New York State's Fragmented Emergency Medical Services System: An Exposé

by

Sydney Arus

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This thesis is dedicated to New York's selfless Emergency Medical Service heroes.

Advised by:

Rachel Somerstein, Ph.D., Associate Professor of Digital Media and Journalism

Felicia Hodges, M.S., Adjunct Instructor of Digital Media and Journalism

Littering the backdrop of every television crime drama are the relentless EMS providers attempting to resuscitate the victim. They're seen rapidly wheeling the survivor into the emergency room, heart monitor beeping, oxygen flowing, head tightly bandaged. Bright red lights flash and sirens blare within the first five minutes of every episode.

We hear the same sirens and see the same shadows through our bedroom windows at night while falling asleep. One of the first things we teach our children is the sound an ambulance makes. And when bystanders call attention to someone injured, the words "someone call 911, we need a medic," are the only ones that make sense.

EMS is the backdrop of our lives. It's something that we don't need to think about, until a moment arises where there are no other thoughts. In and out of the shadows, they hide in plain sight in wait of a situation to do what they've been trained for. They're there when we need them, even should we refuse their help.

But when it comes down to it, do we really know that much about them? How can an industry that serves as the backbone of society exist so mysteriously, even almost anonymously? The organization of the EMS industry in New York State is flawed. It has evolved into a fragmented system that disadvantages rural and non-urban communities, and EMS providers across the state. We're on the verge of a reckoning with the current EMS system, and it's long overdue.

Emergency medical services, or EMS, is a healthcare profession in which first responders provide pre-hospital care to patients of medical and trauma emergencies. When 911 is called for a health-related incident, EMS providers are the trained professionals who respond and carry out various medical interventions.

EMS providers include emergency medical technicians (EMT's) and paramedics. EMT's, who practice "basic life support," undergo an approximately six-month-long training course that sees them CPR certified and allows them to administer oxygen, monitor vital signs, stop bleeding, administer certain medicines/treatments, and more.

Paramedics, who practice "advanced life support," undergo an approximately two-to-three-year-long rigorous training program after having their EMT certification. In addition to providing the treatment that EMT's can, they can start IV (intravenous) therapy, administer narcotics, perform intubation, and monitor the heart's electrical impulses with an ECG (electrocardiogram), among other interventions.

EMS workers are indeed healthcare providers. But they are more than that. They are first responders; first on-scene in emergency situations. They are the primary source of care and compassion for a person in what may be the worst situation of their lives, and the direct line of communication to that person's terrified loved ones. They are the first and maybe the last healthcare professional a patient sees. They are an integral part of maintaining the safety and hope of society.

Yet, their role in society does not match the treatment they receive by the system that is supposed to look out for them- our government. Among the nation's other first responders, police and firefighters, EMS has been sequestered into its own separate entity, lacking the funding and resources that the others have. Simply put, the EMS system in the United States is broken.

At the core of the fragmentation of the EMS system in the U.S. and in New York State specifically, is the lack of a central agency. In 1966, the National Academy of Sciences and National Research Council published a paper famously referred to as the "White Paper." This paper revolutionized health care and specifically emergency health care in the U.S. It brought to the public front the alarming statistics of accidental deaths and injuries and how they were handled. Many of these were motor vehicle accidents, at a time when cars were magnitudes more dangerous than they are today. Following publication of the White Paper, the National Highway Safety Act of 1966 established EMS in the Department of Transportation. This act served to provide a standard national curriculum for EMS training and provided funding to states to help them establish EMS offices throughout.

In 1973, Congress passed the EMS Systems Act (EMSSA), a grant program to fund the establishment of regional emergency trauma systems. Many regions throughout the country received federal funding, but it was difficult to implement EMS funding at the local level with little guidance on how to effectively do so. In 1981, the Omnibus Reconciliation act changed the way EMS was funded, placing funding in the states' hands. Federal funding under the 1973 EMSSA was essentially eliminated, and the "preventative health" funding the states were given

was not regulated. Many states did not thoroughly invest in EMS at all, let alone on the local level.

Today, different aspects of EMS are overseen by different governmental offices. Federal funding and interstate commerce are overseen by the Department of Transportation, while the Center for Medicare and Medicaid Services largely determine the rates for EMS assistance.

