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NEBRASKA

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EMERGENCY MEDICAL SERVICES ASSESSMENT

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Furthermore, we wish to honor the remarkable contributions of all the men and women who have been the local unsung architects and pillars of EMS in Nebraska over the past 50 years. Their relentless commitment and service have not only saved lives but have laid a strong foundation for the next generation and success of emergency medical services in Nebraska.

EXECUTIVE SUMMARY

Over the past 50 years, the State of Nebraska has been well served by a network of local emergency medical services (EMS) that has successfully responded to medical emergencies, and treated and transported Nebraska residents and visitors throughout an increasingly complex healthcare system. The public has developed a strong expectation that these services will always be available, deliver high-quality medical care, and provide an essential service that can be reliably accessed by dialing 911.

There are significant gaps, however, between public expectations and the reality on the ground. Today, Nebraska, like many other states across the nation, faces critical challenges that are threatening EMS reliability, sustainability, and quality. Challenges related to workforce shortages, declining volunteerism, and inadequate funding have become critical, threatening the viability of EMS in some parts of the state. These urgent concerns, however, have deep roots. The challenge for Nebraska EMS fundamentally stems from how EMS has been developed, understood, planned, structured, valued, resourced, and regulated. The underlying issues belie a need for evolution and change. The Nebraska Department of Health and Human Services, Office of Emergency Health Systems (OEHS), has embarked upon an important statewide assessment of EMS in Nebraska. The goal of the assessment is to document the current state of EMS in Nebraska, guide statewide planning and resource allocation, and provide insight into ensuring EMS in Nebraska continues to develop and is long-term sustainable.

To this end, the OEHS has contracted with national EMS consulting firm, SafeTech Solutions, LLP, to comprehensively assess EMS in Nebraska and provide recommend-ations for preserving, promoting, and expanding access to emergency medical services for all Nebraska residents and visitors, now and into the future. SafeTech Solutions' extensive statewide study resulted in 21 key observations:

1. EMS is an expected and increasingly vital element of healthcare across Nebraska.
2. While EMS is currently meeting clinical and medical transportation demands, it is losing capacity, becoming strained, and is in need of evolution and change.
3. Workforce and funding are top concerns for EMS throughout the state.
4. Beneath the workforce and funding issues is a lack of public and governmental attention, understanding, and investment in EMS.
5. Many elements related to the operational performance, workforce, and finances of EMS in Nebraska are difficult to assess and understand due to a lack of data.
6. EMS in Nebraska was not developed as an integrated system, nor does it currently operate as a planned, integrated system.
7. The operational provision of EMS depends solely on local initiative, the market, and altruism.
8. EMS is becoming the default solution to the state's growing rural demand for healthcare and shrinking rural healthcare resources.
9. The funding of EMS is complex and often insufficient, and the full and actual costs of providing rural EMS remain largely hidden.
10. Volunteerism and low-cost labor are Nebraska's primary and largest EMS subsidies. These subsidies are disappearing, with far-reaching implications.
11. Volunteerism across Nebraska is waning and not likely to return.
12. Despite current trends, many rural EMS agencies are proud, independent, and committed to preserving the volunteer model.
13. EMS workforce shortages extend beyond volunteer agencies but are not well understood.
14. Reliability and sustainability issues create significant local EMS agency leadership challenges and highlight leadership deficits and needs.
15. Stakeholders do not have a common or shared vision for the future of EMS in Nebraska.
16. Many EMS stakeholders are passionate about evolving a strong, sustainable, next-generation EMS system.
17. Local EMS agencies have limited capacity and resources to navigate the change and evolution needed for long-term reliability and sustainability.
18. The current structure and resourcing of EMS Regions limit regional support.
19. Nebraska may have an excess of licensed EMS transporting agencies. This excess may by exacerbating shortages and creating inefficiencies.
20. Geographic service areas are informal and driven by history, market factors, and informal agreements.
21. Concern about the emotional and psychological wellbeing of EMS providers is highlighting a deficit in mental fitness programming and EMS-knowledgeable/ experienced mental health resources.

Taken together, the assessment team's 21 key findings suggest that EMS in Nebraska is ready to move into its next chapter. Immediate challenges around workforce and funding, as well as the deeper issues of understanding, atten-tion, valuing, and supporting EMS, are all opportunities. The assessment suggests seven areas where action is needed and possible, to address vulnerabilities and capitalize on opportunities. The seven recommendations are:

1. Strengthen public and governmental knowledge, understanding, valuing, and support of and for EMS;
2. Codify in law the responsibility for ensuring EMS provision;
3. Envision the future of EMS and engage in ongoing statewide planning;
4. Drive next-generation EMS evolution and change systemwide;
5. Grow tomorrow's EMS workforce;
6. Develop funding to support next-generation EMS; and
7. Invest in data-driven information to understand EMS system development and performance.

By implementing these seven recommendations, Nebraska can lay a solid foundation for enhancing EMS sustainability, improving access to high-quality emergency medical services, and ensuring the wellbeing of Nebraska's residents and visitors. These actions will pave the way for a resilient EMS system capable of meeting the everyday and evolving healthcare needs of all Nebraskans.

INTRODUCTION

The development and provision of emergency medical response, treatment, and medical transportation in the state of Nebraska reflect the spirit of the region: the open landscape, fierce pride in independence and self-determination, and the courage and grit of the pioneering West. For more than five decades, these services have been provided by a dedicated and determined people who, despite formidable challenges and scarce resources, have covered the state with a diverse collection of EMS agencies. Local initiative, innovation, and volunteerism built the foundation of EMS in Nebraska. This foundation is now in need of strengthening as Nebraska EMS evolves to meet the emerging needs of its residents and visitors today.

Throughout the United States, reliable EMS has become an expectation. Citizens have increasingly come to view EMS as an essential service, similar to law enforcement and public works. People have come to expect reliable access to emergency medical care that will come to them when they are at home, at work, shopping, recreating, or traveling. This is the case even as governments often fail to fund and support EMS as an essential service.

The last decade has seen significant changes and challenges to provision of EMS in the United States. These challenges are particularly acute for rural and frontier EMS organizations. Numerous reports by researchers and the media have chronicled the decline of rural EMS volunteerism, EMS workforce challenges, funding shortfalls, the closing of services, and increasing demands for higher quality and accountability for services that remain.

EMS in Nebraska is no exception. As the Nebraska Department of Health and Human Services' Office of Emergency Health Systems (OEHS) looks to the future, it seeks to ensure that the provision of emergency medical services in the state is

strong. A strong EMS system means Nebraska residents and visitors have access to emergency medical care no matter where they are in the state, and that they are served by a quality system that is reliable, sustainable, and that has adequate capacity. A strong EMS system also means that these services are provided in a manner that appropriately shares the burden of providing them, and that the people who work in EMS do so in an environment that is safe, humane, satisfying, and fulfilling.

To this end, the OEHS is seeking to: 1) Establish a clear picture of the state of EMS as it is operating in Nebraska today; 2) Understand the opportunities and challenges; 3) Consider recommendations for the ongoing evolution and next generation of EMS throughout Nebraska; and 4) Ensure Nebraskans are served by the best possible emergency medical services system. In pursuit of these objectives, the OEHS has contracted with SafeTech Solutions, LLP, to conduct a statewide assessment of EMS in Nebraska.

SafeTech Solutions is a national EMS consulting firm with extensive experience working with and researching EMS. Over the past 18 years, SafeTech Solutions has worked with numerous governments, EMS system agencies, and leaders, and has been deeply involved in EMS at the local, state, and national levels. SafeTech Solutions specializes in the study and improvement of emergency medical services in rural, remote, and frontier regions.

ASSESSMENT GOALS, APPROACH & METHODOLOGY

This report summarizes SafeTech Solutions' statewide assessment of Nebraska EMS. The report is designed to provide a fresh look at emergency medical services across the state, with an eye toward opportunities, challenges, and the promotion of ongoing development and improvement. The hope is to bring needed perspective and insight to leaders, residents, researchers, and policy makers as Nebraskans continue the work of planning, developing, and resourcing EMS. The report provides a description of the current state of EMS in Nebraska along with key observations, findings, and recommendations.

SafeTech Solutions' year-long assessment of EMS in Nebraska had the following goals:

- **Describe EMS in Nebraska, including how out-of-hospital emergency medical care is structured and operates today;**
- **Assess EMS in Nebraska in a way that is both objective and attentive to the unique characteristics of EMS delivery in the state, including opportunities, strengths, weaknesses, and challenges;**
- **Focus on sustainability, as well as reliability and quality;**
- **Identify relevant observations and findings about EMS in Nebraska; and**
- **Make recommendations for future planning and ongoing development.**

The scope of the assessment was limited in several ways. Full or complete information was not always available, and participation in information gathering was voluntary. Some agencies, communities, and key stakeholders did not participate. A significant limitation derives from the nature and availability of data for the study. Quantitative data was limited. Data that was available suffers from reporting obstacles, inconsistencies, and reliability issues. In addition, some observations and findings are qualitative and difficult to validate.

Despite these limitations, participants shared information and perspectives candidly, and as described below, the study enjoyed deep and widespread participation.

This report uses both qualitative and quantitative data. Quantitative data includes survey responses from 156 EMS agencies and 885 EMS providers. Qualitative data helps flesh out survey responses and state-provided data. SafeTech Solutions consultants conducted approximately 60 interviews with individuals across Nebraska, including interested residents, agency leaders, field providers, healthcare and hospital representatives, governmental leaders at all levels, State OEHS employees, and other stakeholders representing a variety of perspectives.

Using the data collected in the surveys, listening sessions were conducted to verify findings and obtain additional input from stakeholders. Eight in-person listening sessions (two in each EMS Region) and two online listening sessions were hosted across the state. More than 100 stakeholders participated in listening sessions.

Listening Session Locations

- Ogallala
- Broken Bow
- Beatrice
- Norfolk
- Alliance
- Atkinson
- Hastings
- Waterloo

Historical material such as planning documents, assessments, newsletters, training material, and reports, as well as scholarly literature, further inform the report. All data has been analyzed using standard quantitative and qualitative methodology looking for themes, trends, and key issues. These have been organized and presented throughout this report, and they guide our major observations and recommendations.

This report illustrates SafeTech Solutions' distinctive, holistic approach to the study and assessment of emergency medical services. Our approach aims to understand the unique development of EMS in Nebraska, recognizing that questions regarding the provision, quality, equity, and sustainability of EMS intersect with many fields of study, including medicine, healthcare, improvement science, economics, sociology, and psychology. The primary criteria for this assessment were sustainability, reliability, and quality. These closely related con-

cepts are further addressed in the next section. Together they comprise the lens through which we assessed EMS in Nebraska.

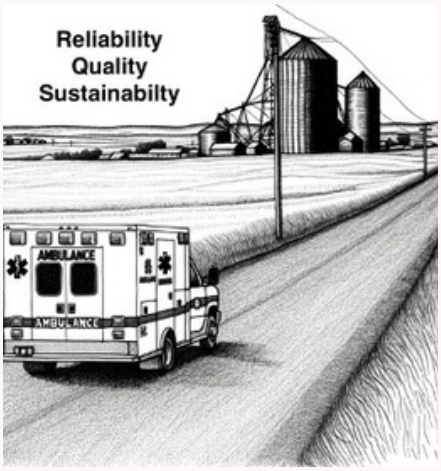
Beyond this lens, SafeTech Solutions imposed no specific assessment template. EMS in each state is unique, specific, dynamic, and contingent upon local histories and conditions. Yardsticks such as the National Highway Traffic Safety Administration's (NHTSA's) 11 EMS Attribute Assessments are helpful in comparing similar EMS systems, but a true and more meaningful understanding moves beyond these to grasp the unique context of the system at hand. In Nebraska, this means measuring and assessing Nebraska against Nebraska.

THE CONCEPT OF SUSTAINABILITY

As Nebraska looks toward the future, it seeks to ensure easy and timely access to emergency medical care, address the growing need for medical transportation between healthcare facilities, and establish a strong and sustainable system for emergency medical services in the state. The public, businesses, visitors, healthcare facilities, and governments want emergency medical services that are high-quality and reliable. Unlike reliability and quality, which are experienced directly and immediately, sustainability works behind the scenes, enabling the long-term delivery of these services. A brief review of these terms can help us understand the challenges Nebraska faces.

Reliability is about the EMS system having the ability and capacity to respond to 100% of requests in a timely, need-appropriate, and system-appropriate manner. Achieving reliability requires suitably prepared resources and staff, strategically placed and ready to respond within an acceptable timeframe when called upon by efficient call-taking and dispatch systems.

Consistent reliability – especially the length of time it takes EMS assets to respond – is a basic indicator of the health of EMS in a geographic area. When EMS agencies are struggling to staff units, motivate personnel, or are experiencing demand that exceeds capacity, response times increase and reliability declines. Increasing response times are often an early indicator that EMS is struggling or becoming fragile.

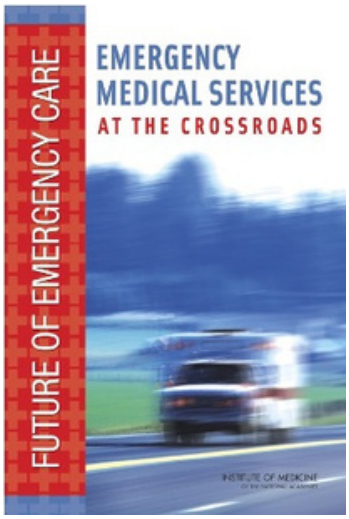


Quality, on the other hand, refers to the extent to which EMS enhances the probability of achieving desired outcomes that align with the expectations of the served population, as well as current professional medical knowledge and best practices. Achieving quality is dependent on establishing and adhering to standards, expectations, and regulations, as well as providing education, training, oversight, evaluation, and regulation. While the establish-ment of concrete clinical quality measures is an ongoing effort at

the national level, quality in EMS often encompasses the subjective perception of the service provided.

Sustainability is about EMS's ability to consistently deliver reliability and quality over an extended period. It reflects the present and long-term health and stability of the EMS agency or system, ensuring that there are adequate resources to meet current needs without compromising future requirements. Achieving sustainability involves maintaining sufficient financial and human resources and utilizing them in an efficient, humane, and viable manner. It also necessitates attention, planning, leadership, organizational structure, and fostering healthy growth and development.

Thus, sustainability – like reliability and quality – is crucial to providing the EMS people have come to depend on and expect in Nebraska and across the nation. Sustainability is about being able to ensure the present and future provision of reliable and high-quality EMS. Yet, for many reasons, including the historical development of emergency medical services as a local rather than statewide, regional, or national concern, EMS across the United States today faces looming sustainability challenges. These challenges have been much-studied and commented upon.



In 2006, for example, the National Academy of Sciences' Institutes of Medicine released a comprehensive national look at EMS titled Emergency Medical Services at the Crossroads. This sobering report describes EMS in the United States as "highly fragmented" and facing significant challenges as a result. The report states:

> EMS operates at the intersection of health care, public health, and public safety and therefore has overlapping roles and responsibilities. Often, local EMS systems are not well integrated with any of these groups and therefore they receive inadequate support from each of them. As a result, EMS has a foot in many doors but no clear home.[1]

[1] Emergency Medical Services at the Crossroads. 2007. Institute of Medicine of the National Academies. The National Academies Press. p. 29.

The report describes the challenges of funding, collaboration, planning, and workforce that continue today and which threaten EMS's sustainability. Across the intermountain states and Great Plains, and through much of rural America, EMS continues to be a patchwork of local agencies that are increasingly unsustainable.

THE ROOTS OF EMS & SUSTAINABILITY ISSUES IN THE US & NEBRASKA

In the first half of the 20th century EMS in Nebraska was limited and in many communities non-existent. Formal ambulance services or rescue squads began in Omaha in 1936 with the formation of the First Aid Bureau. Elsewhere throughout the state, the critically sick and injured were transported, often simply in vehicles that could accommodate a person lying down, such as a hearse or station wagon. In Lincoln, Chase County, Nebraska City, and many other locations, mortuaries outfitted their hearses with lights and sirens and often used local volunteers with limited training to help, when ambulance services were needed. A 95-year-old former volunteer told the assessment team about driving a hearse ambulance for a mortuary in Chase County in the early 1960s. He told of driving lights and sirens for nearly five hours, mostly on two lane roads, to take a critical obstetrical from Wauneta to Omaha and needing to stop for gas en route.

Early ambulance used by Roper & Sons Funeral Home in Lincoln. Photo used by permission of Roper & Sons.

