

THE CLASS OF 1964 POLICY RESEARCH SHOP

EMS WORKFORCE SHORTAGE IN NEW HAMPSHIRE



PRESENTED TO THE NEW HAMPSHIRE SENATE COMMITTEE ON EXECUTIVE
DEPARTMENTS AND ADMINISTRATION

Senator Sue Prentiss, Committee Member

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EXECUTIVE SUMMARY

New Hampshire is facing a shortage of Emergency Medical Service (EMS) workers. This shortage is impacting residents statewide, compromising the system's ability to adequately respond to health care emergencies. Based on stakeholder interviews and a comprehensive literature review, we detail the impact of the EMS personnel shortages on the New Hampshire healthcare system and explore possible legislative solutions to address it. We recommend that New Hampshire implement a variety of financial and non-financial measures to respond to personnel shortages. Our recommendations are based on (1) a comprehensive literature review of the current state of EMS in New Hampshire, (2) a comparative analysis of EMS systems in Maryland and Maine to understand potential solutions and their projected efficacy, and (3) stakeholder interviews that shed light on the potential for implementing EMS training, recruitment, and retention solutions.

1 INTRODUCTION

Like many other states, New Hampshire is experiencing an EMS workforce shortage. According to a report by the NH Department of Safety's Division of Fire Standards and Training & Emergency Medical Services, the state is facing a critical shortage of EMS personnel, including emergency medical technicians (EMTs) and paramedics. This shortage is impacting residents statewide, compromising the system's ability to adequately respond to health care emergencies.¹

The report notes that the EMS workforce shortage is due to a number of factors, including an aging population, a decrease in the number of individuals pursuing EMS careers, and the high level of training and education required for EMS personnel. Additionally, many EMS professionals have left the field due to the COVID-19 pandemic, which has put a strain on the entire healthcare system.

The NH Department of Safety has been working to address the shortage by offering training and education programs for EMS personnel, providing financial incentives for EMS providers, and partnering with local organizations to recruit and retain EMS professionals. However, the shortage is an ongoing challenge that will require ongoing efforts to address.

The EMS shortage in New Hampshire has had several impacts on the state, including:

- *Longer response times:* Due to the shortage of EMS personnel, response times to emergency calls have increased in many areas of the state. This can be particularly problematic in rural areas, where there are fewer EMS providers available.
- *Increased workload for existing personnel:* With fewer EMS personnel available, those who remain in the field are often forced to take on additional responsibilities and work longer hours. This can lead to burnout and decreased job satisfaction, which can further exacerbate the shortage.

- *Reduced access to emergency medical services:* The shortage of EMS personnel can also result in reduced access to emergency medical services, particularly in rural areas. This can lead to delays in treatment and, in some cases, may even result in preventable deaths.
- *Increased costs:* The EMS shortage can also lead to increased costs for both EMS providers and patients. For example, some private ambulance companies may charge higher rates for their services due to the increased demand for EMS personnel.
- *Strain on hospitals:* When EMS personnel are not available, patients may be forced to seek treatment at hospitals, which can put a strain on emergency departments and other healthcare facilities.

1.1 New Hampshire Emergency Medical Services

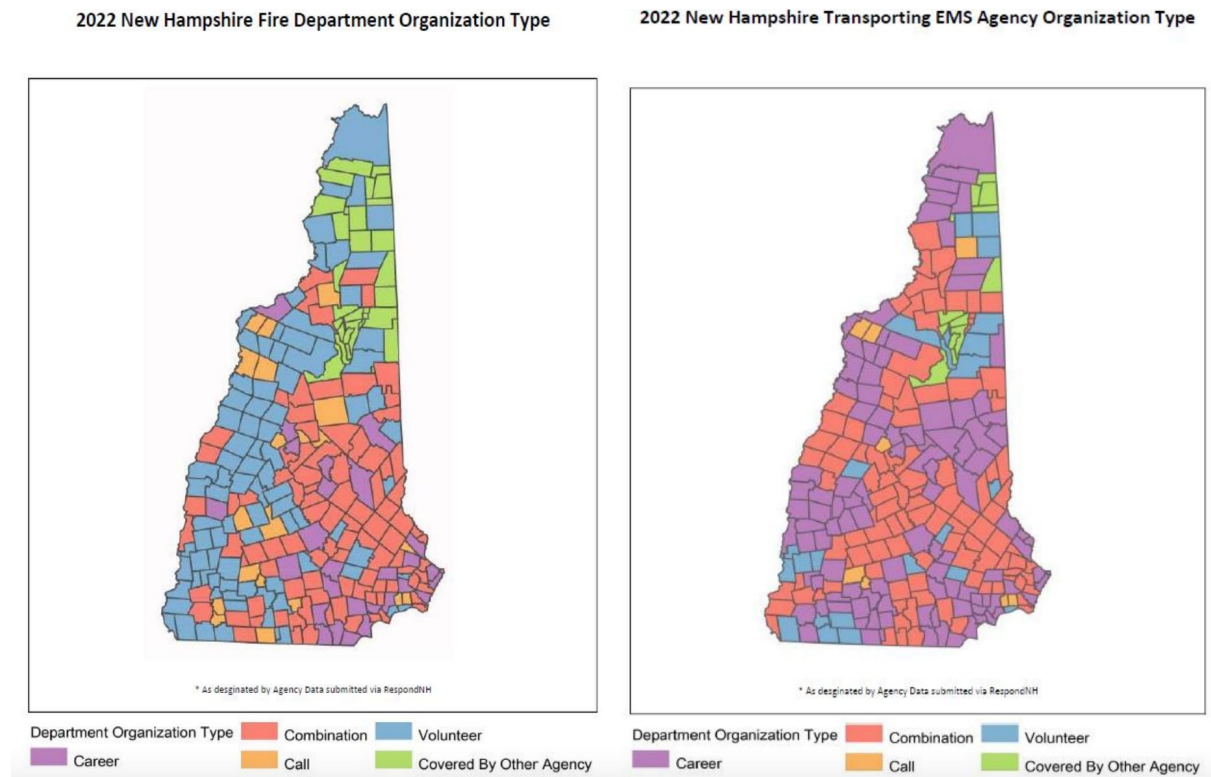
In New Hampshire, EMS are structured in four different ways – there are career, on-call, combination, and volunteer departments. There are also four types of EMS organizations including municipal, government third service, private, and hospital based.² These variations enable each community in New Hampshire to structure their fire and EMS systems based on their own unique needs.