Each state makes their own EMS regulations. In New York State, EMS is organized in a trickle-down-system. The Bureau of EMS of the Department of Health (DOH), which puts forth the protocols and policies that every EMS agency in the state is required to follow, is the head of its organization. They provide direct support to the NYS EMS Council, which in turn provides support to the Regional EMS Councils, which provides support to the County EMS Councils.

These councils and agencies are advisory, many of them not-for-profit. They barely provide funding. They exist to ensure the smooth flow of EMS protocol adherence and medical direction. Regional EMS Councils are comprised of representatives from local EMS agencies, hospitals, doctors, and nurses. They can be likened to a “committee,” rather than an “office.” Lack of a central regulatory agency means that each municipality is solely responsible for implementing EMS in their area.

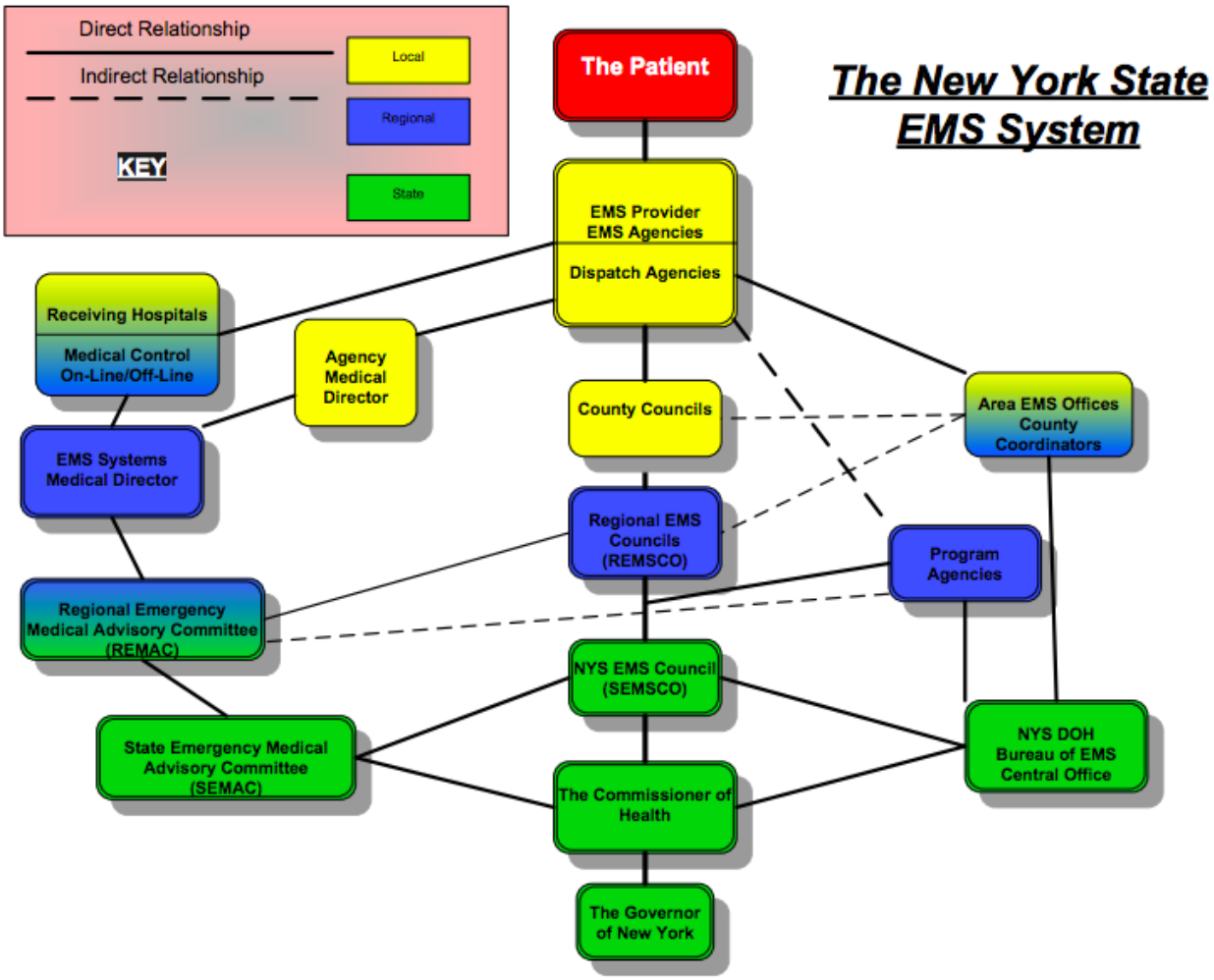


Diagram of EMS organization in New York State. Photo courtesy of *New York State Association of Fire Chiefs.*

Douglas Foster, who has been an EMT at both commercial and volunteer agencies for almost fifteen years, and is currently Chief of Operations at Empress EMS North Division, explains how EMS differs from other first responding services. “There are actually only eleven states in the country right now where EMS is an essential service. In New York State, being one of the states in which it’s not, there is no requirement for funding. With law enforcement, fire protection and sanitation, there is a requirement for each municipality to provide those services or contract for those services, but that doesn’t exist for EMS.”