At the time, emergency medical services in Nebraska were basic, offering only first aid, oxygen, and the occasional use of splints. Both physicians and hospitals showed little enthusiasm for developing these services, viewing ambulances merely as a means of transporting patients to medical facilities for treatment. The implementation of minimum wage laws made it financially unviable for funeral homes, which were the primary providers of ambulance services, to continue operating without incurring losses, as the costs outweighed the fees they could charge. Consequently, this situation led funeral home businesses to seek alternatives for these services. In response to the emerging need, local volunteer fire departments, private businesses, and small independent volunteer groups across Nebraska began to provide ambulance services.[2]

[2] See p. 51-52 in The History and Development of a Consolidated Communications System and an Emergency Medical Services System in Nebraska, by K. F. Kimball, D. G. Penterman, and R. D. Schneider, 1985. Service Press.

Across the United States, it was an urgent concern regarding highway trauma in the 1960s that ushered in the modern era of EMS. Factors such as a higher number of drivers, faster and larger cars, and poor safety standards contributed to a significant increase in highway injuries and deaths. By 1966, the annual number of highway deaths had exceeded 50,000. The public, medical professionals, and politicians began recognizing the need for improved care for trauma victims.

In 1965, the President's Commission on Highway Safety released a report recommending the implementation of a nationwide program to reduce fatalities and injuries resulting from highway accidents.[3] The following year, the National Academy of Sciences National Research Council (NAS-NRC) published a seminal paper titled Accidental Death and Disability: The Neglected Disease of Modern Society.[4] This report shed light on the deficiencies in emergency patient care, the poor quality of ambulance services, and the lack of trained personnel in the field.

The NAS-NRC report highlighted the alarming fact that seriously wounded soldiers in the Vietnam War had better chances of survival within the combat zone than traffic accident victims on the streets or highways of America. It brought attention to the observation that half of the nation's ambulance services were being operated by funeral homes primarily because hearses could accommodate a patient litter. Furthermore, it emphasized the absence of trained ambulance attendants, the lack of radio communications in most ambulances, the unsuitability of vehicles for providing active care during transportation, the shortage of equipment and supplies, and the absence of a systematic approach to caring for trauma victims.[5]

Both reports recommended the establishment of national programs, sparking a period of unprecedented attention, development, and activity towards planning and creating a national EMS system. It is important to note that these efforts

[3] See p. 10-19 in Health, Medical Care, and Transportation of Injured, by the President's Commission on Highway Safety. Washington, DC: US Government Printing Office, 1965.
[4] National Academy of Sciences and National Research Council. Accidental Death and Disability: The Neglected Disease of Modern Society. Washington (DC): National Academies Press; 1966. EMERGENCY FIRST AID AND MEDICAL CARE. Available from: https://www.ncbi.nlm.nih.gov/books/NBK222964/.
[5] Ibid

were spearheaded by the federal government, envisioning a nationwide EMS system that would ensure all Americans have access to competent emergency medical care and transportation.

The development of EMS began with the Highway Safety Act of 1966, which created the Department of Transportation and granted it legislative and financial authority to improve EMS by establishing standards and activities to enhance ambulance services and the training of ambulance personnel.[6] Funds were allocated for EMS demonstration projects, and the Act required states to have highway safety programs and develop regional EMS systems. For the first time, ambulance vehicles, equipment, training, personnel, and administration costs were funded through highway safety programs.

These funds provided resources on the ground to establish and improve local ambulance services throughout the nation, including in Nebraska. Early on, it was understood by EMS developers that a broad, systematic approach was needed to deal with highway trauma that could occuranywhere. It was also understood that local communities, and especially rural communities, would not have the needed resources to develop ambulance services and would need help. Likewise, EMS developers foresaw a regional approach and that regional financing would be needed to develop economies of scale and sustainability. Between 1968-1979 the DOT put more than $142 million into the development of regional EMS systems. Other federal initiatives in the late 1960s and early 1970s allocated additional funding toward research, demonstration projects, and the creation of a lead federal EMS agency in the Department of Health, Education, and Welfare (DHEW).

By the late 1960s and early 1970s, EMS development had rapidly spread across the nation. EMS system demonstration projects were underway in Arkansas, Florida, Illinois, Ohio, and California. Everywhere local communities were buying ambulances and equipment with federal help. People were being trained and tested to be Emergency Medical Technicians. The first advanced cardiac care programs had begun in Columbus; Seattle; Los Angeles; and Dade County, Florida, and the concept of Paramedics was developing.

[6] United States Public Law 89-593. National Traffic and Motor Vehicle Safety Act of 1966. https://www.govinfo.gov/content/pkg/STATUTE-80/pdf/STATUTE-80-Pg718.pdf#page=1.

In Nebraska, energy gathered around plans for a statewide telecommunications system during this period. An early systems-approach to the operation and management of emergency resources emerged in the state, as cooperation between federal and state government, and integration between public and private sectors, brought together groups such as: law enforcement, emergency medical services, highway safety, fire, Civil Defense, agricultural services, and education. In June of 1965, Omaha physician, Dr. Lynn Thompson, initiated a first-of-its-kind study, funded by the U.S. Public Health Service, to provide information on Nebraska's medical transportation and communications systems. The study led to the birth of the Committee on Medical Transportation and Communication and subsequent developments within EMS at the state level. The Nebraska Air Ambulance program, Sky-Aid, was implemented in the late 1960s as a pilot project to explore the use of helicopters in emergency medical response. The program utilized the State Safety Patrol and military surplus helicopters operated by the Nebraska Army National Guard. Personnel from the University of Nebraska College of Medicine also participated.[7]

Following the Highway Safety Act of 1966, Nebraska utilized federal funds through the Governor's Highway Safety Office to procure vehicles, equipment, and training. By the early 1970s, Nebraska was training Emergency Medical Technicians (EMTs) using the Department of Transportation's 81-hour curriculum. One of the first courses was in Kearney, for the local volunteer rescue squads. In 1971, the Department of Health took on the role of coordinating Emergency Medical Services, focusing primarily on training. A 1973 study estimated that due to this training, 1,000 EMTs were certified in Nebraska and 55 lives had been saved. By 1974, $2.5 million of federal funds had been invested in Nebraska for hospital radio equipment to improve communication with ambulances, 30% of ambulance personnel had reached EMT certification, and 85% of the state's population was served by EMT-trained personnel.[8]

While EMS was progressing in Nebraska and across the nation, another NAS-NRC report in 1972 asserted that the federal government could do more in ensuring the provision and upgrading of EMS. It recognized the expense associated with developing and sustaining EMS and recommended that President Nixon propose

[7] The History and Development of a Consolidated Communications System and an Emergency Medical Services System in Nebraska, by K. F. Kimball, D. G. Penterman, and R. D. Schneider, 1985. Service Press.
[8] See p. 86-93 in The History and Development of a Consolidated Communications System and an Emergency Medical Services System in Nebraska, by K. F. Kimball, D. G. Penterman, and R. D. Schneider, 1985. Service Press.

action by Congress to ensure access to emergency care was universal. The report called for the integration of all federal resources under a lead agency. It recommended that the focal point for local EMS be at the state level, and that all federal efforts be coordinated through regional programs.[9]

Initially, the Nixon administration was hesitant to invest in such a program. However, relentless advocacy by Congressional EMS champions eventually led to the passage of the EMS Services Development Act of 1973. This Act recognized that the development of a comprehensive EMS system would need leadership, planning, and funding. It created a lead federal EMS agency in the Department of Health, Education, and Welfare (DHEW) led by an EMS-savvy physician from Illinois named David Boyd. The plan was to develop EMS across the nation to deliver needed care and meet the unique needs of local communities. The vision was for EMS, after initial set-up help, to be sustainable without federal monies.

The nation was divided into 304 EMS regions. Planning was centered around ensuring that each region had "resources sufficient in quality and quantity to meet a wide variety of demands, and the discrete geographic regions established must have sufficient populations and resources to enable them to eventually become self-sufficient." [10] The regions were to be developed as systems around 15 essential EMS components that would ensure commonality in structure and uniformity in the emergency care delivered.

States began to get serious about the development of EMS. In Nebraska, the Department of Health was designated coordinator of EMS in February of 1971. By 1976, in line with the Department of Health, Education, and Welfare's (DHEW's) regional planning approach, Nebraska had established six EMS regions. These areas were: Midlands (including the Omaha area); Southeast (including Lincoln); Northern; Central (including Hastings, Grand Island, and Kearney); High Plains (including the area around North Platte); and the Panhandle. The regions

[9] Committee on Emergency Medical Services, Division of Medical Sciences. Roles and resources of federal agencies in support of comprehensive emergency systems. Washington, DC: National Academy of Sciences–National Research Council; March 1972.
[10] Bass, R. (2015). History of EMS. In D. Cone, J. Brice, T. Delbridge, J. Myers (Eds.), Emergency Medical Services: Clinical Practice and Systems Oversight, Clinical Aspects of EMS, Second Edition. Wiley Online Library. Downloaded June 3, 2023. https://onlinelibrary.wiley.com/doi/abs/10.1002/9781118990810.ch1#pane-pcw-related.

were all funded, mostly non-profit, and governed by a Council and Regional Manager. In accordance with the EMS Services Development Act of 1973, the intent was for these regions to eventually become self-sufficient. This meant reducing their dependence on federal funds over time and cultivating sustainable, local funding models and resources. The regional structure also aimed to encourage a planned systems-approach that would ensure the resilience and effectiveness of Nebraska's EMS system.

EMS systems, though gradual, showed promise. As of 1979, out of the 304 regions originally planned, 17 had reached the envisioned state of full development and self-sufficiency. Progress was noticeable elsewhere, too, with numerous other regions on the trajectory towards self-sufficiency and 96 actively in the planning stage. This journey of development wasn't without its challenges and disputes, but the cycle of planning, executing, and learning continued undeterred. It became clear that developing a national EMS system through the regional approach would take time but would result in a true system with sustainability built in.

However, this trajectory was disrupted in 1981 when President Reagan signed the Omnibus Budget Reconciliation Act. This act effectively put an end to federal leadership in the development of a national EMS system. Instead, it restructured federal funding for EMS into block grants that were allocated at the local level.

Nebraska City Rescue Squad around 1970. Photo used by permission of Nebraska City Fire Rescue.

By 1982, it was apparent that all federal support for the EMS system would cease, leaving the continuation of regional EMS programs to the devices of states or local communities. The central federal EMS agency was disbanded, and the federal government's role was reduced to providing technical assistance and coordination.[11]

Due to the fact that many regions were still in the nascent stages of development or hadn't yet begun, and most states failed to approach EMS development

[11] Ibid

with actual operational plans, lead governmental agencies, and the needed start-up funding, local communities were left to develop EMS on their own. For many states, including Nebraska, the primary focus quickly pivoted towards certifying ambulance personnel, developing the clinical scope of practice, approving educational programming, and working with medical oversight and quality. Moreover, several states took on the responsibility of licensing and regulating agencies that provided ambulance services. The outcome of these efforts varied greatly, leading to a lack of uniformity and consistency in EMS across the country.

Thus, EMS continued to develop in Nebraska, but in a more organic, grassroots manner. The creation and growth of local ambulance services rested on the interest, motivation, altruism, and volunteerism of local people and local government.

In some rural communities where populations are small and ambulance service is only occasionally needed, EMS development can be hard to sustain. While the ambulance services can be set up and operate, long-term sustainability depends on having enough local people who will help, and on support from residents and the community. This underscores the necessity of not just creating EMS services, but also designing sustainability models and fostering a local culture and infrastructure that can sustain them over the long term.

Since the 1980s, EMS has continued to develop despite the lack of regional coordination and planning. A variety of delivery systems have developed in Nebraska and across the nation. As a business and industry, EMS has gone through several periods of consolidation. Increasingly, the fire service is trying to define its role in EMS, while the delivery of EMS continues to be provided by a variety of structures.

Clinical care continues to advance and become refined and focused. EMS has become integral to systems of care for trauma, cardiac care, and strokes. Innovative concepts such as Community Paramedicine and Mobile Integrated Health are deepening EMS's integration into healthcare. The public has come to expect and rely on EMS, no matter where one might be.

While communities in Nebraska have triumphed over significant obstacles to establish and maintain EMS access locally, for many, the community-based, volunteer-centric models are no longer viable. The state's EMS, built up organically from community to community, is an amalgamation of individual local systems, resulting in an uneven and fragmented landscape of care. This locally driven approach to EMS is deeply ingrained in Nebraska's administrative and financial structure.

Today, Nebraska finds itself at a critical juncture. The state faces the challenge of transitioning from an amalgamation of individual, community-based EMS systems to a more unified, efficient, and sustainable statewide model in which access to care is assured and the burden for providing EMS in Nebraska is equitably shared. Although the road ahead is complex, the dedication and commitment that local communities have demonstrated in building their EMS systems provide a strong foundation for this evolution. The goal is to establish a system that delivers reliable, high-quality EMS services to all Nebraskans, regardless of where they live, and one that is sustainable for future generations.

EMS IN NEBRASKA TODAY

A. OVERVIEW

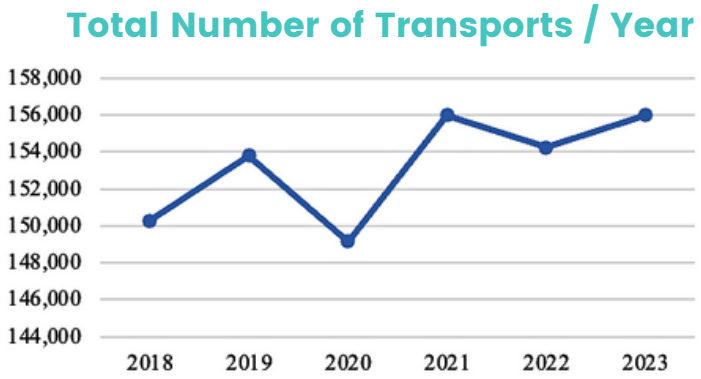
A 1939 publication by the Works Progress Administration (WPA) describes a traveler encountering Nebraska for the first time; he or she "gets an impression of broad fields, deep skies, wind, and sunlight," [12] a picture of the Cornhusker State that dominates the popular imagination yet today. It is hard to think of Nebraska without also calling to mind "farmhouses surrounded by fields of tasseling corn," or the "men and women who take their living from the soil" who live there.[13]

And yet, Nebraska's history is varied and complex, and the state today is a blend of traditional and non-traditional values, shifting demographics, and dramatic contrasts. With an area spanning approximately 77,327 square miles, Nebraska ranks as the 16th largest state in the nation by area. With just under 2 million residents, it is the 7th least densely populated. Nebraska's vast geography, striking weather, and its recent demographic and socio-economic changes make the state a fascinating case study for out-of-hospital healthcare. Like many rural states across the nation, Nebraska relies on out-of-hospital medical services to ensure the wellbeing of its residents and visitors, even as the provision of those services in a manner that is efficient, reliable, equitable, and sustainable is highly challenging.

Nebraska's out-of-hospital emergency medical response and transportation services are summonsed, delivered, and administered by an array of resources, providers, call centers, responder organizations, transport entities, educators, leaders, regulators, and funders. These individual components address immediate needs but fail to integrate to form "a coordinated and seamless system of emergency medical care." [14] The lack of centralized planning and coordination

[12] Nebraska, a Guide to the Cornhusker State. (1939). Federal Writers' Project of the Works Progress Administration. Found online: https://omaha.com/nebraska-a-guide-to-the-cornhusker-state/image_3dfe8248-f9ee-11e6-8691-471d5b490371.html.
[13] Ibid
[14] National Highway Traffic Safety Administration, Office of Emergency Medical Services. (2021). What is EMS? NHTSA.gov. https://www.ems.gov/whatisems.html.

results in significant variations in access to services throughout the state. EMS response, care, and transportation are facilitated by approximately 72 separate Public Safety Answering Points and an unknown number of secondary dispatch centers; 373 independent ground transport agencies; 16 air medical services; and more than 46 non-licensed, non-transporting first response and rescue agencies. There are approximately 6,400 certified and licensed EMS personnel spread across 4 EMS regions. In 2023, these services and personnel responded to more than 237,000 calls and transported over 156,000 patients,[15] representing nearly a 4% increase in transports since 2018.



Agency Call Range		
Call Range	Number of Agencies	Percentage of Agencies
0-25	97	23%
26-50	76	18%
51-100	68	16%
101-300	112	27%
301-500	14	3%
501-1000	26	6%
1000+	26	6%

Statewide emergency response for EMS is accessed through an enhanced E911 call system, answered by Public Safety Answering Points (PSAPs) and dispatched through the PSAP or secondary dispatch centers. Depending on location, resources, and the nature of the call, response may include a tiered response with basic life support (BLS) and/or advanced life support (ALS) clinical levels of non-transporting and transporting services responding. Patients are assessed, treated, and transported to 100 hospitals and receiving facilities across the state.

[15] National Highway Traffic Safety Administration, Office of Emergency Medical Services. (2021). What is EMS? NHTSA.gov. https://www.ems.gov/whatisems.html.