Career organizations employ firefighters and EMS personnel as full-time employees. Staffing levels are dependent on the size of the response area, level of service provided, and financial resources of the community. Members of on-call fire departments and EMS services provide support only as needed, often in addition to having other careers. Volunteer fire and EMS departments function similarly to on-call departments except that their members receive no financial compensation.³ Combination fire departments use both career and on-call members to provide enough personnel to adequately respond to the number of incidents at any given time. Figure 1.1 displays how fire and EMS agencies are organized in New Hampshire by town.

1.2 Licensure and Certification Processes

All licensed EMS unit organizations and full-time fire departments operate under the requirements of state guidelines. Prospective Emergency Medical Technician (EMT) candidates in New Hampshire must complete an EMT training program at a state-approved training college or institute and then pass an exam organized by the National Registry of Emergency Medical Technicians (NREMT). The NREMT is the largest certifying body for EMS professionals with 46 states using its standards as the basis for licensure. New Hampshire state standards, therefore, are connected to a system of national recognition and registration.

Figure 1.1: Geographic distribution of fire department organization type (left) and transporting EMS agency organization type (right) in 2022.⁴



Firefighters are also regulated by state law. New Hampshire State RSA 21-P: 25 directs the minimum educational, training, and selection standards for career firefighters. These include the need for candidates to have a high school diploma or equivalent, be a citizen of the United States, and be at least eighteen years old. There are no minimum requirements to become an on-call or volunteer firefighter so these standards are defined by each department and their own governing body.⁵

There are four types of EMS licenses in New Hampshire approved by the Division of Fire Standards and Training and Emergency Medical Services: Emergency Medical Responder, Emergency Medical Technician, Advanced Emergency Medical Technician, and Paramedic⁶. Progressively, each certification requires greater training hours and a higher course fee.

Emergency Medical Responder (EMR): EMRs are trained in basic first aid and CPR. They are typically the first responders to emergency situations and their primary responsibility is to provide immediate care until more highly trained medical professionals arrive on the scene. EMRs do not transport patients.

Emergency Medical Technician (EMT): EMTs have completed a more comprehensive training program that includes advanced skills in patient assessment, airway management, and the use of basic medical equipment. They are able to provide basic life support (BLS) measures, such as administering oxygen, controlling bleeding, and providing medication in certain circumstances. EMTs are able to transport patients to medical facilities.

Advanced EMT (AEMT): AEMTs have completed additional training beyond EMT level and have a broader range of skills. They are able to provide advanced life support (ALS) measures, such as administering IV fluids, advanced airway management, and administering medications beyond what is permitted for EMTs. AEMTs are also able to transport patients to medical facilities.

Paramedic: Paramedics have the highest level of EMS training and are trained to provide the most advanced life support measures. They are able to perform invasive procedures, such as intubation and chest decompression, and can administer a wide range of medications. Paramedics work closely with other medical professionals in the hospital setting to provide ongoing care to patients.

In summary, as the level of training and skills increases, so does the ability of the EMS provider to provide more advanced care and treatment to patients.

Table 1.2.1: EMS license data in New Hampshire.⁷

EMS License	Minimum Training Length	Average Cost per Program	Training Programs Held in 2021	Number of Licensed NH EMS Providers in July 2022
EMR	48 hrs	\$750-\$1,000	15	211
EMT	150 hrs	\$1,200-\$1,700	63	2,605
AEMT	200 hrs	\$1,500	19	1,374
Paramedic	1,200 hrs	\$12,000 *\$22,000 for an Associate's Degree in Paramedicine	3	1,185

Over time, the duties of firefighters have expanded to meet the needs of communities, increasingly including some degree of emergency medical care and transportation. Although fire suppression remains the primary responsibility of most departments, out of 270 licensed EMS Units, 195 are fire departments.⁸ Fire services are now responsible for 60 percent of the population transported by an EMS agency.⁹ As such, the total number of licensed EMS providers includes a combination of firefighters and EMS providers within other types of units.