“A lot of fire departments, especially here in the Hudson Valley, kind of took on that role as a public safety umbrella, and they provide EMS, but with no obligation to do so. At any point in time a fire department could say, ‘we don’t want to do EMS anymore’ and not provide the service, and there’s no requirement for the municipality to take on that responsibility. In theory, there could be an area that doesn’t have EMS service at all in New York State. I’m not aware of any that exist that way, but there are many areas that still have all volunteer, donation-based services; they barely survive. Because like everything else, the cost of business has increased.”

So why isn’t EMS an “essential service?” This is a loaded question. Technically, the verbiage is misguided. According to former Gov. Cuomo's April 2020 executive order 202.6, article 11 states that EMS is considered an essential service, “necessary to maintain the safety, sanitation, and essential operations of residences or other businesses...” Law enforcement and fire safety are also catalogued in article 11. So technically, EMS is an “essential service,” but this was defined in the context of the pandemic, when “non-essential businesses” were closed. There is no other legislation in New York State that delineates police and fire but not EMS, as essential services. It’s the organization, funding, and career opportunities and benefits that distinguish EMS from other first responding services.

There is commercial and volunteer EMS and “hybrid agencies,” which enlist paid and volunteer providers. Volunteer EMS is exactly how it sounds. EMT’s and medics volunteer their services for the good of their community without pay, usually in addition to the one or more jobs they work to make a living. The volunteer ambulance services are mostly funded by billing insurance,

supplemented with donations and fundraisers. Sometimes the town or municipality will supplement them with minimal financial support. Essentially, the functioning of a volunteer model is reliant on the integrity of the providers, and donations. As such, it is largely unsustainable and inadequate. Hybrid agencies have the funding to pay some employees but they rely on volunteer providers to fill in the gaps.