Nebraska's hospitals operate above the national average in terms of healthcare capacity, offering 3.4 hospital beds per 1,000 residents, as compared to the national average of 2.4. This indicator, however, reflects Nebraska's low population density, while notably not reflecting the intersection of healthcare capacity with factors such as geographic distribution and access to care. For example, the University of Nebraska Medical Center reports that in 2019, 14 out of 93 counties in Nebraska did not have any primary care physicians (up from 13 counties lacking primary care physicians in 2017) – even as the number of active physicians in the state increased from 253.1 per 100,000 population to 257.7 per 100,000 in the same two-year period.[16] The same report states that in 2021, 61.5% of primary healthcare shortage areas were found in rural areas of Nebraska, thus adding another layer of complexity to the provision of healthcare.[17]

Today Nebraska has 100 hospital facilities offering 6,930 beds. Of Nebraska's hospitals, 53 are American College of Surgeons (ACS) trauma designated hospitals. Nebraska has two Level I Trauma Centers and one Level II Pediatric Trauma Center. Nebraska has a burn center that is not designated. Nebraska has two comprehensive Stroke Centers, one thrombectomy capable center, 11 primary stroke centers, and three stroke ready hospitals throughout the state. Sixty-three hospitals are designated as Critical Access Hospitals (CAHs). This designation, granted by the Centers for Medicare & Medicaid Services (CMS), applies to eligible rural hospitals that operate with 25 or fewer inpatient beds and are located more than 35 miles away from another hospital. The CAH designation is designed to mitigate the financial vulnerability of rural hospitals and to enhance access to healthcare by maintaining essential services in rural communities.

Trauma Center Designation	
ACS Trauma Level	Number of Hospitals
I	2
II Pediatric	1
II	3
III	7
IV	40
Burn Center (not designated)	1

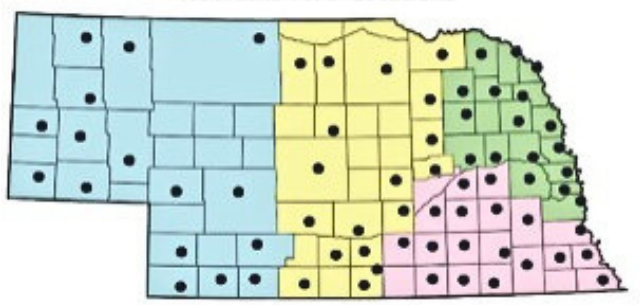
[16] Tak, H. et al. The Status of the Nebraska Healthcare Workforce: 2022 Update. Omaha, NE: UNMC Center for Health Policy.
[17] Ibid

EMS in Nebraska is regulated by the Nebraska Department of Health and Human Services (NDHHS) and its Office of Emergency Health Systems. The Nebraska EMS Association provides education and professional development support and advocacy for EMS in Nebraska.

B. ACCESS, CALL-TAKING, & DISPATCH

Nebraska's residents and visitors access immediate out-of-hospital emergency medical care by calling Nebraska's E911 service system. These calls are answered at approximately 72 independent Public Safety Answering Points (PSAPs). PSAPs vary in requirements for communication's call takers and dispatchers as related to emergency medical dispatch training and certification. In 2018, the State of Nebraska's passed LB 933, thereby placing an increased emphasis on the importance of minimum standard training requirements for telecommunicators/ dispatchers.

Nebraska PSAP Locations



EMS resources are dispatched by PSAPs and an unknown number of secondary dispatch centers. Calls for interfacility transfers, air medical response, and non-emergent EMS often utilize a variety of agency direct numbers.

The E911 system is overseen and regulated by the State's Public Service Commission, the State 911 Department, and a 911 Service System Advisory Committee. The Committee has EMS representation. None of Nebraska's dispatch centers are accredited by the International Academies of Emergency Dispatch.[18]

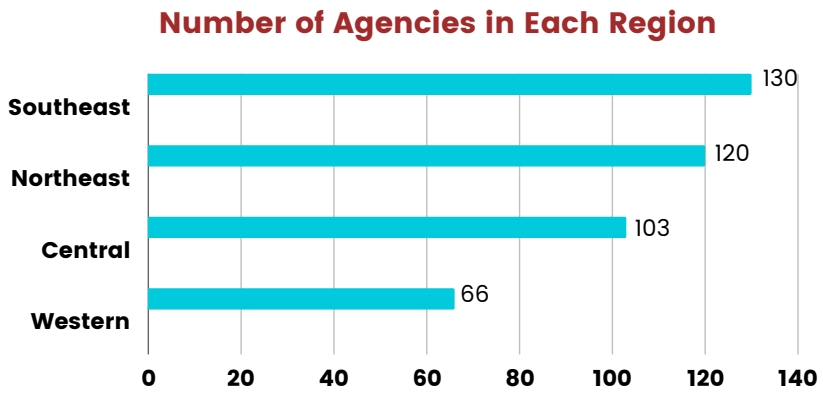
Nebraska is currently in the process of upgrading its E911 service system. It is replacing its decades old analog 911 infrastructure with a digital, internet protocol (IP)-based system. The new digital infrastructure, known as next Generation 911, or NG911, allows voice, photos, videos, and text messages to flow seamlessly from

[18] The Accredited Center of Excellence ACE of the International Academies of Dispatch promotes organizational excellence in public safety communications by encouraging committed agencies to complete "20 Points of Accreditation," a rigorous and measurable set of globally recognized best practices. https://www.emergencydispatch.org/what-we-do/accreditation.

the public to the 911 network and improves the PSAP's ability to help manage call overload, natural disasters, and the transfer of 911 calls based on caller location data.

C. EMS AGENCIES

Requests for EMS in Nebraska are met with a varied resource response that depends on the location and resources available local police departments, county sheriff departments, and the Nebraska State Patrol may provide initial response, as well as local non-transporting response organizations, including 44 agencies licensed at both BLS and ALS levels. Ambulance response is provided by 375 independent ground transport agencies operating in four EMS regions which provide response, assessment, treatment, and transportation.



How agencies are structured and led varies widely across Nebraska. Most agencies are small. More than 80% are exclusively staffed with volunteers. Nearly half of the agencies (193) have 10 or fewer providers on their roster, and more than 60% (254) have 14 or fewer providers. Volunteer agency leaders report that roster numbers do not necessarily reflect the numbers of providers that are active.

Numbers of Various Staffing Models of Nebraska EMS Agencies					
	REGION				TOTALS
	Central	Western	Northeast	Southeast	
Volunteer	91	49	91	107	338
Combination	1	3	1	2	7
All Paid	11	14	28	21	74
TOTALS	103	66	120	130	419

Many of Nebraska's EMS agencies are club-like in structure, meaning that members elect leaders from their ranks, and members vote to approve new members. Many operate without a call schedule. Ownership of these agencies includes fire departments and fire boards, municipalities, counties, not-for-profits, for-profits, tribal, and other ownership. Most (76%) are governmentally owned (city, county, or fire board).

EMS Agency Ownership		
Ownership	Number	Percent
Fire Department or Fire Board	151	36%
City (May include Fire Department)	140	33%
County	27	6%
Other - Non-profit, joint powers, etc.	29	7%
Private or For-profit	42	10%
Tribal	3	0.7%
Unknown	27	6%

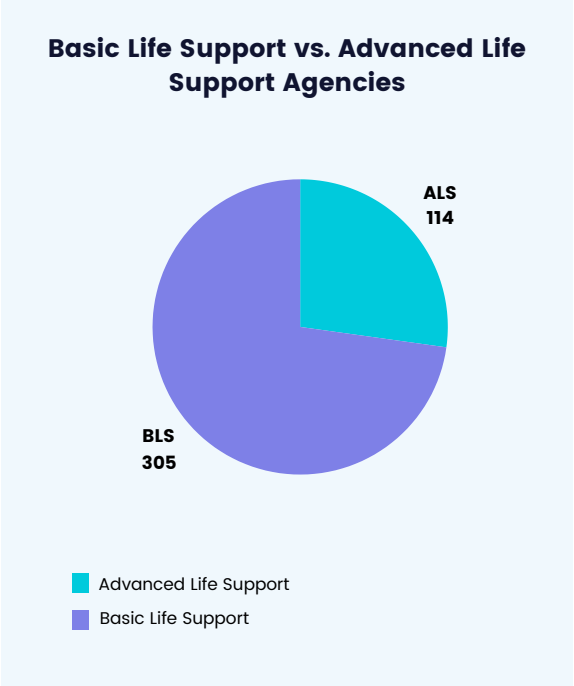
More than half (58%) of EMS agencies in Nebraska report 100 or fewer responses per year. Thirty agencies report less than 10 responses per year. Ten agencies handle more than 60% (153,670) of all responses. The three busiest agencies, representing nearly 50% of all responses, are:

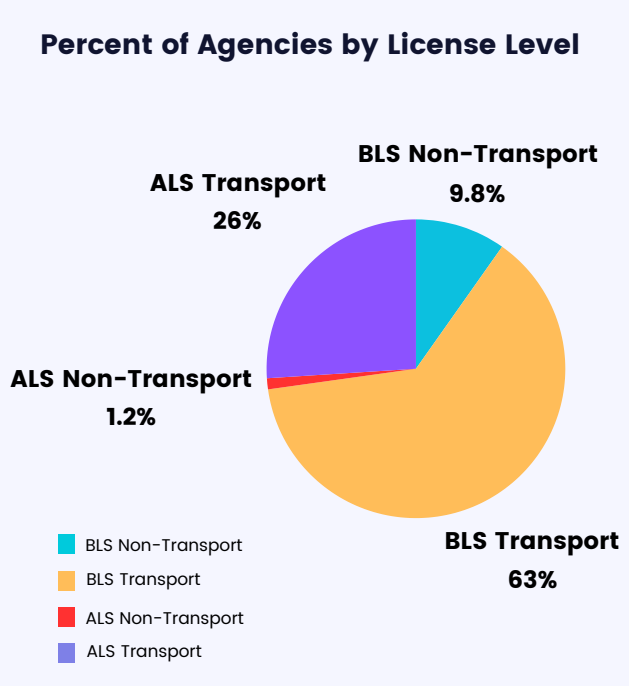
- Omaha Fire Department — 60, 199
- Lincoln Fire Department — 35, 815
- Midwest Medical Trans. — 23,884

Agencies are licensed by the Nebraska Office of Emergency Health Systems (OEHS) as either transporting or non-transporting basic life support (BLS), or transporting or non-transporting advanced life support (ALS). Seventy three percent provide BLS care. BLS agencies must have a minimum of one EMT on their roster and a minimum of one EMT on board while transporting. ALS agencies must have a minimum of one advanced EMT, EMT-intermediate, or paramedic on their roster. To provide ALS care, an ALS licensed agency must have a minimum of one advanced EMT, EMT-intermediate, EMTA, or paramedic providing care. If an advanced provider is not available, an ALS agency may operate at the BLS level. However, a BLS licensed agency may not provide ALS

care even if an ALS provider is responding. First response agencies operating without a minimum of an EMT are not licensed or regulated.

Number of Agencies by License Level	
License Level	Quantity
BLS Non-Transport	41
BLS Transport	264
ALS Non-Transport	5
ALS Transport	109





Whether licensed agencies must be available 24/7 is not clearly stated in statute. However, the OEHS presumes 24/7 availability in its scope of practice definitions. In practice, agencies may declare themselves out of service, provided a backup emergency response plan has been outlined and a backup agency and PSAP have been notified. Currently, the OEHS inspects agencies every four years and continuously monitors performance to ensure agencies are operating within state statutes.

D. AIR MEDICAL

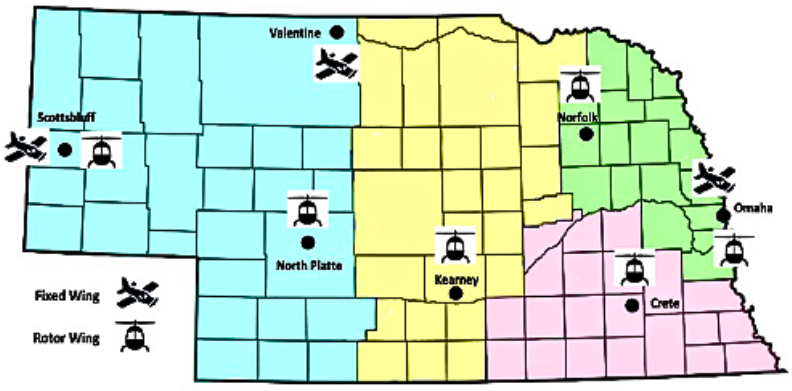
Air medical agencies and their resources have become a vital component of EMS in Nebraska and supplement ground resources. Currently there are 16 air

medical agencies in Nebraska, transporting approximately 3,300 patients per year (2,500 rotor wing and 800 fixed wing). Eight of these agencies' resources are based within Nebraska, and eight responding from outside the state. Nine of these agencies provide both rotor wing and fixed wing resources; six provide exclusively rotor wing services; and two provide exclusively fixed wing services.

Rotor wing and fixed wing air medical teams are most frequently utilized in moving patients between medical facilities within the state and elsewhere. These interfacility transfers are initiated by medical and healthcare facility staff. Less frequently, helicopter resources are summoned by ground crews and law enforcement to respond to emergency scenes for more rapid transport to tertiary care. Air medical resources are based throughout the state and sometimes summoned from locations in Iowa, Colorado, Kansas, South Dakota, and Missouri.

Air Medical Locations

Nebraska Air Medical Resources	
Rotor Wing Base Locations	Fixed Wing Base Locations
Kearney	Omaha
Omaha	Valentine
Scottsbluff	Scottsbluff
Norfolk	
Crete	
North Platte	



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E. WORKFORCE

The workforce is a vital element of Nebraska's EMS. The people staffing ambulances, rescue units, and aircraft perform challenging roles, often with little recognition. They provide response, medical treatment, social help, patient trans-

port, and standby services in all kinds of environments and situations. They often bear witness to Nebraska's best and worst and see a side of Nebraska many others may not. Many tell of being motivated by a desire to serve. Survey data collected for this assessment shows EMS personnel finding satisfaction in: helping people in need (86%), making a contribution to their communities (61%), having a skill or profession they are proud of (43%), and responding to interesting and exciting events (37%).

There are 6,362 licensed EMS personnel and 460 allied health personnel serving in EMS roles in Nebraska today. More than half (57%) report their motivation and morale for working in EMS to be high or very high, with only 14% reporting it low or very low. Approximately 70% are volunteers, and 30% work in paid or career positions. Forty one percent are over the age of 50, and only 10% are under 30. More than half (51%) have been working or volunteering in EMS for more than 20 years, and 11% have been working or volunteering in EMS for 2 years or less. Half have a bachelor's or associate degree, and 9% have graduate or professional degrees. More than half (51%) plan to stay working in EMS for more than 5 years.

Nebraska EMS Providers	
License Type	Total
Advanced EMT	54
APRN-Nurse Practitioner	2
Emergency Medical Responder	263
EMT	4558
EMT-Intermediate	36
Licensed Practical Nurse (Must have other license to provide care)	25
Osteopathic Physician & Surgeon	2
Paramedic	1451
Physician	11
Physician Assistant	13
Registered Nurse	368
APRN-Nurse Practitioner & Registered Nurse	34
APRN-CRNA & Registered Nurse	3
APRN-Clinical Nurse Specialist & Registered Nurse	2
GRAND TOTAL	6822

Survey participants for this assessment reflect the following demographic breakdown: 59% identified as male and 39% as female; 95% identified as White or Caucasian, 2% as Hispanic, 1% American Indian or Alaska Native, and 1% Black or African American.

Many of Nebraska's paid EMS workers appear to be dual-trained EMS/firefighters. Others are EMTs and Paramedics working in municipal, county, hospital, and flight agencies. Some are nurses working in flight agencies and hospital agencies. Paid EMS workers reported valuing the scheduling flexibility that EMS often provides them. Some paid employees reported working multiple jobs both inside and outside of EMS. Some told of working at a fulltime EMS agency and volunteering with another agency on their off hours. Of paid providers, 61% earn $60,000 or more annually, and 27% reported earning $90,000 or more annually. Eighty percent reported receiving a retirement plan benefit.

Most volunteers (67%) report receiving no annual compensation of any kind (stipend, call pay, etc.), and only 15% report receiving more than $1,000 per year. Eighteen percent report receiving some per-call or other type of compensation. The two significant benefits received by volunteers are reimbursement for training expenses (70%) and Line of Duty death benefits.

In conversations and listening sessions, the assessment team learned that Nebraska's EMS volunteers come from a variety of backgrounds, ages, outlooks, experiences, and social positions. The team met volunteers as young as 18 and as old as 76 serving in EMS. Volunteers identified themselves as grandparents, college students, veterans, farm wives, bankers, bikers, trauma junkies, welders, pastors, teachers, ranchers, and more.