1.3 New Hampshire Demographics

The population of New Hampshire is an aging one, which is especially pertinent to the needs of an EMS system. Additionally, the statewide population is growing in size and becoming increasingly diverse.¹⁰ New Hampshire has the second oldest population in the United States, with a medium age of 43.1 years, and 18.7 percent of the population being over the age of 65 years.¹¹ While the majority of the population is white (89.1 percent), the ethnic makeup of the state is diversifying—in the past ten years the Hispanic population has increased by 4.4 percent.¹² The population is increasing particularly in urban areas of the state, whereas in certain rural counties it is decreasing. The total population of the state, however, has increased each year for the past eleven years, anywhere from .2 to 1.5 percent a year.¹³

2 CURRENT NEW HAMPSHIRE EMS SITUATION

Previous work has been conducted to propose ways in which the state of New Hampshire can address this crisis. Specifically, the Fire and EMS Recruitment and Retention Ad Hoc Committee Report was released in August 2022, outlining ways to help fire and EMS organizations throughout New Hampshire recruit and retain members. The report provides state level, local level, and general recommendations.¹⁴ While some target specific requirements or tax incentives, the majority suggest widely applicable strategies and ideas. These recommendations are broadly categorized into five main efforts:

1. Increase diversity, equity, and inclusion
2. Make licensure and certification processes more accessible
3. Improve safety measures to address burnout
4. Develop improved internal and external communication for data analysis and marketing
5. Implement recruitment strategies through apprenticeship and mentorship programs

Out of the multiple methods focused on increasing the number of EMS personnel, educational opportunities and training subsidies offer proactive solutions. Our preliminary research suggests that this area could be a promising research focus moving forward. By targeting the recruitment side of the workforce, efforts can focus on increasing the number of individuals joining EMS.¹⁵ Reducing costs of registration, courses, and licensing, lowers the entry barrier to the EMS industry. This solution can be implemented through subsidies to EMS training: state funds can be used to remove or reduce the cost required for the individual clinician. The other solution on the input side is to encourage EMS education in programs throughout the state to increase awareness of the EMS profession.¹⁶ Subsidizing EMS education in community colleges, technical schools, and high school programs would provide the industry with greater visibility. Additionally, incentivizing colleges, universities, and fire departments to require a rotation shadowing EMS professionals for students would increase the

awareness and possible attraction to the EMS field.¹⁷ A final solution works within existing EMS infrastructure, utilizing fire departments and hospitals to offer EMS apprenticeships for students to gain exposure to working within EMS.

3 DECLINING EMS EMPLOYMENT

3.1 Workforce Shortage

The difficulty experienced in the recruitment and retention of EMS personnel in New Hampshire is based largely on anecdotal feedback from department leaders. While there is currently no cohesive statewide data on what EMS positions need to be filled, many career departments report that they previously had more potential candidates competing throughout the hiring process. On-call and volunteer department leaders also report increased difficulty in recruiting new members. This is consistent with a national poll that almost 70 percent of rural EMS providers report difficulty in adequately meeting staffing needs. Ensuring that EMS clinicians remain in the field is also a challenge – a 2018 study found that the two most prominent reasons for individuals leaving EMS employment were a desire for a career change and dissatisfaction with pay and benefits.¹⁸ This pattern directly impacts patient care, especially for less urgent actions such as inter-facility transfers. The capacity to safely transport patients is necessary to maintain stability at all points across the system of emergency response and patient care.

The decline in EMS personnel has been a long-term trend. The COVID-19 pandemic, however, increased pressure across all aspects of health care, heightening the pre-existing shortage. In April 2021, a national survey of EMS leaders conducted by the National Association of Emergency Medical Technicians (NAEMT) found that 8 percent of responding agencies had experienced a line of duty COVID-19 death within their EMS personnel.¹⁹ Health concerns stopped individuals from volunteering, placing even greater strain on those who remained. Departments reported greater stress, burnout, and fatigue while also highlighting the necessity of their care due to a dramatic uptick in mental health calls.²⁰ This moment has brought EMS safety and well-being to the forefront of public awareness, presenting an opportunity to address needs across the entire system.

There is a strong consensus among those interviewed that EMS providers in New Hampshire receive insufficient pay and benefits to be incentivized to stay in their line of work. The vast majority of EMS personnel are volunteers, and it is challenging for these individuals to dedicate personal time and expense to serving their communities. Of those EMS personnel who are paid, pay is such that many individuals reportedly work two to three jobs to make ends meet and state that their income from EMS alone is not enough to meet their budgeting needs. EMTs in New Hampshire are paid a mean hourly wage of \$17.62, which is equivalent to an annualized mean salary of \$36,650.²¹ Furthermore,

many pay out of their own pockets to receive EMS certification training.²² EMS leaders admit that working in EMS as a volunteer or paid employee carries high opportunity costs, because individuals can find significantly higher paying jobs in other industries, some of which require little to no formal training. This pay limitation has shown to increasingly negatively impact the EMS shortage as the rate at which EMS workers leave the industry has been drastically increasing over the years, with most recent data finding that nearly all EMS workers leave the field within 3-4 years, with nearly 100% turnover rate within that time period.²³

3.2 The Politics of EMS

In August of 2021, New Hampshire Senate Bill 133 repealed the EMS personnel licensure interstate compact. These types of compacts exist across a wide variety of industries, utilizing a centralized database to coordinate the recognition of personnel and training across states. For EMS, such an agreement made it slightly easier for departments to hire qualified employees who were not yet licensed in New Hampshire. By streamlining the reciprocity process, interstate compacts can be a short-term piece of a broader solution. The Firefighters Union, in particular, was opposed to the interstate compact due to fears that it could be used to replace striking workers or increase competition such that overtime hours would be diminished.²⁴

4 EMS Funding in New Hampshire

4.1 Existing Funding Mechanisms

EMS efforts in the United States are funded and supported by several federal programs and initiatives. Some of the main federal funding and interventions for EMS in the US include:

- **EMS Grant Programs:** The Department of Homeland Security (DHS) provides funding for EMS through several grant programs, including the Assistance to Firefighters Grant (AFG) Program, the Staffing for Adequate Fire and Emergency Response (SAFER) Program, and the Emergency Management Performance Grant (EMPG) Program. These grants provide funding for training, equipment, staffing, and other needs for EMS agencies.
- **Medicaid:** Medicaid is a federal-state partnership that provides health insurance to low-income individuals and families. Many states use Medicaid to fund EMS services, including ambulance transportation and emergency care.
- **Medicare:** Medicare is a federal health insurance program for people aged 65 and older and for people with certain disabilities. Medicare provides coverage for ambulance transportation and emergency medical services for eligible beneficiaries.

- National Highway Traffic Safety Administration (NHTSA): The NHTSA is a federal agency that provides funding and support for EMS through its Office of EMS. This office provides resources and training for EMS providers, as well as research and data analysis to improve EMS systems nationwide.
- Federal Emergency Management Agency (FEMA): FEMA provides support for EMS through its National Preparedness Directorate, which offers training and resources for emergency responders, including EMS providers.²⁵

4.2 Current Sources of Funding

New Hampshire Department of Safety, Division of Fire Standards and Training and Emergency Medical Services (NH DFS/EMS) oversees EMS services throughout the state. The NH DFS/EMS administers several grant programs that provide funding to EMS agencies for equipment, training, and other needs. These grant programs include the State Homeland Security Program, the Emergency Management Performance Grant, and the State Fire Training and Education Program. The funding from the state in fiscal year 2023 totals just under \$18 million.

In addition to state funding, EMS agencies in New Hampshire also receive funding through Medicaid reimbursements. Medicaid provides coverage for ambulance transportation and emergency medical services for eligible beneficiaries.²⁶ For the state of New Hampshire, ambulance services cost \$33 per mile, and Medicaid reimburses and covers nearly two-thirds of the cost at \$23 per mile. The rest is charged to insurance or the individual.

User fees are another source of funding for EMS agencies in New Hampshire. These fees are charged to patients who receive ambulance transportation or other EMS services. The fees are used to cover the cost of providing these services and to help offset the cost of equipment, training, and other expenses.

For the smallest EMS departments in New Hampshire, which may be volunteer-based and serve a small rural community, funding may primarily come from local sources such as property taxes, municipal budgets, or fundraising efforts. This is a result of much of the reimbursement rate being based upon the amount of services provided and number of patients. In some cases, these departments may receive limited state or federal funding, but this can vary widely depending on the availability of grants and other funding sources. The exact amount of funding for the smallest EMS departments can be difficult to estimate, as it can vary widely depending on the specific department and community.

For most EMS departments in New Hampshire, which may serve a larger urban area or multiple communities, funding comes from a variety of sources including local, state, and federal funding. For

example, the Manchester Fire Department, which operates EMS services for the city of Manchester, has a budget of approximately \$56 million per year, with funding coming from a variety of sources including city appropriations, grants, and fees for service. According to the department's website, the EMS division is supported by a combination of city funding and billing for services, with no additional funding from state or federal sources.

Overall, the funding breakdown for EMS departments in New Hampshire typically includes a mix of local, state, and federal funding sources. According to the New Hampshire Department of Safety, Bureau of Emergency Medical Services, in 2020, approximately 55 percent of EMS funding in the state came from local sources, 39 percent from state sources, and six percent from federal sources. However, this breakdown can vary widely depending on the specific department and community.

4.3 Current Situation by County

Table 4.2.1 Number of EMS agencies/providers data by county.

County	Licensed EMS agencies	Licensed EMS providers
Belknap	9	346
Carrol	7	239
Cheshire	9	377
Coos	8	281
Grafton	14	585
Hillsborough	57	2,394
Merrimack	15	634
Rockingham	31	1,441
Strafford	12	534
Sullivan	7	254
Total	169	7085

In New Hampshire, EMS services are primarily provided by fire departments, private ambulance services, and volunteer rescue squads. These entities may operate in different ways depending on the

county and the needs of the community. There are 10 counties in New Hampshire, and each county has its own EMS system.

The New Hampshire Bureau of Emergency Medical Services (NHBEMS) is responsible for regulating and overseeing EMS services throughout the state, including those provided by county-level EMS systems. The NHBEMS is responsible for ensuring that all EMS agencies meet state and federal standards for training, equipment, and service delivery.

According to the most recent data from the NHBEMS the number of licensed EMS agencies and providers by county in New Hampshire are as shown in Table 4.2.1. It is important to note that these numbers may change over time, as EMS providers may enter or exit the market and entities may shift their operational strategies. Nonetheless, these figures provide a general snapshot of the types of EMS providers operating in each county in New Hampshire.

5 Comparative Analysis Between States

In addition to gathering data on New Hampshire's EMS shortages and possible solutions, it is critical to understand how similar trends are being managed in other locations. We are particularly interested in analyzing New Hampshire alongside comparable states as well as areas widely regarded as having the most successful EMS programs. To better examine solutions for New Hampshire's EMS workforce shortages, we conducted a comparative analysis of how other states are managing similar workforce issues. This section examines how Maine and Maryland, states with EMS-relevant characteristics that are similar to those of New Hampshire, are implementing endogenous policy solutions to tackle workforce shortages.