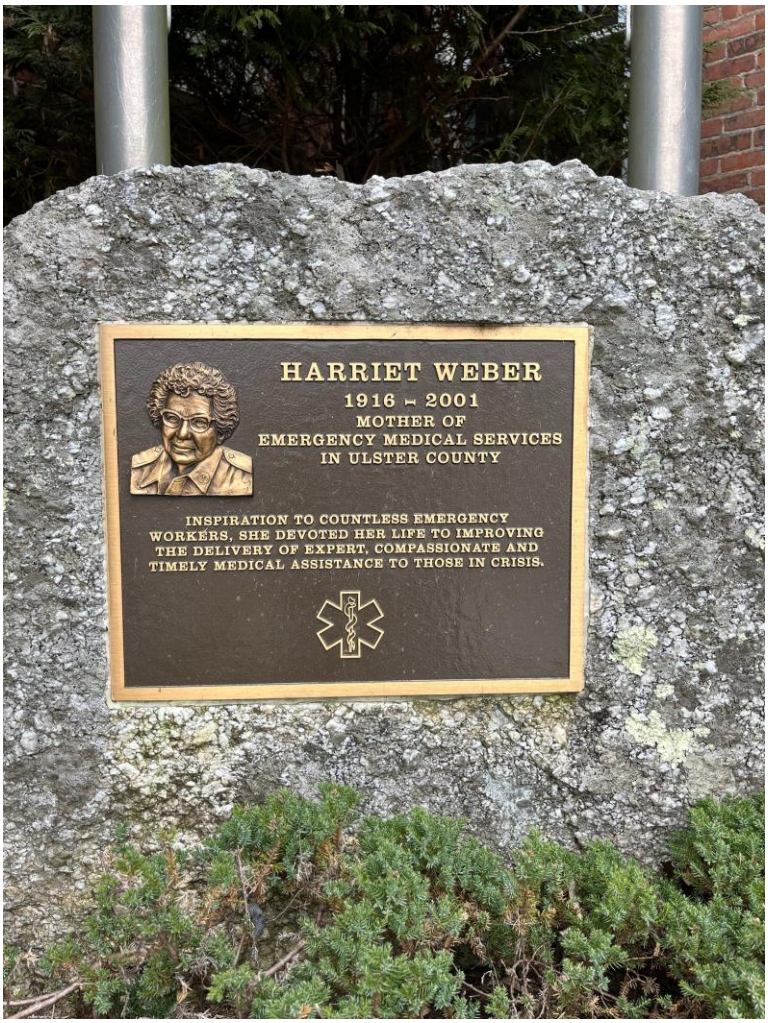
Commercial EMS agencies, on the other hand, are private companies. These agencies can and do respond to 911 calls if they have a contract with the town they are servicing. However, most of the revenue for commercial EMS comes from billing reimbursements for "transports." These jobs are scheduled, non-emergency interfacility transports, such as bringing someone from one hospital to another or bringing someone to and from a dialysis appointment. Commercial EMS takes on all the non-emergency transports- volunteer or hybrid agencies only respond to 911 calls.

On a local level, there are various ways for an EMS agency to be funded. The simplest way is through municipal contracts. A municipality can enter a contract with a provider. A town or municipality can allocate money from their budget to EMS, if there is support within the town government.

Unfortunately, in some areas, town officials may be opposed to increasing their financial support for local EMS. In events like this, an "ambulance improvement district" may be required to establish tax funding for the service. According to New York State Senate Legislation, EMS is categorized as a "improvement district." Snow removal, water supply, sewage, and public

parking are a few examples of other improvement districts. The legislation for improvement districts was established in law in 1909. Joe Vitti, Board of Directors Chairman and paid EMT at Marbletown First Aid Unit (MFAU) explains the ambulance improvement district as "a vehicle for the town to levy a tax to fund services. It provides a framework and opportunity for voters to weigh in first through public comment, and if needed, public referendum."

Marbletown First Aid Unit (MFAU), in Marbletown, New York, was formerly a purely volunteer EMS service. MFAU was founded in 1961 by Harriet Weber, "the mother of EMS," when the only available medical transportation for her sick mother was a hearse. Unfortunately, Mrs. Weber was not unique in that experience. In 1960, approximately fifty percent of all ambulance services nationwide were provided by funeral homes; shortly before the White Paper revolutionized healthcare.



Plaque dedicated to Harriet Weber, "The Mother of EMS," located in front of the MFAU station in High Falls, NY.

Until recently, MFAU was purely volunteer. But this model wasn't working for them. During the summer of 2021, the town of Marbletown moved to establish an ambulance improvement district after struggling for the past decade. Vitti explained to me that the town of Marbletown provided a small amount of funding going back several decades, but most of the funding that supported their volunteer model came from billing insurance. "We had a fairly dismal response rate, we had a handful of people [volunteers] who were trying to do all these calls. So the amount of volume taken up by just a handful of people was becoming too much for those folks. Exhausted

small group and dismal prospects in terms of new volunteers. And low response rate which was creating some pressure from around the community as well. Especially from fire departments. Fire departments getting dispatched on medical calls as well and having to sit and hold hands with a sick person waiting for an ambulance to show up," said Vitti. This prompted their board's decision to begin to pay their EMT's. Around two years ago, they slowly started paying their EMT's using the money from their own ambulance fund. But it wasn't enough.