Volunteers reported being most concerned about their agency's inability to adequately recruit and keep volunteers. They described the stress and pressure of feeling personally responsible to provide a service that depends solely on volunteerism. They are uncertain about what the future of EMS in Nebraska will bring. Many are worried that their communities will not have local EMS in the future. On a daily basis many would like less drama within their organizations.

Nebraska's EMS workforce is regulated by the OEHS. The State of Nebraska licenses all Emergency Medical Responders (EMRs), Emergency Medical Tech-

nicians (EMTs), Advanced Emergency Medical Technicians (AEMTs), Emergency Medical Technician–Intermediates (EMT-Is), Paramedics, and EMS instructors. All must be at least 18 years of age and be certified by the National Registry of EMTs at the appropriate level. All EMTs, AEMTs, EMT-Is, and Paramedics must pass an FBI criminal background check. Nebraska licensed physicians, registered nurses, and physician assistants may also serve in EMS roles. Nebraska is currently in the process of licensing personnel as Community Care Providers (aka Community Paramedics) and critical care transport providers.

While workforce shortages are one of the most talked about concerns amongst Nebraska's EMS personnel, reliable statewide EMS workforce data is limited. Currently, the basic data needed for workforce planning is not available. This includes the number and certification levels of providers needed, the current supply of providers, and the gap between need and supply. Likewise, turnover and the supply line need for new workers are not well understood. All of these are key to workforce planning. Currently, the OEHS has neither the resources nor the expertise to engage in workforce planning. It is unclear, moreover, if workforce planning is part of the OEHS's mission.

F. EMS EDUCATION

EMS education throughout Nebraska is essential to the development of EMS providers and supports their continued professional growth and skill maintenance. The OEHS regulates initial and continuing EMS education and works with approved EMS Training Agencies to maintain compliance, review EMS student pass rates, coordinate continuing education classes, and provide EMS education reimbursement. Education is provided by 19 State-approved training agencies and 298 licensed EMS instructors. Training agencies can be found in community colleges, universities, private colleges, private training businesses, and service organizations. Seven of the training agencies offer Paramedic training; 17 offer EMT training; four offer AEMT training; and 11 offer EMR training.

National Registry of EMT (NREMT) certification is required for all initial provider licensing, and providers must meet continuing education or competency requirements for biennial renewal. Nebraska has achieved admirable success in terms of statewide cumulative pass rates for EMT and Paramedic programs.

Between January 2022 and December 2022, out of the 17 EMT programs with candidates taking the NREMT EMT national certification exam, 13 met the criteria for being classified as a High Performing Program. (High Performing Programs achieve a pass rate higher than the national average during the same period.) Similarly, out of the seven Paramedic programs with candidates taking the NREMT Paramedic national certification exam, five programs met the criteria for being classified as a High Performing Program.

NREMT Cognitive Exam Performance							
	National First Attempt Pass Rate				Nebraska First Attempt Pass Rate		
	2021	2022	2023		2021	2022	2023
EMT	67%	67%	69%	**EMT**	73%	73%	74%
Paramedic	69%	70%	71%	**Paramedic**	86%	81%	83%
	National Cumulative Pass Rate				Nebraska Cumulative Pass Rate		
	2021	2022	2023		2021	2022	2023
EMT	71%	73%	74%	**EMT**	84%	84%	82%
Paramedic	76%	77%	79%	**Paramedic**	96%	95%	93%

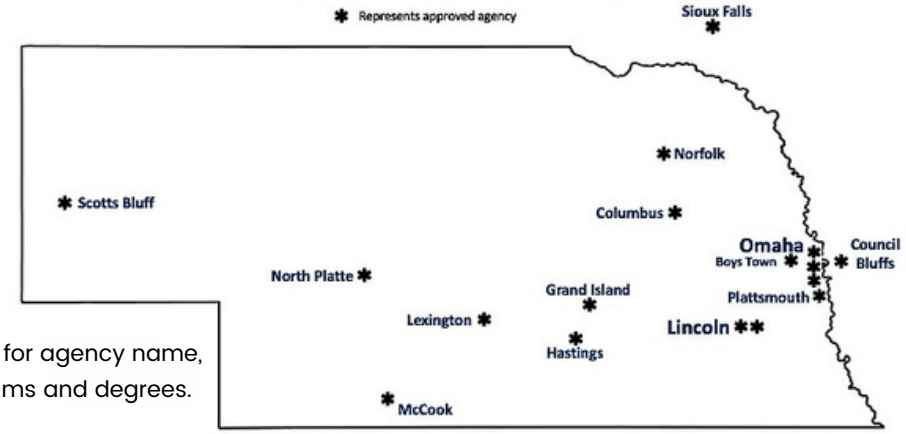
Source: The National Registry Data Dashboard. https://nremt.org/maps?fbclid=IwAR2t8Zfl9KY5M3qcDds80oR2fMHNZICJu0lDKMjFAb27Qtn3aU_fLnJ0wWU

The OEHS provides $592,000 for EMS education to support EMS provider development and retention. These monies are used for tuition reimbursement for initial education and training, continuing education, refresher courses, specialty courses, and for supplementing conference education. Providers may be reimbursed as much as $775 for EMT training; $335 for EMR training; and $5,100 for tuition for Paramedics.

Nebraska is part of the EMS Compact, which enables EMS providers to cross state lines on a specific, time-limited, or intermittent basis to perform their job. The EMS Compact is an innovative, multi-state endeavor to allow EMS providers to practice across state borders legally and ensure they are appropriately credentialed. So far, 24 states have joined the Compact.

The EMS Compact requires each member state to perform background checks and requires National Registry of Emergency Medical Technician certification for initial provider credentialing. The Compact also gives member states authority over EMS personnel from other member states as if they were licensed within that state.

Nebraska Approved EMS Training Agencies



See chart below for agency name, courses, programs and degrees.

Nebraska Approved EMS Training Agencies		
Location	**Agency**	**Courses & Programs Offered**
Boys Town	Boys Town EMS Training Agency	EMT, Refreshers, EMS Instructor, Continuing Ed.
Columbus	Central Comm. College Columbus	EMR, EMT, Refreshers, Bridge Courses, Continuing Education
Council Bluffs, IA	Iowa Western Comm. College	EMT, Paramedic, Refreshers, Continuing Ed., Associate's Degree
Grand Island	Central Comm. College Grand Island	EMR, EMT, AEMT, Paramedic, Refreshers, Bridge Courses, Continuing Ed., Associate's Degree
Hastings	Central Comm. College Hastings	EMR, EMT, Refreshers, Bridge Courses, Continuing Education
Lexington	Central Comm. College Lexington	EMR, EMT, Refreshers, Bridge Courses, Continuing Education
Lincoln	American Red Cross	EMR, Continuing Education
	Southeast Comm. College	EMT, Paramedic, Associate's Degree
	Union College Int'l Rescue & Relief	EMT, Refreshers, Continuing Ed., Associate's and Bachelor's Degrees
McCook	McCook Comm. College	EMT, Paramedic, Refreshers, Bridge Courses, Continuing Ed., Associate's Degree
Norfolk	Northeast Comm. College	EMR, EMT, Paramedic, Refreshers, EMS Instructor, Bridge Courses, Continuing Ed., Associate's Degree
North Platte	Mid-Plains Comm. College	EMT, EMT, Refreshers, EMS Instructor, Continuing Education
Omaha	Creighton University	EMR, EMT, AEMT, Paramedic, Refreshers, EMS Instructor, Bridge Courses, Continuing Ed., Associate's, Bachelor's, & Master's Degrees
	Omaha Fire Department	EMR, EMT, AEMT, Paramedic, Refreshers, Continuing Education
	Metro Comm. College	EMT, AEMT, Paramedic, Refreshers, Bridge Courses, Continuing Ed., Associate's Degree

Location (cont'd)	Agency (Cont'd)	Courses & Programs Offered (Cont'd)
Plattsmouth	EMS Training Zone	EMR, EMT, Refreshers, Bridge Courses, Continuing Ed.
Scottsbluff	Panhandle EMS Education	EMR, EMT, AEMT, Refreshers, EMS Instructor, Bridge Courses, Continuing Education
	Western Nebraska Comm. College	EMR, EMT, Refreshers, EMS Instructor, Bridge Courses, Continuing Education
Sioux Falls, SD	School of EMS	EMT, Paramedic, Continuing Education

G. CLINICAL CARE

The clinical care or medical treatment delivered by EMS providers in Nebraska is carefully guided and regulated. Nebraska and the OEHS views the practice of emergency care by its licensed providers to be a "profession" regardless of volunteer or paid status. EMS providers undergo comprehensive training to develop skills in conducting accurate field assessments, identifying potential causes of a patient's condition, providing appropriate interventions, and making decisions regarding hospital destinations. This clinical care is regulated and governed by:

- the clinical license level of the agency employing the provider (BLS or ALS);
- ·the scope of practice (the care, skills, procedures, and medications the provider is authorized to perform and administer) based on the provider's education, training, and clinical license level (EMR, EMT, EMT-I, AEMT, Paramedic, Community Paramedic, Critical Care Paramedic);
- ·protocols approval by the provider's EMS medical director; and
- ·the approvals and permissions granted by the agency medical director.

EMS clinical care is also overseen by a part-time OEHS EMS Medical Director whose role is to work with stakeholders throughout the state to improve EMS in Nebraska.

The scope of practice for EMS providers in Nebraska is outlined in Nebraska State Law, in the Emergency Medical Services Practice Act and Nebraska's EMS Model Protocols which are developed and approved by the Board of Emergency Medical Services. These align with the guidelines developed by NHTSA's Office of EMS, including the National EMS Scope of Practice Model and the National EMS Education Standards. The National EMS Scope of Practice Model serves as the basis for the certification process conducted by the National Registry of EMTs

(NREMT) for EMRs, EMTs, EMTAs and Paramedics. NREMT certification is required to be initially certified in Nebraska.

EMS providers in Nebraska, while individually licensed and accountable for their provided medical care and decisions, do not hold the same status as independent practitioners like doctors and nurses. Consequently, they are required to practice under the oversight of a licensed physician. This requirement applies to both EMS agencies and non-transport agencies that employ or utilize EMS providers. These agencies must appoint a physician medical director, who plays a pivotal role in supervising the medical care rendered by the agency and its personnel. However, it should be noted that despite this requisite oversight, EMS providers do not operate under physician delegated practice.[19]

EMS physician medical directors are required to be Nebraska licensed to practice medicine and surgery or osteopathic medicine and surgery pursuant to the Uniform Credentialing Act. Medical directors have a range of responsibilities that are vital for ensuring the quality and safety of the care provided by EMS. These responsibilities include:

- Authority over the medical aspects of the EMS agency and its providers;
- The development and approval of protocols for the agency (the State's Model Protocols can be adopted and modified as needed);
- Ensuring the appropriateness of protocols based on provider certifications, licenses, and skill levels;
- The authorization of providers to provide care;
- The verification of skill proficiency of providers;
- The medical supervision of providers;
- Ensuring compliance with accepted standards of medical practice; and
- Overseeing the clinical quality of care delivered.

[19] In most U.S. states, the legal relationship between an EMS medical director and a paramedic involves supervision rather than agency. In an agency legal relationship, the "agent" (or, in this case, EMS clinician) is a representative or employee of a company or governmental entity who is responsible and held liable for the actions or inactions of the "agent." For EMS medical directors, this relationship is supervisory, indicating the responsibility for oversight rather than a direct liability for the actions of the EMS clinician. EMS clinicians are agents of the company or employing entity rather than the EMS medical director unless the EMS medical director is directly employing the EMS clinician. See A.R. Kuzel and E. A. Kuhl, EMS Medical Director Legal Issues and Liability. [Updated 2023 Nov 2]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK597344/

This assessment found agency leaders, providers, and stakeholders reporting variability in the engagement and quality of EMS medical direction across the state. Some medical directors were described as enthused, engaged, and vital to clinical quality and motivating providers to develop their clinical knowledge and skill. Many talked about medical directors as only minimally involved. In the assessment survey, a majority (75%) of agencies reported that their medical director makes themselves available when needed; yet less than half (45%) reported their medical director is actively interested or engaged, and 55% reported their medical director regularly reviews patient care reports when asked. Only 33% of agencies reported that their medical director regularly comes to the agency to review calls or education. Only 39% of providers reported knowing and regularly interacting with their medical director.

Medical directors' lack of involvement may be due, in part, to structure and expectations. Only 26% of agencies report having a job description for their medical director, and only 26% report compensating their medical director.

It is important to note that Nebraska regulations do not mandate specific education or training requirements for EMS medical directors. The OEHS and its EMS Medical Director do not have authority over EMS medical directors across the state. The ultimate authority over medical directors is the Licensing Unit of the Division of Public Health and the Nebraska Board of Medicine and Surgery, which is responsible for regulating the practice of medicine and issuing physician licenses.

It is difficult to objectively determine the quality of clinical care delivered by EMS in Nebraska. There are few specific established measures of clinical quality, and the State's eNARSIS data collection system is not yet regularly producing clinical quality reports. However, this does not necessarily mean that EMS patient care lacks quality. Stakeholders across Nebraska report a high degree of confidence in the clinical care currently being provided by EMS in Nebraska. While there may be specific providers or agencies with deficits in their clinical care, no significant statewide issues have been reported. The ongoing development of Nebraska's Statewide Trauma System, and Stroke and STEMI program, as well as work with simulation and ongoing education is reported to be continually raising the bar of clinical care across the state.

In Rules and Regulations, the State requires each licensed agency implement a medical quality assurance program. This program must include: an annual review of protocols and standing orders; documentation of medical care audits as required by physician medical director; and continuing medical education for the emergency medical services personnel.[20] How these regulations are implemented varies widely. Some full-time paid agencies have personnel dedicated to quality assurance who perform regular chart review, ensure protocol compliance, perform group call reviews, assess skills, and match education and training with discovered opportunities and needs. Many rural volunteer services have no structured or formal means of routinely reviewing quality. The operational demands of simply responding in rural areas with a certified crew often dwarf clinical quality concerns. This is exacerbated by a dearth of guidance in establishing quality practices that actually monitor and improve clinical care. The disparity in quality practices matches the ongoing struggle of EMS throughout the nation to establish appropriate quality measures beyond chart reviews, response times, and skill performance.[21]

In some locations, stakeholders believe the growing demands for clinical competence through the scope of practice, initial training and testing, and ongoing continuing education are creating a barrier that is inhibiting volunteerism. On the other hand, some providers, agency leaders, and physicians express concerns around knowledge, skill maintenance, and degradation given the limited experience and low volume of patient contact some providers have.

H. COMMUNITY PARAMEDICINE

Over the past decade, EMS around the world has evolved from its traditional role of responding to emergencies and providing medical transportation to encompass a broad range of healthcare services. Amid increasing demands on healthcare, healthcare shortages, and the need for more efficient healthcare delivery models where patients do not need to travel to a facility, EMS is adapting to deliver local community-based care. This concept is known as Community Paramedicine or Mobile Integrated Health.

[20] See Nebraska Rules and Regulations 172, Professional and Occupational Licensure, Chapter 12.
[21] Redlener, M. et al, "National Assessment of Quality Programs in Emergency Medical Services," in Prehospital Emergency Care. 2018. 22(3): 370-378. doi: 10.1080/10903127.2017.1380094. Epub 2018 Jan 3. PMID: 29297735.

Nebraska EMS is exploring Community Paramedicine or Mobile Integrated Health, recognizing EMTs, EMT-Is, AEMTs, and Paramedics possess a unique set of skills that enable them to respond effectively to diverse situations and patient needs. Their mobility and adaptability to provide care in various environments make them well-suited to provide preventive care, chronic disease management, and healthcare support to individuals in their homes, reducing the burden on healthcare facilities and providing efficiencies and convenience. The concept represents an evolution in EMS's scope of practice and necessitates additional education, training, and autonomy.

In 2016 the City of McCook, Nebraska piloted a Community Paramedicine program. The goal was to enhance patient care in ways that reduce ambulance transports, emergency room visits, and hospital readmissions. McCook is a rural community of 7,300 people in southwest Nebraska. The leaders of its local hospital, which serves approximately 30,000 people in McCook, saw a need and opportunity to partner with the local EMS, provided by McCook Fire Department, and a primary care clinic, to provide in-home healthcare visits by Paramedics. The program used on-duty Paramedics, thus no additional staff were needed. The program was funded by a $10,000 grant from Community Hospital Health Foundation to cover mileage, supplies, and incidentals.

