently and are less likely to develop lifelong roots in communities and on-line communities are increasingly available to give people a sense of community belonging, without needing to be involved with in-person volunteer activities.

Funding Subgroup

Early EMS funding and system designs focused on the rapid development of response capabilities, propagation of 9-1-1, purveying of basic and advanced medical training and the provisioning of equipment, with little effort or thought given to intelligent EMS system design, appropriate market right control, inappropriate or missing regulations, lack of standardization or interoperability between organizations and states, lack of understanding the impact of utility economics on EMS nor the provisioning of long-term sustainable funding sources. Initially funded by block grants given to the states, then later funded by user fees from health insurance, EMS has evolved differently in each state and in each county and municipality. Many EMS agencies were funded at a local level through fund-raising campaigns, such as pancake breakfasts, spaghetti dinners, letter campaigns, and fund-raising galas. For many states including NY, this lack of coordination and intentional design has created highly irrational, ineffective, and inefficient EMS delivery systems which is contributing to its current collapse. This is just one of the many problems NYS EMS faces.

In many marketplaces, EMS functions within a geographically constrained geopolitical boundary, creating a constraint on its ability to grow or gain economies of scale. Additionally, the supply, quality and price of EMS does not impact demand for services, like is seen in most openly competitive markets, rather EMS and healthcare demand for services are influenced by socioeconomics, population density, population health, age and other uncontrollable factors such as flu and pandemic. When it comes to the funding of EMS, health insurance user fees do not pay based on actual charges, but rather based on negotiated, prevailing or government-based reimbursement rates that are often reimbursed well below the cost to provide the service. Given these facts, the pool of dollars available to pay for EMS services from healthcare user fees is essentially fixed, due to public utility

economic constraints, and when competition is introduced into an EMS marketplace, especially if unregulated, a massive diseconomy of scale ensues. This negatively impacts service reliability, provides for inconsistent quality of care, removes the agency's ability to pay living wages and benefits, limits access to modern medical equipment and lifesaving medications, and the vehicles used are often lacking. These factors pass the means test for EMS to be defined as a public utility and as such, EMS should be seen, regulated and funded as a public utility or quasi-public utility, with the caveat that EMS is also considered an essential service and public good, and therefore should also be subsidized by the community to ensure sustainable high-quality service and care as well as having access to other public funding mechanisms such as a safety-net healthcare provider would.

The EMS system in NYS is in need of reform, through re-design, financial support, legislation and funding. As part of the Governors 2022-2023 budget were proposed reforms to Article 30, titled Part F. As written, Part F met resistance, as the EMS community was not a party in the development, which led to some disciplines in EMS taking exception to parts of the proposed budget proposal. Additionally, resistance was met by outside associations who were concerned about some of the content. The proposed Part F was withdrawn prior to the adoption of the budget. In order to move the agenda on Part F forward, with EMS involvement, the SEMSCO in the summer of 2022 developed a work-group to revise the proposed Part F. Consensus was gained and the work-group has successfully drafted revisions to Part F 2022-2023, they have been adopted by the SEMSCO and are being forwarded for consideration in the 2023-2024 budget session.

Much of the vision is focused on correcting the imbalance of EMS system funding. A shift is required changing the funding model from that

of transportation model to that of a system readiness model and that of a transportation model to that of the highly skilled medical care that is provided to the patient, regardless is the patient is transported. Both Medicare and Medicaid admit to underfunding EMS, and both lack any true accommodation for the cost of readiness associated with EMS. Rising costs, decreased volunteerism, staffing shortages, and no significant adjustment in revenue have led to much of the associated issues surrounding EMS statewide. In the NEMSAC Advisory, EMS System Funding and Reimbursement, December 2, 2016 they report that EMS funding has mostly been centered on the transport of patients and there must be a shift to one based on performance and patient care services and the cost of readiness.

NEMSAC Advisory EMS System Funding and Reimbursement NATIONAL EMS ADVISORY COUNCIL COMMITTEE REPORT AND ADVISORY Current status: FINAL as of December 2, 2016 Committee: Finance Title: EMS Funding and Reimbursement Version: FINAL

The National EMS Advisory Council (NEMSAC) was established in April 2007 as a nationally recognized council of EMS representatives and consumers to provide advice and recommendations regarding EMS to NHTSA in the Department of Transportation and to the members of the Federal Interagency Committee on EMS.

Issue Synopsis:

EMS funding to date has been centered on transport of patients. To promote more cost-effective care and recognize the professional healthcare role EMS provides, there must be a fundamental shift in funding paradigm to one based on performance and patient care services.

Problem statement:

Emergency Medical Services (EMS) Systems are incredibly diverse across the United States and are generally not accorded the status of an

“essential service” (that is, a service that the government is required, by law, to provide to its citizens). EMS varies in clinical sophistication, deployment strategies, performance standards, and governance. EMS Systems also vary considerably in how they are funded. Emergency Medical Services is defined as “pre-hospital and out of hospital EMS, including 911 and dispatch, emergency medical response, field triage and stabilization, and transport by ambulance or helicopter to a hospital and between facilities”. Ambulance services are a critical component of an EMS System and the health care safety net which have historically been primarily funded by user fees. In certain locations, local tax subsidies have also been used to offset costs for all EMS System components.