MFAU services approximately 2,800 homes in the towns of Marbletown, Rosendale, Stone Ridge, and other neighboring towns and hamlets. Their service area includes coverage in 8 towns and hamlets. While all the towns and hamlets they serve have their own fire departments, none of those fire departments provide EMS services. MFAU was left to service a large area on its own, without the adequate funding to buy new necessary equipment, update old equipment, or pay their employees. Additionally, as many of the residences are sparsely located, travel times between the station and the destination can vary. Ambulances can't go more than 30mph on certain roads because of the hilly landscape of the region, coupled with narrow, windy roads, and the prevalence of deer. Vitti said, "it's a huge service area. It can take us about twenty minutes to get to someone's house."

They realized they needed supplemental tax funding to provide the adequate and quality service the community needed. They started a campaign to educate the community and its elected officials about what was going on.

"Save Community Ambulance" sign for Marbletown First Aid Unit, found in Stone Ridge, NY.

After several years, with much effort and communication with residents and elected officials, MFAU became a fully funded ambulance service. A fairly equal tax increase among the three towns of Marbletown, Rochester, and Rosendale, has allowed them to provide the quality service and preparedness they were barely able to swing as a volunteer agency, having relied mainly on patient insurance reimbursement. While MFAU currently enlists some volunteer EMT's, most of their EMT's and certified drivers are paid.

The vague and indirect ways of receiving funding, and the division between volunteer and commercial EMS, are demonstrative of the decentralized nature of New York State EMS. The minimal guidance from a strong leadership, the scarcity of models to implement EMS effectively and consistently throughout the state, and the lack of central funding all contribute to the disjointedness of the industry.

This disjointedness is problematic. Rural communities suffer the most at the hands of this system. A town that doesn't have its own police department will still have NYS troopers and a County Sheriff office responsible for serving it. NYS police stations are located everywhere. Small towns and villages without their own designated EMS agency become the responsibility of the agencies of neighboring areas. Since neighboring agencies are likely understaffed or busy responding to other calls, it can take a long time for an ambulance to get to the scene. The rural areas without the resources or incentives to develop their own EMS system leaves residents without timely access to emergency care. As such, rural Americans are over 50% more likely to die of trauma-related causes than their urban counterparts. Having access to emergency medical care in these rural areas is crucial because hospitals can be long drives away. In a life or death situation, pre-hospital care may be their only chance at surviving.

"A lot of people believe the ambulance or EMS in general is provided by the local fire department because they see that in large city settings," says Foster. [The FDNY in New York City for example]. "And not even every large city has that. Everyone watches *Emergency* and *Chicago Fire*, and that's a [misrepresentation]."

The way that the Fire Department of New York City has their own EMS services funded by the city is a typical model for many larger cities. But New York City is the most populated city in the nation. EMS in NYC is not the same as EMS in rural New York. In fact, the modern American EMS system was made for the urban setting. "The first pseudo-EMS systems appeared almost solely in major urban centers, with the rare exception of the odd local emergency rescue squads. These early emergency systems relied upon their urban environments to provide both a clientele and tax base capable of supporting the latest technologies and most skilled physicians and healthcare workers."

In rural settings, there are simply less people to work, less people that require the service, and overall less money flowing through these communities. As expected, call volumes are drastically lower in rural communities and this has been used as justification for "lack of funding necessity," by local and state governments. Rural areas have statistically higher poverty rates than urban areas in New York State. Many patients who require critical care and transport might not have health insurance or the means to pay out of pocket. If a patient can't pay or doesn't have insurance, the EMS agency has to cover the costs. As most of EMS agencies' revenue comes from health insurance reimbursements, this intensifies the burden of struggling to stay afloat as a volunteer agency.

A 2014 study published by the National Academy of Public Administration stated, "The public has come to expect the availability of EMS service over time. These expectations may be inferred from the public outcry that results from the occasional cases of EMS failure to respond and the fact that most hospitals and hospital-based ambulances are required by Federal law to

provide stabilizing emergency care regardless of ability to pay." The study cited a 2007 poll from a Motor Vehicle Occupant Safety Survey which found that 94% of respondents believed that EMS was equally as important or more important than police and fire services. While the public recognizes the importance of EMS, a lack of understanding of how the system works creates a disconnect between communities and providers. People expect EMS to be readily available at all times, the way a firetruck or police officer would be, but don't understand how the system works. They might not understand that there isn't a guarantee for an ambulance to arrive in a timely manner, or a guarantee for one at all.