In our comparative analysis, we seek to understand how other states and cities have adapted to the EMS workforce shortage. Where possible, we assess the magnitude of EMS personnel shortages, and its impact on the healthcare system, in each location. We also evaluate state licensing procedures, and whether certification processes have been adapted to address these personnel shortages. Lastly, we discuss solutions proposed in Maine and Maryland, and where possible, provide efficacy statistics. In later sections, we also discuss whether any of these solutions align with those being discussed in New Hampshire.

At the outset we note the different pay for EMTs and paramedics in New Hampshire's sister states, Vermont and Maine, and Maryland, as shown below²⁷:

Table 5.1.1: EMS pay by provider type in New Hampshire, Vermont, Maine, and Maryland

State	EMS personnel type	Mean hourly wage	Annualized mean wage
New Hampshire	EMT	\$17.62	\$36,650
	Paramedic	\$28.18	\$58,620
Vermont	EMT	\$18.09	\$37,630
	Paramedic	\$23.51	\$48,910
Maine	EMT	\$17.65	\$36,710
	Paramedic	\$24.10	\$50,130
Maryland	EMT	\$26.01	\$54,110
	Paramedic	\$29.96	\$62,310

5.2 Maine

Maine has an extremely similar population size to New Hampshire, and 90.2 percent of the population is white, a racial composition which largely mirrors that of New Hampshire and the greater New England area.²⁸ Furthermore, Maine and New Hampshire have the two oldest populations in the country.²⁹ Like New Hampshire, Maine has a similar clustering of EMS providers and contains only one Level I trauma center that serves a large population.³⁰ Trauma centers are able to provide intensive care for the most severe of injuries and ailments, and thus become a focal point for medical care across a wide area. Consequently, Maine and New Hampshire’s EMS systems are structurally similar in that they are designed around a single medical institution for high-level care.

EMS workforce issues are significantly affecting the delivery of EMS services in Maine, resulting in delayed emergency response times and to an overworked and overstressed workforce. The Maine State Blue Ribbon Commission on EMS found that EMS in Maine is at “a breaking point.”³¹ Maine’s EMS workforce consists mostly of volunteers and an “underpaid” workforce.³² The Commission finds that the underlying causes of workforce problems are two-fold: the decline in volunteerism and struggles in employee and retention primarily caused by “inadequate compensation and benefits offered to many EMS employees.”³³ The average annual salary for an EMT in Maine ranges from \$29,225 to \$35,542, while a paramedic’s salary varies from \$38,836 to \$53,244, both depending on location.³⁴ EMS services in Maine face significant funding issues. Consequently, services cannot provide their employees with standards of compensation, benefits, and working conditions that can reliably attract employees. Such recruitment problems make it harder to sustain workforce sizes that can deliver EMS services effectively across the state. A recent Maine Department of Labor (MDOL)

survey indicated that EMS services find it difficult to hire EMTs, AEMTs, and paramedics, and as a result, they have to rely on *per diem* staffing and volunteer positions to meet their workforce needs.³⁵

There is some dissonance between difficulties in recruiting and retaining EMS personnel and sustained (if not increasing) demand for EMS educational and training programs from students and providers alike. Various organizations, such as regional EMS offices, private ambulance services, and the Maine Community College System, offer training opportunities for different levels of EMS personnel. The MDOL has also implemented the Healthcare Training for ME program in collaboration with other state agencies and the University of Maine System. This initiative provides continued healthcare training and career advancement opportunities to participants. However, there are concerns that the funding for both participants and educators of these programs is still insufficient, and traditional EMS fields have struggled to retain individuals who complete these programs.

Potential solutions under consideration in Maine mostly entail financial incentives for EMS employees and volunteers. The Maine State Blue Ribbon Commission made the following formal recommendations to address workforce recruitment and retention issues.³⁶

- *Provide certain staff access to the Maine State Retirement System:*

The Commission recognized that insufficient compensation and benefits offered to EMS employees constitute a primary cause of recruitment and retention issues. The Commission recommended that the state legislature consider providing staff of non-governmental, non-profit licensed EMS services access to the Maine State Retirement System and to the State of Maine healthcare benefits. Many of Maine's 272 licensed EMS services are run by municipal governments and hence offer staff access to the Maine State Retirement System. However, staff of nongovernmental EMS services face much more uncertainty in terms of benefits and may or may not receive retirement benefits through their employers. Hence, allowing licensed non-profit EMS employees access to State retirement benefits and healthcare benefits may help attract and retain staff for these critical services.

- *Grant retirement credits to eligible volunteers:*

Under the Length of Service Award Program (LOSAP), enacted in 2015, eligible volunteers can receive retirement contributions.³⁷ Eligible volunteers include active part-time or on-call members of fire departments, volunteer firefighters, and licensed EMS personnel or ambulance operators who provide emergency medical services on an on-call, part-time, or volunteer basis. However, LOSAP has had limited success, partly because the state secured only three one-time funding initiatives, totaling \$2 million. There is also no dedicated funding source for the LOSAP.