It is generally recognized that financing EMS has many challenges and that the methods are fragmented, conflicted and often underfunded. The first challenge is that federal health care policy currently reimburses ambulance service as a transportation benefit. In general terms, the ambulance must transport the patient to a hospital emergency department (ED) to receive compensation from federal payers and most commercial insurance companies.

Acknowledging that not all patients require a trip to the ED, but that the assessment and care provided to such patients remains valuable, is an important step toward bringing financial stability to the industry and reducing overall health care expenditures. With the growing sophistication of EMS Systems, pilot programs have shown that EMS crews can deliver definitive care at the scene of the emergency, thus obviating the need for transport. Proactive EMS evaluation; response, assessment, treatment and referral at the scene by EMS without transport to an ED and transportation to alternative destinations by ambulance are often viable options to safely care for the general public. However, insurance will not typically cover these services and the patient may be liable for one hundred percent of the fees associated with these services. In the typical scenario, EMS responds to a medical

need, the patient is assessed, treated and transported to the ED, insurance is billed, the service is covered (decreasing the patient's out-of-pocket costs), and the ambulance agency is generally compensated for the care it appropriately provided

Due to the unique nature of the service delivery model, EMS agencies provide an increasing number of responses where no reimbursement is available. For example, EMS is called to an emergency scene by law enforcement to assess a patient at a motor vehicle accident at significant cost. If the patient is appropriately assessed, treated, and referred to another health care provider but NOT transported, no reimbursement is available by insurance companies. Costs were still incurred for readiness to respond, as well as for the actual response, assessment and treatment. Policies vary among EMS agencies regarding whether patients are billed for a response without transport.

A second issue threatening the future viability of EMS is the inadequacy of federal reimbursement rates in covering the cost of providing services. Similar to other healthcare safety net providers, like hospital emergency departments, a significant portion of the costs associated with EMS are directed to achieving and maintaining readiness and to responding in a timely and effective manner. According to the Institutes of Medicine, "EMS costs include the direct costs of each emergency response, as well as the readiness costs associated with maintaining the capability to respond quickly, 24-hours a day, 7-days a week." Those costs include 24x7 staffing levels based on call demand experience, response time reliability, level of service provided, competency training, costs of equipment and supplies, and administrative expenses. These costs are inherent in the delivery of service and must be adequately accounted for in the reimbursement models.

EMS response is reported to be at the intersection of healthcare, public health, and

public safety, yet reimbursement by health insurance providers is often the only source of funding. Local government funding of EMS and ambulance service varies widely across the United States and is subject to change annually. The changes may be unrelated to the cost of providing the service. For example, local government funding only subsidizes the first response component and not ambulance service. In other areas, local government subsidizes uncompensated care. Often times, no local government subsidies are provided for any EMS activities.

Federal, state and local grant sources are often restricted to certain EMS agencies based on provider type. Non-governmental EMS agencies are often not eligible for federal grant funding.

Ambulance services provide significant levels of uncompensated care, including charity care provided to the uninsured and below-cost reimbursement from Medicare, Medicaid and other government insurers, about double the amount compared to other healthcare provider groups (American Ambulance Association, 2008). Virtually no state funding and no federal funding are provided to offset uncompensated care and charity care.

The Medicaid coverage expansion required under the Accountable Care Act will reduce, but not eliminate, charity care for EMS and does not address below-cost reimbursement by Medicaid and Medicare. The significant cost burden of uncompensated care will continue to be shifted to commercial insurers unabated because of severe underfunding.

The current cost survey model under consideration by the U.S. Congress would provide the information necessary to provide much needed insight on these points as well as set the stage for the modernization of the Medicare ambulance benefit.

These two issues – (1) the need to recognize the provision of health care services performed by

ambulance providers and (2) the need for standardized cost data – contribute to the complexity of financing EMS Systems. In a fee-for-service setting, uncompensated care has always been a great challenge. While the recent federal health care reform initiative (i.e., the Accountable Care Act, known as the ACA) intends to reduce uncompensated care, it has created a burgeoning level of under-compensated care. A pathway to adequately assess EMS System costs

In 2017 Medicaid produced the EMS Adequacy report which indicated EMS was underfunded/ or adapt CMS cost data collection recommendations

The following is from MRT, NYS Medicaid Redesign Team, June 2017. "Boo-Yah! Report (ny.gov)