The distinction between EMS and other first responding agencies can also be seen in career benefits and opportunities. Many EMS providers, depending on their primary source of income, are not eligible for state health insurance. EMS providers are also not eligible for the state pension program. The intensity and stress of the job coupled with low wages and the lack of long-term benefits lead to high-burnout rates and difficulty recruiting and retaining EMS providers. There's a shortage of EMT's *and* paramedics. Paramedics are already harder to come by because of the intense training to become certified. Poor benefits for paramedics further discourage EMT's from going the extra mile and becoming paramedics. Advanced life support, practiced by paramedics, is the highest level of pre-hospital medical care that exists and it's often these interventions that save lives.

Dr. Molly McCann-Pineo, Director of Clinical Research for the EMS service line at Northwell Health, says, "Previously, being an EMS provider, that was a career. However, as times have changed, the compensation hasn't improved and the mental health outcomes that individuals

experience that are not being addressed, lead to a lot of job dissatisfaction and extreme job turnover. EMS has one of the highest job turnover rates." This high turnover rate is largely because there is little financial or social reward for working in EMS. It's been called a "stepping-stone" career. Many people who do go into EMS go into the field to garner clinical experience required for other medical professions, such as nursing or medical school. Many EMS providers who work or volunteer for fire departments eventually become firefighters.

The job of an EMS provider can be a difficult one. Aside from the low wages, poor benefits and long hours, the job itself can be extremely physically and emotionally demanding. Jessica Freedman-Foster, 24, has been an EMT in Duchess County, NY for the past five years. "It's been about three years now. It was during a blizzard. A nasty snowstorm. We got a call for a thirty-something year old, CPR in progress, possibly domestic. When we got there, it was already set up as a crime scene. She was brutally stabbed to death by her ex-husband. They [PD] continued CPR until we got there and then they called it. When we were bagging her there was air coming out of her cheeks because she had stab wounds from head-to-toe. Their baby was sleeping nearby in the house. I didn't sleep for three days because they still hadn't caught him. There was a guy standing at the victim's head, probably a volunteer, his bare hands covered in blood, and he asked if he could close her eyes. We went to the troopers' station, and I was afraid to close my eyes because of that image. That semester I was taking classes in criminal justice, and I dropped it all after that call. It changed my whole outlook on wanting to work in that field. It took a while to get over that."

She recounted the call for a possible-domestic-turned-homicide, citing it as one of the most traumatic moments she's had on the job. This call was one of several which were hard for her to deal with.

As an EMT, Freedman-Foster is unfortunately not unique in her history of job-related trauma. Numerous studies have cited the alarming prevalence of PTSD and other mental illnesses in the EMS community. A study published in the *Journal of Emergency Medical* Services in 2015 found that "EMS responders were 10 times more likely to have suicidal ideations and/or attempt suicide compared to the CDC national average."

Dr. McCann-Pineo discussed a preliminary study she and her team had done to apply for a grant to further research mental illness among EMS providers. Their early research found that, "of 25 providers that were interviewed, over half of them met the clinical thresholds of burnout, 16% had probable PTSD, 20% had anxiety, and 20% had depression. It's an indication that they're experiencing significant mental health outcomes."

A career that is distinguished by the phrase, "you never know what you're walking into," is bound to have baggage. Being a central figure in dealing with adults and children in pain, in distress, afraid, or dying, unsurprisingly takes a toll on those responding. Bearing witness is one thing but being intimately involved in such pivotal moments of others' lives by holding a certain level of responsibility is another.

“I got into it because I wanted to help people, my community,” says Freedman-Foster. “My dad’s best friend was a big influence on that. He was the captain at a volunteer agency near me. He passed away the year before I got my EMT [certification], so I never got the chance to tell or show him.”

“One of the hardest parts of working in this industry,” she said, “is barely being able to make a living with the pay we get. People at fast food jobs get the same pay as us or more. We don’t get paid enough for the job we do. It’s just not fair. I’ve been working sixty hours a week for the past four years. I haven’t had a set sleep schedule for the past four years.”