5.3 Maryland

Maryland consists of extremely rural communities on the eastern shores and western regions of the state. This rurality is quite like New Hampshire's.³⁸ Furthermore, Maryland also has a Level I trauma center that also services surrounding states. Like how the Dartmouth Hitchcock Medical Center services Vermont and other New England states, Maryland helps service Delaware and Virginia.³⁹ Unlike Maine and New Hampshire, however, Maryland also has some of the best response times in the country. Maryland is responding to workforce-related pressures by implementing new flexibilities to its recruitment and retention policies. We acknowledge that some of Maryland's successes may be correlated to some degree with demographic characteristics that are dissimilar to those of New Hampshire; Maryland has a larger population, one of the highest average incomes nationwide, and a higher proportion of the population living in urban and suburban areas.⁴⁰

Education & Training

The majority of individuals who join Maryland's EMS system begin by taking an initial EMT clinician course. The number of new EMTs entering the system historically varies. Estimates indicate that hundreds of new EMTs enter the workforce each year.⁴¹ After receiving their EMT certification, many of these individuals move on to the advanced life support (ALS) level. Although most continue to be employed the Maryland EMS system, some graduates do explore other opportunities in the healthcare field. Table 5.3.1 displays the number of clinicians in Maryland. For several years, except for FY2021, the number of licensed/certified clinicians at each EMS level have been decreasing. The uptick in FY2021 can be attributed to the creation of almost 1,500 provisional clinicians to help the medical system during the COVID-19 pandemic crisis.

*Table 5.3.1: Number of EMDs, EMRs, EMTs, CRTs, and Paramedics in Maryland⁴²
(includes Current, Extended, and Military Status; Excludes lapsed, inactive, and expired)*

Level	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022*
EMD	1,320	1,377	1,066	1,110	1,210	1,052
EMR	1,589	1,136	662	603	652	464
EMT	16,069	15,485	14,853	14,875	15,501	14,763
CRT	619	587	575	546	509	441
Paramedic	3,336	3,278	3,491	3,573	3,787	3,724
Total	22,933	21,863	20,647	20,707	21,659	20,444

**July 1, 2021 - September 1, 2022; all other years reported are shown by fiscal year ending June 30*

Recruitment Efforts

Following national trends, the attrition rate for EMTs in Maryland is higher than the recruitment rate.⁴³ Attrition rates were made worse by the COVID-19 pandemic. The shortage of EMTs puts a strain on the EMS system, which needs to respond to over one million calls for assistance each year in Maryland.⁴⁴ To address this problem, the Maryland Institute for Emergency Medical Services Systems (MIEMSS) introduced a stipend program in 2022 to encourage more students to enroll in EMT courses, reduce the attrition rate, and increase the number of certified EMTs. The program offered up to 500 students a \$2,000 stipend, which is distributed in increments throughout the course training. The increments were: \$200 for passing the first assessment (Module 1 or equivalent), \$300 for passing the second assessment/halfway point (Module 2), \$300 for completing the EMT course, \$200 for finishing the MIEMSS internship package, and \$1,000 for passing the National Registry of EMT cognitive exam within three attempts, which is required for certification in Maryland.⁴⁵

The stipend program has generated a lot of interest since the beginning of 2022, resulting in a seven percent increase in applications to EMT training from 2021.⁴⁶ The program is made possible by grants from the Maryland Department of Health's Office of Preparedness and Response and the Center for Disease Control & Prevention. The grant program can support the certification of up to 500 students and will conclude in 2023. The stipend program has currently filled all 500 slots. Should any of these participants fail to meet the required milestones, the remaining funds will be used to support other candidates who previously expressed interest in joining the program.⁴⁷ As of the time of writing of this report, 80 individuals who are part of the stipend program successfully completed the EMT training course.

Another source of positive recruitment tactics was the MIEMSS Volunteer Responder Incentive Protection Act (VRIPA), which is a stipend program designed to incentivize and retain volunteer EMS providers in Maryland. The VRIPA program provides a tax credit of up to \$5,000 for eligible volunteer EMS providers who serve for at least 36 hours per quarter in an authorized capacity. The program is designed to address the shortage of volunteer EMS providers in many communities throughout Maryland and to provide additional support for these providers who often face significant challenges and expenses associated with their volunteer work.

Since its launch in 2012, the VRIPA program has generated significant public attention, and has been recognized as an innovative approach to addressing the shortage of EMS providers in Maryland. According to a 2020 report by MIEMSS, the VRIPA program has provided over \$38 million in tax credits to eligible volunteers since its inception. The report also notes that the program has helped to retain and recruit volunteer EMS providers in many communities throughout the state, including rural and underserved areas. Dividing \$38 million by \$5,000 (the maximum tax credit provided by the VRIPA program) gives us 7,600, which represents the approximate number of volunteer EMS

providers who have received tax credits through the program since its inception in 2012. However, it is worth noting that not all eligible providers will necessarily claim the full \$5,000 tax credit, so this number may not represent the exact number of individuals who have participated in the program, but just the lower bounds on those it has influenced. The program has received media coverage in local and national news outlets, and it has been promoted by a variety of organizations and stakeholders in the EMS community.⁴⁸

Enactment of COVID-19 Personnel Flexibilities

To address the shortage of emergency medical services (EMS) personnel during the COVID-19 pandemic, state authorities enacted several flexibilities related to the recruitment and retention of EMS personnel. Specifically, Executive Order #20-03-30-02 instructed state regulators to temporarily suspend provisions of Maryland's EMS laws and regulations concerning the licensure, certification, or scope of practice of EMS personnel so long as it did not endanger public health, welfare, or safety, and could improve the State's response to the emergency. Public Notices #1 and #4 allowed for a total of 1,300 provisional EMS clinicians to be appointed across all levels of EMS.⁴⁹ Provisional clinicians were sourced from various groups, including those whose certification or licensure had expired, inactive personnel, EMS students who had not completed all of their education requirements, and personnel who were licensed or certified in another state.⁵⁰ In addition, Public Notices #3 and #9 permitted commercial ambulance services to utilize non-certified personnel, who do not possess any medical qualifications, to operate a Basic Life Support ambulance. Furthermore, Public Notice #5 rearranged the sequence of components in the EMT exam to simplify the certification process for EMT candidates.