#9304 Ambulance Transportation Rate Adequacy (DPDM) The 2016-17 Enacted State Budget (Chapter 59 of the Laws of 2016) requires the Commissioner of Health to “review the rates of reimbursement made through the Medicaid program for ambulance transportation for rate adequacy” and to report the findings of the review to the President of the Senate and the Speaker of the Assembly by December 31, 2016. The Department completed the required report and submitted it to the Legislature last March. The Department conducted an ambulance transport cost analysis with the information available and recommends adjusting the current Basic Life Support (BLS) and Advanced Life Support (ALS) rates to 75 percent of the average per ambulance trip cost. The resulting increase in the current Medicaid ambulance reimbursement rates would have an annual cost estimated at \$31.4 million (non-federal share \$15.7 million). The Department recommended that increases in the Medicaid ambulance rates be phased in over a multi-year period depending on available resources within the Medicaid Global Spending Cap. In addition to increasing the ambulance rates in 47 counties and New York City, the Department’s recommendation would achieve greater statewide rate standardization, thereby moving toward overcoming the rate disparities among counties resulting from the legacy of local departments of social services administration of

Medicaid transportation. Counties with rates higher than those proposed will be held harmless from any reductions resulting from aligning the new rate increases. The Department included a \$6 million investment in State Fiscal Year 2017-18 Executive Budget, but this recommendation was rejected by the Legislature.

Recommendations

1. Medicaid reassessment and reform
 - a. Immediate Temporary Increase to Medicaid
 - b. Work with the office of Medicaid and the elected officials to create a temporary significant increase to the NY Medicaid ambulance rate within 90 days. New York Medicaid should increase the ambulance Medicaid rate to closer meet actual costs incurred and more consistent with Medicare and other Insurance companies.
 - c. After completion of the cost reimbursement study by Medicaid work with Medicaid to redevelop the reimbursement model to ensure long-term stability of EMS over the next two years.
 - d. Create a rural EMS Medicaid rate. Historically cost of readiness is higher in rural settings due to longer distances and lower volumes. Creating a rural and super rural fee schedule like Medicare. Work with NY Medicaid and the elected officials to create a rural Medicaid reimbursement structure within the next 6 months.
 - e. Work with Medicaid to conduct a reimbursement and cost study of EMS to base

- future Medicaid reimbursement for EMS within one year.
- f. Implement the proposed Medicaid assessment program
 - g. Legislatively implement proposed Medicaid assessment program to minimize the burden of increasing Medicaid reimbursement on the tax payer within 60 days of the next legislative session. This program will significantly increase Medicaid revenue for EMS agencies.
 - h. Work with Medicaid to redevelop the reimbursement model
 - i. Ask the state to develop an appropriate reimbursement rate for EMS. To align with costs of readiness
2. Work with the legislature to create a requirement that all counties have EMS coordinators to improve oversight of the system within the next two years.
 3. Consistent with the recommendations in the revised Part F, the State Emergency Medical Services Council (SEMSCO) develop a Statewide EMS plan by December 31, 2023. The state emergency medical services council, in consultation with the department, shall develop and maintain a statewide comprehensive emergency medical system plan that shall provide for a coordinated emergency medical system in New York State.
 4. Develop educational materials for elected officials, media outlets, and the general public that outlines the role of EMS and discusses the challenges being faced. Work with advocacy organizations SEMSCO, BEMS&TS to develop education for elected officials, the media, and the general public prior to the next legislative session. In order for legislation to be effective our elected officials are being asked to work all legislative efforts through the SEMSCO as by its organizational structure equally represents all disciplines.
 5. Support funding for the SEMSCO working with advocacy organizations and other stakeholders to create a united marketing campaign for EMS across the state prior to the next legislative session in order to recruit EMS providers and promoting EMS education. Collaborate with advocacy organizations to develop a united marketing campaign for EMS in New York State.
 6. Develop a state subsidy or grant program (with support from the Federal government) to provide financial relief for EMS agencies to improve to meet quality response metrics as defined by the SEMSCO and the Department. The subsidies or grants should be channelled through REMSCO's and Program agencies, to Counties or geographical regions to facilitate reaching the goal of meeting quality response metrics, provide funding for consolidation and mergers, or other methods which develop county or regional EMS systems. Work with elected officials and the Department of Health to create a subsidy or grant program to all allow EMS agencies in need to have access to funding withing three months of the start of the next legislative sessions. The state creates a subsidy program open to all EMS agencies based of operational quality metrics, or grant programs geared to improve operational quality metrics with contingency requirements.
 7. Many states have created grant programs for EMS agencies to offset loss. Requiring sustainability plans and threshold qualifications. Initial funding

based on approved plan; subsequent funding based off performance (36 million, 2 million per region) managed by the REMSCO's.

8. Work with the department of health and legislature to designate a safety net provider status for EMS to allow for improved reimbursement in geographic areas with poor insurance within 6 months of the next legislative sessions. This would allow for funding to be made available for funding in low insured and high Medicaid areas.
9. County EMS Coordinators. Counties should be required to have dedicated EMS Coordinator to ensure adequate EMS support from local government.
10. Support and recommend the addition of Full-time staff embedded in the BEMS to support the work of the SEMSCO.
11. The TAG supports the 2023-2024 revisions to the 2022-2023 Part F Budget and request that the Governor and Legislature adopt the proposed changes.