During the pilot, the three partner entities identified and recommended patients for the program. With patient consent and a physician referral, Paramedics were given information about the patient's health conditions, past admissions and ER visits, social support, medication, and safety in the home (including risk or occurrence of falls), as well as economic, socioeconomic, and psychosocial factors affecting the patient's healthcare, including the patient's ability to follow a plan of care. Paramedics typically made one visit per week for four weeks, focusing on home safety, medication compliance, and discharge plan of care. The Paramedics completed a patient care report and shared it with the hospital and the patient's physician. Social workers made follow-up calls to monitor progress and determine areas for improvement.

More than 30 patients were served during the pilot, at an average cost of less than $85 per visit. Paramedics were able to check on patients, assist patients with activities of daily living, and identify patients whose needs could be best met

with nursing home or assisted living care. As fire-based Paramedics, they were able to install smoke alarms and grab bars in patients' homes, identify trip hazards, and assist in other relevant ways.[22]

Marc Harpham, McCook Fire Chief and Paramedic, hailed the pilot program as a success for increasing rural healthcare access in the McCook region. He highlighted the critical need for Community Paramedicine in rural healthcare, emphasizing ongoing efforts to refine aspects such as referrals, utilization of Community Paramedicine resources, and ensuring the program's longevity. Harpham expressed optimism, stating, "There is a huge need for help if we can get things in place for us to do it."[23]

Used by permission of McCook Fire Department.

McCook Fire Department Community Paramedics visited clients in their homes to support ongoing care following discharge from healthcare facilities.

Studies of outcome measures of Community Paramedic programs similar to the McCook program generally show enough evidence that these programs are effective and efficient to support their implementation into healthcare system design. The programs result in a net reduction in acute healthcare utilization, appear to be economically viable, and result in positive patient outcomes with high satisfaction with care.[24] In addition, these programs provide a wide range of benefits for EMS in terms of visibility, resource utilization, and potential career enhancement.

In 2020 Nebraska passed legislation allowing for the practice and licensing of Community Paramedics who have completed an approved Community Paramedic educational program (Nebraska Revised Statute 38-1206.02). The State also set standards for the provision of these services. (172 Neb. Admin. Code, ch. 12, § 005). However, the great challenge for Community Paramedic and Mobile Integrated Health programming in Nebraska is funding. Stakeholders

[22] Case Study: Paramedicine program strengthens rural health care system. Bryan Health. https://www.bryanhealth.com/app/files/public/2731/rural-bryan-health-mccook-compendium.pdf.
[23] Personal communication. March 25, 2024.
[24] Shannon, B. et al, "The Development of Community Paramedicine; A Restricted Review," in Health and Social Care in the Community. 2022. 30(6):e3547-e3561. doi: 10.1111/hsc.13985.

and agency leaders in Nebraska report having difficulty translating the effectiveness and efficiencies offered by Community Paramedic programs into sustainable funding. The typical reimbursement provided by health insurance, Medicare, and Medicaid has not evolved in most states to make Community Paramedic programs long-term viable.

I. THE STRUCTURE AND REGULATION OF EMS

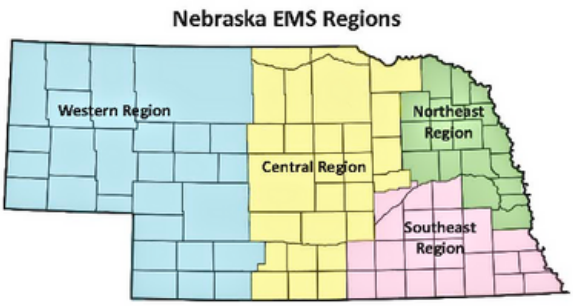
The current structure and regulation of EMS in Nebraska have been shaped by prevailing values such as protecting the public; ensuring quality care; fostering self-sufficiency, independence, and autonomy; and promoting local self-determination. These values are evident in how EMS is organized both at the local and state levels.

In Nebraska, the provision of EMS is not mandatory, making access to care and the capacity of services providing response, transport, and care primarily the responsibility of local individuals and communities. The presence of EMS in a community depends on factors like need, local interest, investment, demographics, and economic considerations. Consequently, the level and reliability of services vary significantly across the state. Ownership, structure, leadership, and valuation of emergency medical services are entirely local determinations, as is the operational funding of EMS, leading to wide variances.

This structure creates an uneven delivery of EMS and often prioritizes local control and independence over what is best for patients. If a community or region deems it cannot afford EMS or an advanced level of EMS, it will not have it – despite the need.

While the State has divided EMS in Nebraska into four regions, a truly systematic regional approach to the operational delivery of EMS does not exist. A meaningfully regional approach would, first, consider the region's need for emergency medical care, taking into consideration factors such as volume, demographics, the region's unique characteristics, medical resources and locations, patient transportation issues, current EMS resources, and economics. Secondly, this information would guide the creation of a regional EMS plan focused on a best-for-patient, best-for-residents/business/visitors structure. Lastly, such a plan would be implemented using a variety of collective, regional resources to focus on reliability, quality, and sustainability.

While Nebraska State law does not focus on aspects like access to care, capacity, system planning, or local EMS resource provision and funding, in practice, the State is increasingly involved in these areas due to evolving needs and circumstances.



The Nebraska State government's involvement in EMS began as modern EMS developed and emergency medical care became more sophistic- ated. Similar to other states, Nebraska's government has been motivated since the 1970s to protect the public by regulating EMS providers, training, and agencies. The State's motivation and actions regarding EMS are outlined in the Emergency Medical Services Practice Act (EMS Practice Act), which serves as the foundational legislation guiding EMS regulation at the state level.

The EMS Act outlines the State's interest and motivation through specific findings of the Nebraska Legislature (section 38-1203), including:

- Recognizing EMS as a primary and essential healthcare service;
- Acknowledging the life-saving potential of adequately trained providers and well-equipped ambulances;
- Understanding the effectiveness of State oversight in training and licensing personnel and organizations, and that these may be the difference between life, death, or permanent disability;
- Assuming EMS will be more effective when the State is involved in the oversight of training, and licenses personnel and organizations through rules and regulations adopted by an EMS Board;
- Recognizing the importance of an EMS Practice Act in advancing quality care and ensuring effectiveness, practicality, and economy in the provision of EMS;
- Acknowledging the complexity and demanding nature of EMS delivery, which calls for constant review and updating of requirements; and
- Emphasizing the importance of a regulatory system responsive to the changing needs of patients, providers, and agencies for the residents of Nebraska.

To fulfill its interest, the State seeks through the legislative action and the executive branch to do five things (section 38-1202):

1. Effectuate the delivery of quality emergency medical care in the state;
2. License persons and organizations;
3. Establish educational requirements and permitted practices for persons providing emergency medical care;
4. Regulate persons and organizations to provide the highest degree of care they are capable of providing; and
5. Protect public health and safety.

Two governmental entities are charged with administering and implementing the EMS Act: the Board of Emergency Medical Services (Board) and the Office of Emergency Health Systems (OEHS). The two work together to adopt and promulgate regulations under the authority granted to them by the statutes passed by the Legislature. Regulations are adopted in order to clarify and define processes and requirements outlined in state law. The properly adopted rules and regulations have the force of law. EMS related rules and regulations can be found in Nebraska Administrative Code chapters 5, 9, 10, 11,12 and 13.

The Board is a 17-member body that represents an array of interests, including EMS, medicine, healthcare, public safety, and other general interests. It provides guidance, advice, and recommendations to the executive branch and legislative branch and guides the OEHS in the development of rules and regulations.

Board members are appointed by the Governor and approved by the Legislature. These members serve five-year terms. Seven members are active emergency care providers with at least five years of experience. Of the seven provider members there are least two EMRs, two EMTs, and two paramedics. Three members are physicians active in emergency medical care. One physician must be board-certified in emergency medicine, with another specializing in pediatric care. Other members include a representative of an approved training agency, an experienced physician assistant active in emergency medical care education, an experienced registered nurse active in emergency medical education, and two public members interested in EMS. Among the members are to be representatives of volunteer and paid agencies, a firefighter, law enforcement officer, and an active Critical Incident Stress Management (CISM) representative (section 38-1215).

The Board's duties are to (section 38-1215):

- Promote the dissemination of information about relevant emergency medical information, the availability of EMS, and EMS training programs in Nebraska;
- Be a focal point for discussions about the availability and quality of EMS in Nebraska, ensuring information needed for such discussions is collected;
- Establish Model Protocols;
- Regularly review the EMS Practice Act and its implementation in light of Nebraskans' needs, reporting to the Legislature with recommendations; and
- Identify EMS communication needs and make recommendations for the development of a communications plan.

Additionally, the Board uses its broad EMS stakeholder representation to recommend the rules and regulations needed to protect the public. Recommendations include: personnel and agency licensure requirements, standards for BLS and ALS agencies, continuing competency requirements, EMS instructor requirements, standards for training agencies, and variances to protocols (section 38-1217).

The OEHS, housed within the Department of Health and Human Services, has 16 employees (nine of whom are directly involved in EMS) and is charged with adopting and promulgating the rules and regulations needed to administer the EMS Act (section 38-1219). The OEHS is responsible for:

- All aspects of licensing EMS providers and agencies;
- Oversight and approval of education and training and the inspection of training agencies;
- Establishing and maintaining EMS Model Protocols (with Board recommendations);
- Coordinating EMS Regions and the support provided by Regional Specialists;
- The periodic inspection of agencies;
- Collecting and analyzing EMS data and maintaining the Electronic Nebraska Ambulance Rescue Service Information System (eNARSIS);
- Providing support for personnel around licensing, rules, and regulations;
- Providing technical assistance to local agencies regarding licensing, rules, and regulations;
- Administering Emergency Medical Services for Children;

- Administering Trauma System of Care and the Stroke and STEMI Systems of Care;
- Administering State-funded assessments of local EMS;
- Supporting the Board of Emergency Medical Services;
- Overseeing Nebraska's Critical Incident Stress Management program;
- Managing Nebraska's involvement in the EMS Compact; and
- Overseeing a variety of other projects and programs related to emergency health.

To carry out these responsibilities, the OEHS is structured in a manner similar to many other State EMS programs. As EMS continues to evolve, State EMS programs across the nation are finding their offices significantly understaffed – especially when compared to other programs within State government with similar responsibilities. When modern EMS first developed, a State's primary interest was protecting the public through regulation. However, the growing need to evolve EMS into a true system of care – especially in rural and remote areas – is creating the need for State EMS offices to become advocates for EMS within State government as well as centers for EMS technical assistance.

EMS across Nebraska faces increasing challenges related to workforce, funding, and how it is structured locally, with stakeholders across the state reporting increasing expectations of the OEHS. When a local agency or provider experiences a challenge of any kind (reliability, sustainability, passing a test, finding continuing education, an emotionally taxing call, a conflict with a neighboring agency, etc.), the OEHS is the go-to resource. Regional Specialists report regularly experiencing the need for assistance to local agencies outstripping the available resources.

J. EMS DATA IN NEBRASKA

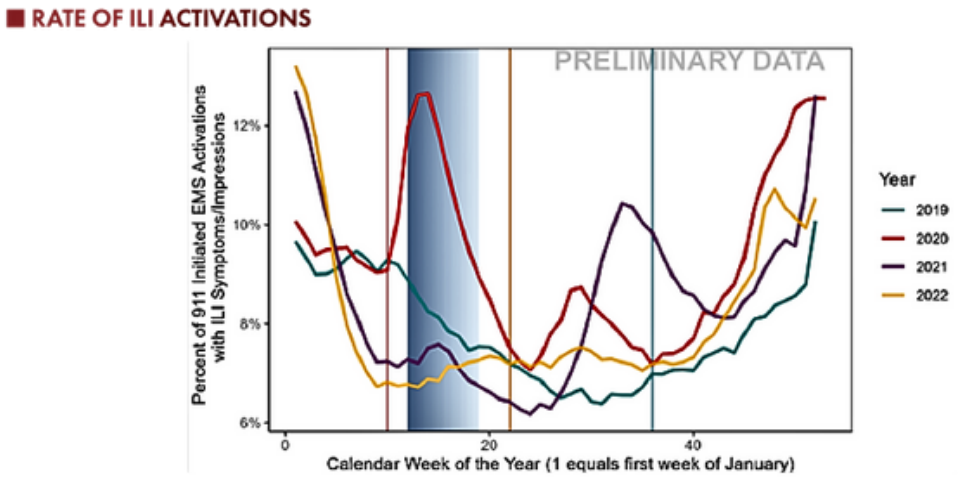
Throughout the nation data is understood to be essential to EMS quality and ongoing improvement. Valid and accurate information is built on solid data. In Nebraska, EMS data collection is maintained and managed by the OEHS. The collected data is essential to obtaining the information needed to protect the public, ensure clinical quality, and develop an evolving understanding of EMS in the state.

Nebraska's data collection includes not only all data collected for licensing

providers and agencies, but also requires that electronic patient care reports be completed on all calls and submitted to the Nebraska Ambulance and Rescue Service Information System (eNARSIS). Nebraska Rules and Regulations requires that collected patient care data adheres to the National EMS Information System (NEMSIS) Data Dictionary. NEMSIS serves as a national data repository, establishing national standards for the collection of hundreds of data elements. It is primarily designed to enhance patient care through data standardization, aggregation, and utilization at the local, state, and national levels. NEMSIS data provides a platform for formal research and analysis of EMS data.

NEMSIS is helping to provide a deeper understanding of EMS in the United States, as can be seen in its 2022 Data Report.[25] From all 50 states, NEMSIS collected data on 53 million EMS calls or responses. Of those responses, 42 million patients were treated and transported. Of those treated and transported, 46% were over the age of 60. Less than 6% of responses were in rural areas, and volunteer agencies made up less than 2% of the responses. From the scene to the receiving facility, 70% were transported nonemergent (without lights and sirens), and 90% of patients were taken to hospital emergency departments. Seventy-six percent were treated and transported by ALS care.

NEMSIS data collected during COVID-19 demonstrates the time of year and the significant spikes in flu-like (ILI) symptom responses in the following graph compared over four years:



[25] National EMS Information System (NEMSIS), (2023) NHTSA Office of EMS, Department of Transportation, 2022 Data Report.

Likewise, eNARSIS is becoming capable of producing the same sort of information as agencies across Nebraska are increasingly improving their data entry. In 2023, eNARSIS collected over 230,000 patient care reports. In looking at EMS personnel's impression of the patient's primary problem or most significant condition, the data shows 7,446 patients presented with psychiatric type problems (2,678 of these were for suicidal ideation and suicide attempt); 14,818 patients presented with injuries; 9,602 presented with weakness; 6,731 with altered mental status; and 2,477 presented with syncope.

Such data can be analyzed and used to study trends and training needs, and be used by agencies; hospitals; the Board; the Trauma, Stroke and STEMI Systems; EMS for Children; and other stakeholders. The OEHS provides eNARSIS as a patient care report documentation platform to all EMS agencies, and provides support for the data collection.

In coming years, data will likely be used to analyze multiple components of the emergency medical services system, such as understanding where advanced resources are needed, timeliness, patient outcomes, and how EMS can be delivered most effectively and efficiently.

However, Nebraska, like many states, faces significant challenges in turning data into meaningful improvement. These challenges continue to hamper EMS in creating a compelling case for the support and resources it needs.[26] Specifically, in Nebraska these challenges include:

- **Relevance.** The current data focus does not pertain to the major challenges facing EMS such as workforce, finance, and operational efficiency. The current NEMSIS and eNARSIS systems are focused on collecting large amounts of clinical data for the national database. Beyond a few clinical studies, this data has failed to produce significant meaningful information and clinical improvements. The current challenges facing EMS in Nebraska are largely operational and financial, and the needed data and information is about workforce and the business side of EMS.
- **Demonstrating the value of data collection.** Providers and agencies quickly grow tired of extensive data submission if they do not see the value in

[26] Becknell, J., Simon, L. (2016, December). Beyond EMS Data Collection: Envisioning an Information-Driven Future for Emergency Medical Services (Report No. DOT HS 812 361). Washington, DC: National Highway Traffic Safety Administration.

their effort. Much of the data that is currently collected is not turned into useful information that can be used for improvement or change. There must be a clear and direct connection between data collection and something that the local provider and agency deem to be of value.

- **Obtaining quality data.** The accuracy of entered data must be reliable. When providers are taxed by staffing shortages and increasing demand, entering data accurately may not be a priority. The collection of reliable EMS data requires EMS providers to spend time and energy understanding and collecting appropriate data. They are often not motivated to do this. Furthermore, in order to ensure accuracy, effective data collection takes regular and ongoing training to ensure widespread understanding of data definitions.
- **Fostering trust.** Local agency leaders and providers may be reluctant to share data and information about operations, finances, workforce, and community support with other agencies – even though they may benefit from cross-agency comparison.
- **Poor integration with healthcare.** EMS patient care reports and hospital and healthcare patients' electronic health records are often not integrated in a manner that allows EMS to use patient outcome information for learning and improvement.
- **Limited resources.** The OEHS has limited IT resources to handle a growing need for not only the collection of data but the analysis and reporting on collected data.