6 Stakeholder Interviews

6.1 Methodology

The methodology that we chose to make our list of interviewees was predicated on two ideas: talking to officials on a high enough level that dealt with the state interactions with EMS, and also talking to a variety of counties to get a diverse view of how the state was impacted. We reached out to state officials, heads of EMS departments, and then also directly to EMS workers. We made sure to sample from a representative grouping of the counties of the state.

Our interview process was the same for each individual and we followed the same script in order to keep our interviews consistent and to focus on the same issues. The general themes that our script touched upon are as follows:

- I. Overall thoughts on NH EMS situation

- II. Number of employees for full capacity
- III. Process for EMS certification
- IV. State gov role in EMS
- V. Differences in counties
- VI. Suggestions for construction of ideal EMS
- VII. Suggestions for policy changes

6.2 Interview List

We interviewed the following individuals and representatives from across the New Hampshire EMS system:

- **Justin Romanello**, bureau chief, Division of Fire Standards and Training & EMS, NH DOS
- **Michael Hutchinson**, paramedic and licensed EMS instructor, owner of FireMed Nashua
- **Gary Baber**, fire chief, Acworth Fire
- **Jordyn Bagalio**, operations manager, Canaan EMS
- **Brian Johns**, owner and paramedic, LifeStar EMS LLC
- **Tyler Driscoll**, fire chief, Center Harbor Fire Department
- **Christopher Stawasz**, American Medical Response (AMR), which provides EMS services in several counties across the state, including Hillsborough, Rockingham, Strafford, Merrimack, Belknap, Grafton, and Carroll.
- **Ryan Cashin**, Manchester Fire Department EMS – The Manchester Fire Department provides EMS services to the city of Manchester, which is located in Hillsborough County.
- **Kevin Kerrigan**, Nashua Fire Rescue – Nashua Fire Rescue provides EMS services to the city of Nashua, which is located in Hillsborough County.
- **Pam Russel**, Salem Fire Department EMS – Salem Fire Department provides EMS services to the town of Salem, which is located in Rockingham County.

6.3 Interview Findings

In general, stakeholders expressed concern for the following issues:

- *Lack of full-time and part-time availability*: Stakeholders expressed concerns that in many places, it is difficult to get qualified personnel to commit to full-time or even part-time work. This is because the opportunity cost for committing to EMS is high, as there are several local industries that pay a much higher hourly wage. High inflation and the accompanying cost of living crisis further deters individuals from committing to EMS shifts.
- *Pay scales are not commensurate with work expectations and training requirements*: EMS personnel are tasked with demanding responsibilities, and many need to work shifts late at night and on the weekends. Furthermore, EMS personnel invariably invest a significant amount of time and

money into obtaining certification training. However, pay scales are not commensurate with such demanding work expectations and high level of education required. As one stakeholder bluntly put it: “It’s hard to convince people to work for EMS when they can go work at McDonald’s for a larger, more reliable salary – with no training required at all.”

- *Low reimbursement rates:* Many EMS organizations are struggling financially due to Medicare/Medicaid reimbursement rates remaining relatively stagnant in the face of increasing costs. Previously, these reimbursement rates had covered a larger proportion of the cost to run the services, but have not kept up with inflation. Now, these costs are a lower percentage of the operating budget, forcing EMS to find funding from other sources. In order to break even and sustain critical operations, they need to cut down on costs. In many cases, organizations are forced to cut down on personnel costs, thereby underpaying staff.
- *Geographical arbitrage:* Counties display significant differences in their ability to fund EMS operations. Counties in the north and southwest of the state, which often have more severe budgetary problems, rely more on volunteers. These differences have gotten more pronounced recently, with the oldest volunteer EMS service in the state shutting down due to budgetary issues in Cheshire County.

7 Potential Solutions

From our literature review, comparative analysis of other states, and stakeholder interviews, we distill the following solutions for training, recruiting, and retaining qualified EMS personnel.

7.1 Recognize EMS as Essential Services

Stakeholders interviewed consistently advocated for EMS to be recognized as an essential service. New Hampshire defines essential services as those that are necessary to ensure the health, safety, and welfare of the public during an emergency or disaster. These services are critical to the functioning of society and are typically provided by government agencies, private businesses, and nonprofit organizations. During an emergency or disaster, the state may prioritize these essential services to ensure that they continue to operate and that the needs of the public are met. Basically, a designation from the state as essential services will result in increased priority and funding to the operation.

Stakeholders consistently argued that recognition would bring practical benefits. In particular, recognition of EMS as an essential service would allow policymakers access to grant money that could fund recruitment and retention efforts. The state has identified several essential services that are considered critical during such situations. These essential services include:

- Health and medical services, including hospitals, clinics, and other healthcare facilities and providers.