After almost five years of working in the field as a full-time EMT, she got off the road and has been working part-time in a more administrative role in the company. While on the road, she worked mostly non-emergency transport shifts at a commercial agency. “That’s all I really did was transports. And I got burnt out. Some shifts I'd be so tired and couldn’t keep my eyes open and then I'd have to do a long-distance transport to Albany and then drive back, because I’d be working 24 hour shifts. I needed to do 24’s for the money.”

A lack of awareness and education plays a significant role in perpetuating this issue. Most of the public don’t truly understand how the system works. The media praised EMS during the height of the pandemic as heroes, and pop culture paints EMS providers as an essential function of our healthcare system, but there is a blatant disconnect between that attitude and what goes on behind the scenes.

A lack of public understanding has cemented the neglect of the EMS industry by the government. As the formerly mentioned statistics indicate, EMS is a service that the public expects and respects. When expectations are not met, respect dwindles. People who call 911 for a medical emergency don't expect that they might have to wait 30 minutes for an ambulance to arrive unless they live in an isolated area. When municipal governments don't have the desire or means to allocate funds to EMS, it's up to the community to work together with their local government to implement an improvement district so that a residential tax increase will directly apply to EMS. But when people don't know that it works this way, which is often the case, they're left hoping that the nearest ambulance can respond quickly or developing resentment for the providers they feel are lazy and don't care enough about their job.

Dr. Molly McCann-Pineo says "Pre-hospital medicine is a very baby field. It's very new. EMS didn't really get any recognition until the last couple of years, and I think specifically, September 11th brought light to the needs of EMS providers." The law enforcement system, by comparison, has been in place since pre-Civil War United States. EMS, as discussed earlier, has only been a "recognized" service since the latter half of the 20th century. The novelty of the field lends inevitable hurdles in trying to create an organized and cohesive system.

New York State has a fragmented EMS system. Because of it, rural and non-urban areas of the state have limited or minimal access to emergency health care. Providers work excruciatingly long hours doing hard, stressful work, and get burnt out. They don't get paid enough and are excluded from state benefits. Mental health issues are prevalent among providers. EMS is touted as a "stepping-stone" career and that's exactly why many people enter the field. Job turnover

rates persist. Tension grows within the EMS field, within communities, and towards the system itself. It's a viscous cycle, one factor perpetuating the next. Throw a global pandemic into the mix to make every aspect worse. Where do we go from here?

While this issue is not well-known or well-understood among the public, there are lawmakers who have been awoken to this issue and are trying to make a change. In December 2021, State Senator Michelle Hinchey's proposed legislation to create a rural EMS task force was signed into law by Governor Kathy Hochul. Senate Bill S3503C and Assembly Bill A1561C authorized the Department of Health to create a rural EMS taskforce. This task force, to be made up of 12 people, will thoroughly examine EMS systems in rural New York. This research will determine what exactly is not working for these EMS agencies, in terms of recruitment and retention of providers, and funding. "The task force will come out with an official report to the governor and the legislature detailing what is needed financially and policy-wise," said Brian Coffin, Legislative Director and Chief of Staff of NYS Senator Michelle Hinchey's Office. The task force plans to have all of its members by June and will begin conducting its research in the summer or fall of this year.

Another piece of legislation, Senate Bill S8432A, sponsored by State Senator Shelley Mayer, aims to define EMS as an essential service in New York State law. This bill would define EMS as an essential service in legislation, expand benefits, and enable a more centralized form of organization. While defining EMS as an essential service and clearly outlining those implications for the state would be the catalyst needed to uplift this system-- the bill has yet to pass the Senate or the Assembly.

The legislation is a promising call to action, but this is just the beginning. An issue that is rooted in deep systemic instability, like EMS, requires more than just one bill. It requires community. People can only feel passionately about change if they understand what it is that's broken. It is a necessity for this issue to be known and talked about. It affects people every day of their lives. This legislation shows us that there is hope. There are people out there who are listening and willing to initiate that change. Let this not be the traction we've needed to get uphill only to stop at the peak. For many New Yorkers, this is life or death.