K. THE ECONOMICS OF EMS IN NEBRASKA

The challenges facing EMS in Nebraska continue to shine a light on the economics of EMS. The economic structure of EMS is intricate and often misunderstood.

In Nebraska, funding for EMS frequently comprises a blend of ambulance fee-for-service charges and reimbursement, governmental funding, or donations of labor or money. Fee-for-service revenue is highly variable based on the third-party payment source (private insurance, Medicare, Medicaid, auto-insurance, etc.) Governmental funding is often provided at the local level through property or sales taxes. Donated labor and donated money depend on people's motivation and altruism. This combination of private market payments to offset

variable costs, combined with governmental payments for fixed costs, and the mix of donated labor and monies can be confusing.

As in most places nationwide, the way EMS developed in Nebraska has had a bearing on the complexity of its economics. The full costs of providing out-of-hospital care have often been hidden, and funding sources have been varied and at times unreliable. Public works, law enforcement, fire departments, public health, and public education are generally viewed as essential services and common goods that necessitate sustained and dedicated public funding.[27] The same has not always been true for EMS, however, and the way EMS is viewed economically continues to be unclear.

Despite being perceived as essential by many, EMS in Nebraska straddles a variety of organizational and economic models, including fire departments and fire boards; unfunded volunteer non-profits; private for-profit and venture capital businesses; a branch of healthcare; and as part of local governments such as special taxing districts, municipal, or county departments. Amidst this diversity, what remains constant is that much of EMS in Nebraska operates in an economic environment of great contrast. Some EMS operations are well funded and personnel are well paid, while other operations depend on the sacrifice of donated labor, equipment, facilities, and operational monies. For-profit EMS agencies continue to operate and make profits, particularly in locations with sufficient population densities and economies of scale.

Determining the precise annual cost of providing EMS in Nebraska is challenging. However, SafeTech Solutions estimates this figure to be around

[27] EMS is increasingly viewed as an essential service and common good in that EMS is expected by the public, necessary to the safety and welfare or society, and cannot be assured of readiness and equitable access and distribution without government support.

An Analysis of Prehospital Emergency Medical Services as an Essential Service and as a Public Good in Economic Theory. National Academy of Public Administration. May 2014. https://www.ems.gov/assets/Prehospital_EMS_Essential_Service_And_Public_Good-1663689363.pdf

Recognition of EMS as an Essential Public Function. NAEMT Position Statement. Revised March 2021. https://www.ems.gov/assets/ems-as-an-essential-service-revised-2-25-21.pdf

American College of Emergency Physicians. (2018, February). Policy Statement: Special Roles for Emergency Medical Services Professionals. https://www.acep.org/globalassets/newpdfs/policy-statements/special-roles-for-emergency-medical-services-professionals.pdf

$392 million, or $200 per resident ($511 per household). SafeTech uses a model to explore the gap between reimbursements for transport and the gap between reimbursements for transport and the costs of providing those services. Of the $392 million in costs, 52% or $204 million are likely to be covered in reimbursement revenues. The remaining deficit of $188 million is currently covered by a combination of volunteer and low-wage labor, along with governmental funds. The model is based on approximately 238,000 annual EMS responses statewide. Of those responses, 68% or 161,000 patients are transported.[28]

Nebraska EMS Agency by Type

EMS Agency Ownership	
License Type	Total
Fire Department or Fire Board	152
City	140
County	28
Other - Non-profit, joint powers, etc.	36
Private or for-profit	43
Hospital	17
Tribal	3

The model effectively illustrates the significant costs associated with EMS in Nebraska. The readiness costs in the state are particularly high due to several factors, including Nebraska's vast geography and long distances, varied climate, low population density, decentralized delivery model, challenges in providing training, and the usage of air medical services. The model further reveals the wide variation in the cost per call based on the annual call volume and illustrates that the costs of readiness – including labor, facilities, vehicles, and equipment – drive up per call cost and will likely never be covered by transport reimbursements, necessitating other revenues.

[28] The numbers of responses vs. transports are based on OEHS eNARSIS data. There may be some duplication but these represent the best current data.

The model estimates the average EMS bill in Nebraska to be $1,600 and the average payment received by ambulance agencies to be $832, or 52%.[29]

The costs are met through a variety of funding sources. The State of Nebraska provides some grants that are used by local services for equipment, training, and personnel; however, besides these, no sustaining funding for EMS is allocated at the state level. Significant sources of funding for EMS, ranked from largest to smallest, are as follows:

Sources of Funding, Nebraska EMS	
Donated labor (volunteerism)	If all EMS volunteer hours statewide were to be valued at fair market wages, volunteerism would likely emerge as the largest subsidizer/funder of EMS in Nebraska.
Transport revenues	These are the revenues collected from billing insurance companies, both Medicare and Medicaid, and private payers.
Local tax funding	This comes from municipal or county funding through taxes or the general fund.
Local taxing districts	This comes from special taxing districts designed for specific services.
Local fundraising	This accounts for all local fundraising events.
Provider grants	Grants that come from the Branch budget, largely for vehicles and equipment
Other grants	Grants from government programs, private foundations, or corporations
Philanthropy	Gifts from individuals, foundations, or corporations
Donations	Private donations, mostly to volunteer services

Historically, EMS has sought to be reimbursed for medical transportation through revenues collected from medical and auto insurance, both Medicare and Medicaid, and private payers. However, reimbursement for transportation can only cover the full costs of readiness, overhead, response, treatment, and transportation if the agency has sufficient volume of calls and a payer mix[30] that includes enough private insurance or private party

[29] The $1,600 is an estimated average ambulance transport change based on the averages of estimated CMS base rate (BLS, ALS, ALS2 and SCT) charges across Nebraska along with an average of 40 billable miles using the average per mile charge of $15 per mile. The number of billable miles averages both 911 billable miles and interfacility billable miles in Nebraska.

[30] Payer mix is the percentage of runs billed out to each type of payer Medicare, Medicaid, Commercial Insurance (Auto and Liability Insurances) and patients (i.e. patient pay or self-pay).

payments. In the Great Plains states, SafeTech Solutions has found the total annual expense of one 24/7 BLS unit to be approximately $750,00 and one 24/7 ALS unit to be approximately $1.2 million to 1.4 million.In many locations more than 1,400 – 2,000 annual calls/transports are needed to cover the costs of a single 24/7 paid staff ALS unit.[31] The variance in annual calls/ transports needed is because of the variance in labor costs and other expenses.

EMS is unable to collect for its full costs due to the way reimbursement works. While an EMS agency may bill its full costs, the Centers for Medicare & Medicaid Services (CMS) sets the standards and rates for reimbursements in EMS. Medicare and Medicaid make up the single largest payers for healthcare nationwide and in Nebraska. Approximately 18.5% of Nebraskans use Medicare, and 19% of Nebraskans receive healthcare services through Medicaid.[32] SafeTech Solutions estimates that Nebraska EMS agencies receive only about 51% payment of the average billing.

While detailed data on the cost of EMS, reimbursement for EMS, and funding sources was beyond the scope and available data of the assessment, SafeTech's model demonstrates that utilizing only transportation-based reimbursements to fund ambulance services is impossible for most Nebraska EMS agencies. This is especially true in agencies with low call volumes – which make up the bulk of agencies in Nebraska.

Call Volume Range for Nebraska Agencies	
Call Volume Range	Number of Agencies
0-25	97
26-50	76
51-100	68
101-300	112
301-500	14
501-1000	26
1000+	26

[32] Enrollment figures for CMS programs at https://data.cms.gov/summary-statistics-on-beneficiary-enrollment/medicare-and-medicaid-reports/medicare-monthly-enrollment. Medicare in Nebraska, https://www.healthinsurance.org/medicare/nebraska/#enrollment

Therefore, significant public funding, or volunteer or low-wage labor, is needed. Historically, the biggest subsidy of EMS in Nebraska has been donated labor (volunteers) and low-wage labor. Both these subsidies are disappearing. Local jurisdictions in Nebraska have robust tools for developing public funding of EMS through county and municipal property and sales taxes and creating special taxing districts. However, some rural areas, communities, and counties in Nebraska may not have the population or visitor base to create local funding to sustain local EMS.

One approach to achieving sustainable funding is by consolidating resources to establish economies of scale. In various locations throughout the Great Plains states municipalities, counties, and regions are in the process of creating economies of scale by merging agencies, consolidating resources, creating joint powers authorities, and developing regional approaches to the delivery of EMS.

Sustainable funding for EMS is typically not a significant issue in Nebraska's urban areas. Urban emergency medical services are primarily funded by a high volume of transports and tax subsidies, ensuring their continued operation.

This is not the case in much of rural Nebraska, however, where call volume is relatively low and weather and distances between communities and healthcare facilities make these services vital despite their lack of financial viability. Volunteer services in Nebraska are funded by a combination of donated labor, transport revenues, grants, fundraising, philanthropic donations, and some limited funding from municipalities and counties.

The recent decline in volunteerism is impacting rural Nebraska EMS. Labor is the largest expense for any EMS agency. Conversely, it can also be argued that the largest financial support or subsidy of EMS in Nebraska is volunteer labor. In volunteer EMS organizations, labor costs are not accounted for and are therefore hidden. As volunteerism declines, however, organizations must contemplate paying staff or going out of business. At this point, a service's heretofore hidden labor costs become glaringly apparent.

In 2022, a volunteer hour in Nebraska was valued at $29.50 per hour.[33] This value is based on the minimal amount needed to replace a volunteer with a fully paid employee including wages and benefits. At this rate, the labor costs to staff one 24-hour ambulance unit would be at a minimum of $517,000 annually. In should also be noted that the $29.50 is likely low and does not account for recent rises in the consumer price index (CPI) and the post-COVID cost of labor.

Of the 419 Nebraska EMS agencies, 345 or 82% use some volunteers (combination departments), and 338 (80%) report using all volunteers. If these services were to replace their volunteers with 24/7 paid staff at $29.50 per hour, the annual cost would be in excess of $174 million.[34]

Calculating the value of volunteer labor helps communities, residents, and governments recognize the true and full costs of the emergency medical services they are receiving from volunteers. It is an opportunity to better understand the real and full value of the services provided.It also raises the question of responsibility for the funding of operational EMS across the state. During the assessment, questions of funding responsibility are clearly at the root of many of the current challenges facing EMS across the state.

[33] This calculation comes from the Independent Sector, a non-profit organization that calculates the value of a volunteer hour based on data from the Bureau of Labor Statistics. https://independentsector.org/resource/vovt_state_2021/.

[34] This annual cost of volunteer replacement is calculated for each agency with and basic assumption that each agency will at least staff one 24/7 unit with 2 personnel. For combination agencies, only the cost of one crew member was counted as needed to be replace with paid staff. For the all-volunteer services agencies both crew members were counted as needing to be replaced. The formula is: (Number of crew members) x (Value of volunteer hour, $29.50) x (24 hours) x (365 days) = Annual Cost.

KEY OBSERVATIONS & FINDINGS

Over the past 50 years, Nebraska EMS has successfully applied standard principles and practices and has learned from clinical research and experience. Nebraska EMS is keeping pace with EMS across the nation in terms of clinical care protocols, structure, and regulation. However, like many other states, Nebraska faces significant challenges and opportunities. The challenges are formidable. The opportunity to address them, however, amounts to envisioning a new period of evolution, development, and growth.

The 21 key observations and findings of this assessment illuminate both the current state of EMS in Nebraska and possible paths forward.

KEY FINDING 1

EMS is an expected and increasingly vital element of healthcare across Nebraska.

EMS is no longer simply a nice-to-have service in Nebraska; it has assumed the mantle of a common good, as expected in community life as law enforcement, public works, schools, public health, and courts.[35] From the noisy bustle of 78th and Dodge Streets in Omaha to the quiet lanes of Fort Robinson State Park and along the meandering Frenchman Creek in Hayes County, EMS has become available in every corner of Nebraska. It has evolved from humble beginnings to a vital element of society that residents and visitors assume is only a phone call away. While some Nebraska residents and visitors may not understand how EMS is delivered, funded, structured, staffed, or evaluated, they fully expect it to be available, prompt, competent, professional, and capable of delivering increasingly higher levels of service and clinical care when it is needed.

During this assessment, expectations were clear that EMS is available and capable of delivering safe, appropriate, and timely out-of-hospital care when called upon. No stakeholder or informant suggested that EMS is optional. An

[35] Emergency Medical Services (EMS) can be considered a common good in the sense that they are a vital service provided to the community, often funded by public resources, and available to all members of the community regardless of their ability to pay. EMS are essential in ensuring public safety and quality of life by providing immediate medical care in emergencies, which benefits the public at large.

informant from Webster County could not imagine life without EMS, reflecting on a time when family members were transported in the back of a pickup truck for treatment. One EMS provider wrote, "We are taken for granted. Everyone assumes we'll always be there... they don't think about EMS until they need it." Informants throughout the state spoke passionately about EMS as an essential aspect of everyday safety and quality of life.

EMS has increasingly become a vital and integral part of Nebraska's complex healthcare system, especially in rural and frontier areas. Where there is an urgent out-of-hospital medical emergency, EMS is summoned. When medical assistance is sought but not readily available in its traditional form, EMS is increasingly becoming the go-to access point. For patients at rural Critical Access Hospitals who need transport to tertiary care, EMS is the resource. The regionalized medical specialties such as maternal/child care, orthopedics, cardiac and stroke care, trauma care, oncology, and psychiatric care regularly utilize EMS as their primary connector. When a non-ambulatory patient needs to be moved to a skilled nursing facility, EMS is needed. When a burn patient must be transported to a burn center, EMS gets the call. As rural primary care resources across the state decline, EMS is now being considered as an option to fill the gap.

This finding underscores that, as EMS is now an established and expected common good, like law enforcement, public works, schools, public health, and courts, it will require similar attention and support.

KEY FINDING 2

While currently meeting clinical and medical transportation demands, EMS is losing capacity, becoming strained, and is in need of evolution and change.

Across the state, night and day, through all seasons and weather, EMS providers and agencies are responding when called. Patients are being treated and transported. EMS providers generally display a sense of pride in the services they provide and largely demonstrate a commitment to ensuring Nebraska's EMS needs are met. According to the assessment, "helping people in need" was survey respondents' top motivator and satisfier for their EMS role.

While it was impossible to objectively evaluate the quality of clinical care pro-

vided by EMS in Nebraska,[36] no major or systemic EMS clinical issues or deficits were reported by informants and stakeholders across the state, including receiving hospital personnel. In fact, informants who were familiar with the services and care provided by EMS were quick to praise the care and the dedication of the providers and agencies.

Clinical issues were not considered an area of challenge or need by either EMS agencies or EMS providers. Neither state EMS officials nor medical directors reported any major or systematic clinical issues or deficits. EMS providers reported being confident in their clinical skills (85% of respondents). EMS agencies reported having positive relationships with receiving hospitals (89% of agencies responding) Only 8% of agencies expressed concern about the quality of clinical care provided by staff.

The most talked about issue amongst EMS stakeholders, informants, and providers is the emerging imbalance between EMS demand and resources. Stakeholders and informants report being concerned about the operational reliability of EMS and the short-term and long-term sustainability of EMS – especially in low population areas. While currently meeting needs, providers and informants describe EMS as losing capacity (not enough workers) and straining to meet demands. Some providers report being exhausted. Others told of being on call constantly. A majority of providers (69%) report being worried about the future of EMS in Nebraska.

A top issue for agencies is their staff's carrying capacity and not finding a new generation of workers willing to make the sacrifice. Seventy-one percent of agencies reported that one of their top concerns is **a small group of people carrying most of the schedule load**. An agency leader said, "We just can't keep going this way. Something needs to change." A rural EMT wrote:

> I have over 30 years in EMS. I feel the lack of sleep more now than ever. There is no one to take the load since there are so few of us that respond, I've been ready to quit for a long time but feel guilt leaving the area without service.

[36] Objectively assessing the quality of EMS clinical performance through clinical data is still being developed and was not available at the time of this assessment.

Another EMS provider wrote:

> Currently, there are only two volunteers available during daytime in our community on a regular basis. Our squad does the best we can with being flexible for those members, but childcare during calls is difficult and maintaining a good rescue/personal life balance can be a challenge.

An agency leader wrote:

> I fear for the future of EMS in Nebraska . . . This is a hard job with long hours. The current generation can't handle working this job. Too many EMTs and Paramedics have left this profession. Something needs to be done to help the ground transport-ation or it will keep declining and will be no more.

Repeatedly, the assessment team heard concerns about the strain. The strain is showing up in multiple areas: two or three people keeping an agency operating; burnout and exhaustion; leaders needing to constantly work field shifts and having no time to manage or lead; aging providers continuing to work far beyond retirement age and what they want; providers being up all night for an interfacility transfer after working all day in their regular job; all-call systems with providers worried about leaving their community to shop or recreate; providers working multiple jobs; a compromise of provider health and emotional and psychological wellbeing to meet the mission; less time for education, training, and skills improvement; less time to recruit and prepare a new generation of providers; and a general sense of frustration about the future.