- Law enforcement and public safety
- Public works
- Food and agriculture
- Energy
- Water and wastewater
- Transportation
- Communications and information technology
- Critical manufacturing

7.2 Combine fire and emergency medical services

Fire departments are a significant node in the provision of emergency medical services. As noted before, fire services already account for 60 percent of the population transported by EMS agencies in New Hampshire. Furthermore, while there is no government mandate in New Hampshire for all fire-fighters to be EMS-certified, approximately 60 percent of fire-fighters are already licensed EMS providers.⁵¹ Therefore, it may be appropriate to consider amalgamating fire and emergency medical services under a single organization. Stakeholders interviewed expressed some concern that such measures could alienate firefighting unions, who are concerned that fire departments may be overburdened with additional responsibilities without additional financial and personnel support.

7.3 Incentivize interested individuals to initiate and complete EMS training

Maryland's educational stipend program could serve as an example of a successful educational incentive program for EMS trainees. Interest in the educational stipend program has been high, and state authorities have been able to discharge all of the budgeted funds. At least 80 trainees who received stipends under the program successfully completed EMT certification. It is important to note that Maryland's programs have in-built incentive mechanisms throughout each stage of the certification process, which hedges against moral hazard and reserves the most benefits for when the student fully finishes their training. Should New Hampshire adopt a similar incentive mechanism for EMS training, we recommend that incentives be discharged in a phased approach. For volunteers specifically, the state could consider providing training reimbursement for individuals who serve certain lengths of time in volunteer agencies.

7.4 Increase pay, benefits, and other incentives

Lack of pay and financial benefits are significant inhibitors to the recruitment and retention of paid EMS personnel. As noted before, EMS personnel who are paid for their services on a full-time or part-time basis face increasing opportunity costs for staying with EMS departments: EMS salaries are often insufficient to make ends meet, and other industries pay significantly higher salaries. For example, an average nursing salary in the state would be within the range of \$70-85,000 with only a

year or two of extra training. This is in comparison to the average EMT salary of \$32,000 a year, and average paramedic salary of \$58,000 a year. However, we believe it is reasonable for New Hampshire to consider following Maine in providing retirement and healthcare benefits to EMS personnel. Many paid EMS personnel face uncertainty in terms of benefits and may or may not receive retirement and healthcare benefits through their other employers. Hence, allowing paid EMS employees access to State retirement benefits and healthcare benefits may help attract and retain staff for these critical services.

7.5 Institutionalize meaningful benefits and incentives for volunteer EMS personnel

Volunteer EMS personnel constitute a significant proportion of New Hampshire's EMS workforce, up to 70 percent of all fire and EMS personnel. While the state and counties cannot fully reimburse volunteers for their time and services, it is reasonable to consider institutionalizing meaningful benefits for volunteer EMS personnel. Specifically, we believe it may be appropriate to adopt a policy similar to that of Maine's Length of Service Award Program (LOSAP), under which eligible volunteers can receive retirement contributions. LOSAP plans are authorized in at least 40 states, and nearly one-fifth of volunteer firefighters nationwide participate in some form of LOSAP. To be eligible for the LOSAP, individuals must have completed an annual minimum of training and service hours. After achieving the minimum number of years of credit, and upon reaching a specified age, the individual is eligible for a monthly annuity.⁵² When adopting such programs, however, it is important to secure sufficient funding from the state budget (and ideally, a dedicated funding source) so that the program can be sustained for the long-term.

7.6 Make permanent some pandemic-era flexibilities and in retention and recruitment

EMS workforce attrition was especially severe during the COVID-19 pandemic, which necessitated the implementation of personnel flexibilities that entailed an acceptable level of risk to patients. Many EMS leaders we interviewed expressed interest in continuing on a permanent or semi-permanent basis some pandemic-era flexibilities in the recruitment and retention of EMS personnel. In particular, stakeholders expressed the need to model New Hampshire's policies after Maine and Maryland's pandemic-era flexibilities. First, there is interest from those we interviewed in implementing some iteration of Maryland's Public Notice #5, which rearranged the sequence of components in the EMT exam so as to simplify the certification process for EMT candidates. Second, there is widespread interest in implementing some iteration of Maryland's Public Notice #9 and Maine's Pandemic (Phase 1) Protocol, which permitted commercial ambulance services to utilize non-medically certified personnel to drive ambulances. Many EMS stakeholders stress that as long as EMS vehicles are staffed by at least one certified professional, it is not necessary for secondary staff, including drivers of EMS vehicles, to be fully certified.

8 Conclusion

Nationwide shortages of EMS personnel have shed much needed light on the recruitment and retention of qualified providers at local, state, and national levels across the United States. Interviews with stakeholders corroborate previous findings that EMS personnel shortages are particularly severe in New Hampshire's rural communities, which often rely upon mostly volunteer organizations to provide emergency medical services. EMS providers are extremely concerned that personnel shortages are undermining the quality of care that can be provided to patients. Furthermore, there are significant economic pressures on individuals in the EMS workforce, as pay and stipends are insufficient to cover costs of living and the opportunity costs associated with pursuing careers in other industries.

Fundamentally, financial incentives seem to be necessary to better recruit and retain qualified EMS personnel. We considered the recruitment and retention efforts of other states, primarily Maine and Maryland. Their initiatives centered around providing significant financial incentives in the form of education stipends, retirement contributions, and access to state employee benefits. These states seem to have seen some degree of success from their initiatives. In New Hampshire, recognizing EMS as an essential service will lay the groundwork for accessing grants that could fund similar efforts. Non-financial measures may also be successful in alleviating some of the pressure on the EMS system, particularly extending some of the pandemic-era flexibilities in the recruitment and retention of personnel.

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