Informants also indicated the strain is leading to a decline in response reliability, impacting neighboring services. The strain is also being felt in larger communities with fully paid agencies struggling to retain and recruit paramedics and dealing with increasing demands on staff.

KEY FINDING 3

Workforce and funding are top concerns for EMS throughout the state.

EMS agency leaders report staffing shortages as the top challenge facing Neb-

raska EMS. Just below workforce, but related, are funding issues. Both workforce and funding are reported to be impacting reliability and long-term sustainability.

Agencies responding to the survey describe workforce challenges as:

- recruiting staff
- a small group carrying most of the schedule load
- availability of staff during specific times of the day
- the advancing age of staff
- motivating staff to participate
- retaining staff
- staff exhaustion and/or stress

Only 31% of agencies using volunteers reported having enough staff. Twenty-eight percent indicated they will likely not have enough volunteers to operate within the next five years. The greatest areas of need are: recruiting staff, motivating staff to participate, and retaining staff.Agency leaders told of spending much of their time simply trying to ensure providers are available to meet 24/7 staffing needs. Similarly, individual EMS providers report workforce issues as their top concern. A majority report staffing shortages to be the greatest challenge or frustration. Only 15% indicate their agency has enough staff. A majority personally feel the demands on them are increasing and often feel taken advantage of by EMS and healthcare.

Workforce shortages are manifesting themselves in a variety of ways. The most prominent is the impact on volunteer agencies. Many of these agencies use an all-call staffing system in which there is no staffing schedule and everyone is summonsed when there is a call. With fewer providers available to respond, the pressure to always be available increases. This creates stress and the necessity to "be on call" without a break. Only 30% of agencies say providers can easily leave town without worry or guilt about EMS coverage in their area.[37]

In other agencies, workforce shortages are leading to providers working more hours, with regular openings in the schedule, demands to come in on days off, decreased capacity, an inability to meet all calls, difficulties staffing additional

[37] Of agencies responding to the survey, 76% do not have a regular call schedule.

units when needed, and challenges meeting interfacility transfer demands. All of this impedes the agency's ability to staff in a manner that is humane, safe, and motivating. As one agency leader expressed, "One extra call or transfer breaks our back. Everyone is tired and frustrated."

Next to workforce issues, funding is perceived as the second greatest EMS challenge in Nebraska. Both agencies and providers recognize a link between workforce and funding. Without adequate funding, volunteer agencies must continue to rely on donated labor, with limited incentives, educational support, and motivational benefits. Many lack the resources to even consider hiring staff for the times when volunteers are not available. Similarly, agencies with fully paid employees or a combination of paid and volunteer staff struggle to create an employment value proposition (EVP) that will attract and retain enough of the right employees.

Both workforce and funding issues are impacting reliability and sustainability. Only 26% of providers see EMS as operating sustainably. Forty percent of agencies report having missed calls in the past year due to staffing issues. Fifty-six percent have experienced delayed responses in the past year due to staffing. A 2017 University of Nebraska Medical Center EMS workforce study paper found that a majority of EMS agencies in Nebraska indicated that the inability to recruit and retain staff is impacting the services they provide.[38]

KEY FINDING 4

Beneath the workforce and funding issues is a lack of public and governmental attention, understanding, and investment in EMS.

Many EMS providers and agency leaders report that more public and government attention and investment in EMS will be needed.However, they remain skeptical that this will occur without a better understanding of EMS by Nebraska's residents and government officials.

The public and government often have a mistaken belief that EMS is sustainable simply because it remains so reliable. They also incorrectly believe that EMS, just like law enforcement, fire services, and public works, is fully supported by general

[38] Holt, M., "Assessment of EMS Workforce in Nebraska with Future Strategies." (2017). https://digitalcommons.unmc.edu/coph_slce/5.

budgets and taxes. This misconception is reinforced by the assumption that EMS is a government function because it is typically accessed through 9-1-1 calls, which are answered by government-run public safety answering points.

It is not well understood that EMS in Nebraska developed locally in an environment of scarcity without regional or statewide planning. EMS has, and continues, to operate largely because a small group of local people care about it, are motivated to provide it, and are willing to sacrifice personal interest, family time, and other opportunities to ensure the service continues. Few outside of EMS are familiar with the levels of care provided or what goes into the training and preparation of an EMR, EMT, or paramedic. Few understand that the highest levels of care are often provided where least needed and the lowest levels of care where people are sicker and trauma deaths are higher.[39]

The public and government are often confused about who provides EMS. They see ambulance vehicles with a variety of logos and names. They may see an ambulance from a fire department or an ambulance with just a town's name painted on the side. They may see ambulances with large healthcare system logos or the corporate name of a for-profit business. This creates confusion about who provides the services and how they are supported. When people use EMS, they may receive a bill and assume insurance payments cover the full expense of providing EMS. They may hear about the need for volunteers and categorize EMS as simply another local civic club.

As one EMS provider told the assessment team, "No one thinks much about us until they need us. Then the only thing we hear about is how fast we got there, if we're nice to them and how much it costs." Other providers talked about a lack of understanding and valuing of EMS as a standby service – that there is significant value associated with having an EMS unit available. Whether or not it responds to a call – having an ambulance nearby creates a sense of safety and wellbeing.

Other stakeholders are concerned that EMS in the remote corners of Nebraska is not appropriately valued. They point out that while remote agencies and providers may have few calls, the demands on them can be extreme. Response

[39] "About Rural Health." Center for Disease Control and Prevention. Updated 2023. https://www.cdc.gov/ruralhealth/about.html#:~:text=Rural%20Americans%20are%20more%20likely,stroke%20than%20their%20urban%20counterparts.

times are long. Transport times are often longer. The providers are regularly tasked with caring for critical patients for extended periods of time – especially when flight services are not available. These services are often the least resourced and yet Nebraska's residents and visitors expect these providers and agencies to provide the same levels of service they receive in Omaha or Lincoln.

Some EMS leaders are concerned that EMS is not understood and treated as both a business and profession. Because of how EMS developed, it is often not treated as a business where expenses must be tracked and revenues regularly evaluated and cultivated. As a healthcare profession, EMS is increasingly expected to provide state-of-the-art care and be accountable for that care through continuous evaluation and improvement. Many agencies in Nebraska simply do not have the resources to attend to the business and professional side of EMS and therefore find it difficult to tell a compelling story about their performance, needs, and long-term sustainability.

A list of what Nebraska EMS stakeholders, agency leaders, and providers wish the public and government understood and valued about EMS includes the following:

- There is no mandate that EMS be provided in Nebraska;
- Operational EMS is a local function dependent solely on local initiative;
- EMS developed in an environment of scarcity and has provided low-cost EMS at a bargain that is no longer sustainable;
- EMS developed without planning for regional needs or regional efficiencies;
- EMS is often not viewed as a business;
- The business nature of providing local EMS is becoming increasingly important;
- EMS has always needed financial resources or subsidies beyond what it can collect from medical transportation reimbursements from insurance, Medicare and Medicaid, and self-pay;
- The greatest subsidy of EMS in Nebraska is volunteer and low-cost labor;
- The full and true costs of operating EMS remain largely hidden;
- EMS providers are increasingly being viewed as healthcare professionals with all of the expectations and liabilities that accompany the provision of healthcare as a professional;
- Attention to EMS and its need for resources is often eclipsed by law enforcement, fire, disaster planning, healthcare, public health, and mental health;

- The future sustainability of EMS will require more attention and support from the public and government;
- The regionalization of medical specialties has dramatically increased demands on EMS;
- Primary care, mental health, and interfacility transfer demands on EMS have increased, with impacts to 9-1-1 service; and
- EMS reliability and sustainability should not be assumed.

Many EMS stakeholders expressed a desire for the public and government to gain more understanding about the nature of EMS and the current conditions that are creating challenges.

KEY FINDING 5

Many elements related to the operational performance, workforce, and finances of EMS in Nebraska are difficult to assess and understand due to a lack of data.

The assessment team found itself limited in assessing EMS in Nebraska because of the absence of operational performance data, workforce data, and specific financial numbers. The absence of such data is not unique to Nebraska. Across the nation EMS data collection has primarily focused on clinical performance, not on operational performance, workforce, or business practices. The assessment team found a paucity of data on the following:

- number of delayed or missed requests and responses;
- number of calls given to other agencies;
- which agencies are struggling most with reliability;
- which agencies are facing sustainability issues;
- which agencies have capacity to help other services;
- operational performance trends in specific areas or regions;
- number of EMS workers needed across the state (workforce demand);
- number of EMS workers including their various license levels that are available (workforce supply);
- the gap between workforce demand and supply;
- a comparison of the number of providers on rosters with the number of providers who are actually active;
- trends in workforce turnover;
- trends in volunteer replacement;
- safety breaches, provider injuries, and mental health issues;

- EMS salary trends;
- operational expense data; and
- average reimbursements.

Basic data on EMS performance from the Public Safety Answering Points (PSAPs) is also absent. PSAPs receive the bulk of requests, often dispatch EMS, and have important system performance data. This data is not consolidated across PSAPs, inhibiting a clear view of how EMS in Nebraska is performing. Because of the limits in basic performance data, it is difficult to track system failure unless it is colossal and shows up via the media or through other means.

Some agency leaders expressed a reluctance to share data beyond the requirements for clinical patient reporting. Reasons for this reluctance are explained as a desire for autonomy and independence, a reluctance to show need or weakness, a lack of trust, concerns about governmental interference, and the desire to remain self-sufficient.

Without extensive data it is difficult to attract the appropriate attention EMS needs because basic questions cannot be answered quantitatively. Some of these questions are: How reliable is EMS across the state? How many calls are delayed each month? How many volunteers are leaving EMS? How many volunteers are actually taking call (not just on the roster)? How many EMS workers with what certifications are needed? How much will it cost to replace volunteer labor? What is the true and full cost of providing EMS? Is EMS currently efficient in a given area or region? Without data, EMS is struggling to tell a compelling story about its needs.

KEY FINDING 6

EMS in Nebraska was not developed as an integrated system, nor does it currently operate as a planned, integrated system.

Today Nebraska residents and visitors are served by a collection of independent EMS agencies that developed locally and organically without regional or statewide planning and coordination. This means EMS resources are not necessarily deployed in a manner that is optimal for patient care and cost effectiveness or designed for long-term sustainability.

True systems are organized collections of elements or parts (or subsystems)

that are integrated to accomplish an overall goal (such as best-care-for-all-patients). High-functioning systems continually exchange feedback among the various parts, elements, or subsystems to ensure the system remains strong and collectively laser-focused on achieving the goal. If an element of the system is changed, weakened, removed, or damaged, the nature of the overall system changes, impacting the goal. This means that if any element or activity in the system is weakened, misaligned, or fails, the system makes necessary adjustments to effectively achieve its goal and protect its elements. This is a true collection of elements functioning as a system.

Like other states, Nebraska has the most advanced EMS resources that provide the highest levels of clinical care in urban areas where response and transport times are short and medical facilities with high levels of clinical care are close by. Nebraska has the least amount of advanced life support resources in rural areas where trauma mortality is higher and acute cardiovascular conditions are impacted by time and distance.[40] In addition, the absence of a true systems approach shows up in a variety of other areas, including:

- a lack of ongoing regional and statewide planning aimed at operational expedience, optimal geographic coverage, efficiencies, and cost containment;
- a lack of regional approaches where shared services would maximize resources and create greater capacity;
- an uneven distribution of workers;
- uneven oversight, medical direction, and clinical care levels statewide;
- a dearth of coordinated leadership;
- an uncoordinated approach to interfacility transfers;
- uneven funding for EMS;
- limited data and information, and a limited ability to evaluate EMS performance;
- an inability to foster long-term sustainability; and

[40] Jarman, M.P. et al., "Rural Risk: Geographic Disparities in Trauma Mortality." Surgery. 2016. 160(6):1551-1559. doi: 10.1016/j.surg.2016.06.020.

Curtin, S. C. and Spencer, M. R. "Trends in Death Rates in Urban and Rural Areas: United States, 1999–2019." NCHS Data Brief, no 417. Hyattsville, MD: National Center for Health Statistics. 2021. DOI: https://dx.doi.org/10.15620/cdc:109049external icon

- a variety of other EMS-related issues such as advocacy, systems of care, and mobile integrated health, etc.

KEY FINDING 7

The operational provision of EMS depends solely on local initiative, the market, and altruism.

A common refrain the assessment team heard from rural EMS providers and agency leaders is, "We need help." The refrain is an important acknowledgement that the current structure of EMS as an exclusively local function may not be sustainable. Speaking to staffing shortages, an informant from the panhandle said, "This is not just happening in our town. It's everyone. Nobody around us has enough people."

During a State Legislative hearing on EMS in October, 2023, people from across the state told lawmakers that many of their local EMS agencies will need help to remain sustainable. Speaking about staffing issues, an EMT testified that, "The issues are systemwide. The trends are historic, and the current system of EMS is not sustainable." [41]

EMS is described in Nebraska statute as an essential health care service.[42] However, there is no statutory requirement or entity of government responsible for ensuring EMS is provided, and no required funding for the delivery of operational EMS. Without such requirements the existence of EMS hinges on a variety of factors including the motivation and altruism of local people, local governments treating EMS as a common good, healthcare institutions incorporating EMS into their service offerings, and the business opportunities offered by EMS.

The lack of responsibility for the provision of EMS becomes a major sustainability concern when local commitment, initiative, and/or resources shrink at the same time the expectation for and demand for services increases. If an EMS agency becomes unable to meet the demand or goes out of business, there is no requirement it be replaced, and no governmental entity responsible for ensuring

[41] Sanderford, A. "Strains on Rural Nebraska Ambulance Services Spur Calls for State Help," in the Nebraska Examiner. 25 October 2023. https://nebraskaexaminer.com/2023/10/25/strains-on-rural-nebraska-ambulance-services-spur-calls-for-state-help/
[42] Nebraska Emergency Medical Services Practice Act, 38-1203.

EMS is available. Many residents and officials are surprised to learn this.

While there is no authoritative legal or policy definition of an "essential service" in Nebraska and throughout the United States, a study conducted by the National Academy of Public Administration for The National Emergency Medical Services Advisory Council (NEMSAC) found that EMS may be considered an essential service based on two different, but complementary, definitions.

First, EMS is essential because it is ensuring public health and safety. EMS is a public service the interruption of which would endanger the life, personal safety, or health of the whole or part of the population.Second, EMS is essential in ensuring equal access to emergency medical care. EMS is a service to which all residents should be guaranteed access. EMS is an essential service insofar as the public generally has come to expect that emergency medical services will be available every hour of every day to all residents regardless of ability to pay.[43]

KEY FINDING 8

EMS is becoming the default solution to the state's growing rural demand for healthcare and shrinking rural healthcare resources.

Another common EMS stakeholder theme is the increasing demand that EMS fill a growing gap between rural healthcare needs and available resources. Stakeholders paint a picture of a multifaceted challenge. Rural populations are aging and living longer with more chronic diseases. The aged may be expecting more immediate access than in the past. Concurrently, local healthcare infrastructure is diminishing, with a notable decrease in the number of primary care physicians and accessible health points. This decline is juxtaposed with the centralization of specialized medical services, such as cardiovascular and respiratory care, into urban centers.

Issues of rural healthcare access and capacity are widely documented. With the aging of rural populations, which are becoming sicker and grappling with an increase in mental health issues, the shortage of vital resources such as primary care physicians, clinic services, hospitals, and mental health professionals is

[43] "An Analysis of Prehospital Emergency Medical Services as an Essential Service and as a Public Good," in Economic Theory (2014). National Academy of Public Administration. Published by National Highway Traffic Safety Administration, p.3.

becoming acute.[44] [45] Healthcare specialties are increasingly regionalized, leaving local communities underserved.

The rural disparities are stark. Rural Americans are more prone to fatal health outcomes from heart disease, cancer, unintentional injury, chronic lower respiratory disease, and stroke than urban residents. Unintentional injuries, including motor vehicle crashes and opioid overdoses, are about 50% more likely to result in death in rural areas. Rural children with mental, behavioral, and developmental disorders encounter more community and familial challenges than their urban counterparts, according to a study by the U.S. Centers for Disease Control and Prevention.[46]

Nebraska exemplifies this trend, with 58 of its 93 counties designated as "shortage areas" for family physicians. A looming shortage of 5,435 nurses by 2025 exacerbates the situation, further compounding healthcare access in the state.[47] With a physician ratio of 245.5 per 100,000 people, Nebraska ranks low nationally in medical professional availability.[48] Additionally, 7.1% of Nebraska residents lack health insurance, and 13.9% report suboptimal health status, underlining the barriers to healthcare access beyond the scarcity of medical professionals.[49]

As a result, EMS is often the first line of response for residents and visitors in need of medical attention, filling the void left by the absence or limitation of other healthcare resources. Additionally, EMS is frequently tasked with connecting patients to distant, regionalized specialties.

[44] Coughlin, S. S. et al, “Continuing Challenges in Rural Health in the United States,” in the Journal of Environment and Health Sciences. 2019. 5(2):90-92. Epub 2019 Dec 16. PMID: 32104722; PMCID: PMC7043306.
[45] Mack, B., et al, "Mental Health in Rural Areas,"National Rural Health Association Policy Brief. 2022.
[46] About Rural Health. 28, November 2023. Center for Disease Control.
https://www.cdc.gov/ruralhealth/about.html
[47] The Status of the Nebraska Healthcare Workforce: Update 2020. The University of Nebraska Medical Center.
https://www.unmc.edu/publichealth/chp/_documents/Workforce_2020.pdf
[48] 2021 State Physician Workforce Data Report, Association of American Medical Colleges.
[49] Data on the percentage of adults reporting fair or poor health is from the 2022 County Health Rankings & Roadmaps program of the University of Wisconsin Population Health Institute. Data on the share of the population without health insurance came from the 2021 American Community Survey Tables for Health Insurance Coverage.

The concept of Community Paramedicine or Mobile Integrated Health is being promoted by some experts as a potential solution, aimed at harnessing the capabilities of rural EMS to meet primary healthcare needs.[50][51] However, the current state of EMS, as described by an EMT, is one of being stretched too thin: "We can barely keep up with the everyday calls. There are not enough hospitals and we're always taking people to Lincoln. We used to have doctors. Now the clinic's closed. And they want us to be doctors?"

KEY FINDING 9

The funding of EMS is complex and often insufficient, and the full and actual costs of providing rural EMS remain largely hidden.

Funding for EMS in Nebraska is complex and difficult to assess. EMS developed across the United States in an environment of scarcity with little financial planning – and Nebraska is no exception. Many EMS agencies – especially those in rural areas – have operated without written budgets, with insufficient funding, and without significant financial reserves.

Only half (50%) of the Nebraska EMS agencies responding to the assessment survey report having a written budget. Only slightly more (54%) report receiving enough financial resources to fund operations in their service area. A scant 3% report having 25% of their annual operating budget in reserve.

EMS is typically funded through a complex combination of reimbursements for medical transportation and a variety of subsidies. Reimbursements are the payments received from billing insurance, Medicare and Medicaid, and private payers.

The full cost of providing EMS can be met through transportation reimbursements only if there is a sufficient volume of transports (as in urban environments), though even high-volume agencies often fail to meet the full and true costs of providing EMS. In recent years, reimbursements for medical transportation have largely remained stagnant or declined. EMS has not been successful in significantly increasing reimbursements as costs have risen.

[50] The Rural Health Information Hub describes community paramedicine as an evolving healthcare model that prepares and allows paramedics and emergency medical technicians (EMTs) to operate in a public health and primary care role to address the needs of rural residents in a more efficient and proactive way.
[51] Patterson, D. G. et al, "What is the Potential of Community Paramedicine to Fill Rural Health Care Gaps?" in the Journal of Health Care for the Poor and Underserved. 2016. 27(4A):144-158. doi: 10.1353/hpu.2016.0192. PMID: 27818420.

SafeTech Solutions has found understanding subsidies is critical to understanding EMS challenges and potential solutions. In Great Plains states such as Nebraska, a significant number of annual billable transports are needed to pay for these services without subsidies. When accounting for all expenses including labor and overhead, approximately 600-800 paid transports are needed annually to fully fund one 24/7 Basic Life Support EMS unit without a subsidy. The approximate nature of this number is due to variabilities in the payer mix and labor costs. Approximately 1000-1400 paid transports are needed annually to fully fund one 24/7 Advanced Life Support EMS unit without a subsidy.

Of the 373 EMS transporting agencies in Nebraska, only 52 agencies have more than 500 transports per year, and only 26 have more than 1,000 transports per year. In the assessment survey, 63% of agencies report that reimbursements do not cover agency operating expenses, and many are likely not accounting for the true value or cost of labor. All of this means subsidies are extremely important to the funding picture of EMS in Nebraska.

Subsidies, or revenues other than reimbursements, for transportation include donated or low-wage labor (volunteers), local taxes, taxing districts, monies from municipal and county budgets, financial donations, fundraising, and grants.

Sustainability is related to the cost of providing EMS. As community leaders, legislators, and citizens become more aware of the needs of EMS, a common question is, “How much does it cost to provide EMS?”

There are many costs associated with providing EMS, including: labor; training and education; clinical oversight (medical direction) and quality assurance; facilities; vehicles; equipment and supplies; supervision, management, and leadership; call taking; dispatch; and much more. A significant cost of 9-1-1 EMS is the cost associated with being ready and available 24/7.

As modern EMS developed locally and organically in Nebraska with scarce financial resources, agencies used a variety of ways to efficiently provide services. Much EMS is provided by formal and informal agencies. Some EMS is provided by dual-trained fire department personnel or hospital-based personnel. Some EMS is provided by governmental agencies that share facilities and administrative costs with other parts of the government. Some EMS is provided by not-for-profit and for-profit business. These various business structures often account for costs differently.

Costs may be hidden in a variety of ways. The use of donated or low-wage labor has left the full costs of labor hidden. Hospital- and fire-based agencies often blend the cost of providing EMS with other provided services. Often the cost of readiness – having a crew, vehicle, and equipment ready to respond – is not fully accounted for. More than 36% of requests for EMS in Nebraska do not result in transportation of a patient, and often these costs are not accounted for.

Thus, the full and true costs of providing EMS have been obscured. As the public has come to expect and rely on EMS and increasing levels of EMS clinical care, the costs of the services have not been understood. As sustainability has become a concern, understanding all costs – including the costs associated with readiness, oversight, evaluation, administration, and planning – has become necessary.

KEY FINDING 10

Volunteerism and low-cost labor are Nebraska's primary and largest EMS subsidies. These subsidies are disappearing with far-reaching implications.

The greatest subsidy of EMS in Nebraska is volunteer or low-cost labor. So, too, is labor the greatest expense. Of the 419 EMS agencies operating in Nebraska today, 338 are staffed with volunteers, and 7 use a combination of volunteer and paid staffing.[52]

Numbers of Various Staffing Models of Nebraska EMS Agencies

Region	Central	Western	Northeast	Southeast	TOTALS
Volunteer	91	49	91	107	338
Combination	1	3	1	2	7
All Paid	11	14	28	21	74
TOTALS	103	66	120	130	419

It can be estimated that the annual value of the volunteer subsidy statewide in Nebraska is more than $174 million or approximately 1% of the Nebraska annual state budget.[53] This number comes from calculating the minimal costs needed to replace volunteers with paid employees. Each agency would need at least two EMS providers available 24/7, 365 days a year, to operate without volunteers.

[52]For purposes of this report, a volunteer is any agency employee or agency member who does not received regular wages. An employee or agency member may receive call pay or a per-call stipend or other compensation and still be considered a volunteer if not receiving regular wages.
[53] For comparison, the annual State budget for the Nebraska State Patrol is approximately $96 million. http://www.statespending.nebraska.gov/spent2022/

Based on the unique Nebraska economic environment, the value of a volunteer hour in Nebraska in 2022 was $29.50.[54] This figure is what it would take at minimum to replace a volunteer hour with a paid employee, including benefits.

The current minimum value of volunteer labor to each Nebraska EMS agency is $517,000 per year. Another way to frame this is that each volunteer EMS agency is subsidized by local volunteers donating $517,00 worth of labor each year.

As can be seen, volunteer and low-cost labor has provided Nebraskans with an incredible gift and bargain. Volunteer labor has enabled EMS to operate without significant subsidies from the communities they serve. When EMS developed in the 1970s and 1980s, volunteer labor made sense. Local people were motivated and interested in volunteering. Rural and smalltown EMS agencies had few calls. Hiring people to standby for calls seemed unnecessary and financially prohibitive. But nonetheless, this contribution by local people kept EMS local and low cost.

While volunteer EMS is low cost in dollars for the residents, communities, and visitors served, it has often entailed substantial personal costs for the volunteers. In surveying and listening to providers across Nebraska, it is clear that rural volunteers are a deeply committed group of people. Many present as unassuming and express a deep appreciation for the role and work despite the growing challenges. But as rosters shrink, fewer individuals are carrying the load. One EMT told of being one of two people in his community who are active and regularly taking calls. “I’m not worried about myself,” he said, “but my family has had enough.”

Across the state EMS volunteers donate countless hours for preparation, training, responding and handling calls, keeping the vehicles and equipment ready, and trying to keep the organization afloat. Volunteers risk health, safety, and peace of mind to perform this work. They sacrifice sleep, family time, job time, and holidays. Occasionally, the calls are dramatic and exciting and demand quick thinking and sharp skills. But much of the work is simply about bringing calm to

[54] The estimated value of the volunteer hours is calculated each year for each state by the Independent Sector based on the annual average hourly earnings (non-seasonally adjusted) for all production and non-supervisory workers on private non-farm payrolls. These annual earnings estimates come from the Current Employment Statistics (CES) database, which is available from the Bureau of Labor Statistics (BLS). The 2022 report can be found at https://independentsector.org/wp-content/uploads/2023/04/VOVT-Report-2023.pdf

crisis, reassurance when other resources are not available, transporting an elderly resident to the right facility, helping someone breathe or providing re-assurance to frightened neighbors and strangers. While other elements of healthcare and public safety are valued with sizable budgets and regular wages, EMS continues to provide rural communities with an incredible gift – a subsidy that has not been fully accounted for.

KEY FINDING 11

Volunteerism across Nebraska is waning and not likely to return.

While Nebraska enjoys the sixth highest state rate of volunteerism in the nation,[55] many ambulance services report a steady decline in the number of volunteers on their roster. Agencies report an inability to find an adequate number of new volunteers to replace those who are quitting or retire. "The new generation doesn't want to do this," said one of the agency leaders.

The decline in EMS volunteerism appears to be a growing trend that is not showing signs of reversal. Research among rural EMS volunteers in the intermountain states and across the Great Plains by SafeTech Solutions suggests the following causes of declining volunteerism in EMS:

- **Socioeconomic changes:** Rural individuals and families report needing to work more hours and more jobs to support themselves and their families. People report commuting greater distances to jobs. These socioeconomic changes are related to changes in agriculture, manufacturing, the service industry, healthcare, and retail businesses. EMS demands a significant time commitment compared to other volunteer opportunities, and when people need to spend more time working or commuting, extensive volunteer commitments become challenging.

- **Changing demographics:** Rural EMS stakeholders voice common concerns about the aging of volunteers, the aging of their communities, and the inability to find young people to replace aging volunteers. Statistics support these concerns. The proportion of Nebraskans over 60 is growing and the proportion under 60 is shrinking. The U.S. Census Bureau estimates

[55] Volunteering in America: Rankings, Americorps and the United States Census Bureau. https://americorps.gov/sites/default/files/document/Volunteering_in_America_Rankings_508.pdf

that more than 25% of Nebraska's population will be over age 60 by the year 2030, an increase of 32% percent from 2012. Currently more than one third (34%) of Nebraska's population is 50 and older, with higher concentrations of individuals age 50 and older in rural counties and higher concentrations of individuals age 49 and younger in urban and suburban counties.[56][57]

- **Increasing demands of the role:** Many rural EMS volunteers report that the demands of an EMS role have increased. Volunteers report that EMTs are expected to know more, provide higher levels of care, and be responsible for more detailed patient care reports. A smaller roster of active volunteers means fewer volunteers must do more. Many leaders and educators of volunteer EMS agencies believe testing for basic EMT certification has become more difficult with the use of online computer-based testing.

- **Less commitment to the local community:** Rural communities continue to undergo significant sociological changes. The commerce center of rural America has moved from locally owned and operated Main Street businesses to regional box stores where people often shop without a relationship or connection to the people or companies they are doing business with. Oftentimes, the newer generations experience less of a connection to the small towns they live in than have previous generations, and thus younger people may be less likely to feel the need to volunteer.

- **Changing attitudes about volunteering:** Young people today are less likely to volunteer than previous generations, and how they volunteer and why is changing. Volunteering in America has declined since 2005 in every age group. More specifically, about 25% of teenagers volunteered in 2015, down from 28% in 2005 – putting an end to 30 years of rising volunteerism among high school-age Americans. This decline in youth volunteerism continues.[58][59]

[56] "Nebraska Population Aging, Shifting East." Strategic Discussions for Nebraska. University of Nebraska, Lincoln. 2012. https://sdn.unl.edu/deichert
[57] Kelly, C. et al, "A Report to the Nebraska State Unit on Aging: Perspectives of Nebraskans Age 50 and Older." Gerontology Faculty Publications. 4. 2022. Department of Gerontology, University of Nebraska at Omaha. https://digitalcommons.unomaha.edu/gerontologyfacpub/4
[58] Grimm, R., Jr., and Dietz, N. "Where Are America's Volunteers? A Look at America's Widespread Decline in Volunteering in Cities and States." Research Brief: Do Good Institute, University of Maryland. 2018.
[59] Carr, P., and Kefalas, M. Hollowing Out the Middle: The Rural Brain Drain and What It Means for America. Beacon Press. 2009.

- **The regionalization of healthcare:** Many rural EMS volunteers report that the demands of an EMS role have increased. Volunteers report that EMTs are expected to know more, provide higher levels of care, and be responsible for more detailed patient care reports. A smaller roster of active volunteers means fewer volunteers must do more. Many leaders and educators of volunteer EMS agencies believe testing for basic EMT certification has become more difficult with the use of online computer-based testing.

- **The loss of intrinsic rewards:** Volunteerism thrives on the intrinsic rewards of the work. However, for many volunteering EMS providers, the role has ceased to provide the rewards they hoped for when they signed up. There are fewer people to carry an increasing load. Some volunteers report high levels of stress related to just ensuring someone is available for calls. When one feels they are volunteering because someone may be harmed or die if they don't volunteer, there is strong pressure. Some services are operating with two to five volunteers taking the bulk of the call time and responses. Some providers report that even the valued camaraderie that is often a major reward for working in EMS is disappearing as agency drama escalates.

It is important to note that declining volunteerism is not just an EMS problem, as the need for volunteers in all sectors has increased. The number of Americans willing to volunteer continues to decline across the board. While volunteerism has fallen off sharply since the COVID-19 pandemic, volunteering has actually been on the decline for the past 14 years. According to a 2023 report released by the Census Bureau and AmeriCorps, in 2020 and 2021, the number of volunteers in America dropped about 7% to a little more than 23% of Americans reporting to formally volunteer with an organization. This is the lowest rate of volunteering since tracking began in the early 2000s. The largest decline is mostly concentrated in rural and suburban areas, where volunteering rates have historically been the highest.[60] A 2018 report on the national volunteer rate demonstrates a continuing decline in Americans' willingness to volunteer across all fields. Volunteerism reached a high of 28.8% following the 9/11 attacks in 2001, but since then has continued a pervasive decline. Rural volunteering fell from 30.9% in 2003 to 25.3% by 2015. The report states, "Fewer Americans are engaging

[60] Schneider, E. and Marshall, T. 25 January 2023, "At Height of Pandemic, More Than Half of People Age 16 and Over Helped Neighbors, 23% Formally Volunteered". United States Census Bureau. https://www.census.gov/library/stories/2023/01/volunteering-and-civic-life-in-america.html

in their community by volunteering and giving than in any time in the recent past."[61]

KEY FINDING 12

Despite current trends, many rural EMS agencies are proud, independent, and committed to preserving the volunteer model despite current trends.

In listening sessions and interviews performed for this assessment, Nebraska's EMS agency leaders, providers, and local stakeholders largely acknowledge the current rural delivery model needs help. But views of the path forward are mixed. Some possible paths forward include more interagency collaboration for efficiencies, regionalized delivery, and fulltime staffing models that will likely necessitate the creation of multi-community regional agencies. However, many view these approaches unfavorably and advocate for trying to maintain and fix the current volunteer model (i.e. find new ways to recruit and retain volunteers and make volunteering more attractive).

A number of providers and agency leaders believe changing to something other than the local volunteer model is unfeasible. They view the volunteer model as highly efficient and the best financial and service value for their communities. They are concerned that change would take away the locally based ambulance, erode control, and deprive residents of the quality of personal service they are used to.

A provider said, "We're happy to work with other services as long as we can keep our own ambulance in town." Some spoke passionately about personally knowing many of their patients as neighbors and family. These connections and knowledge are viewed as enabling local services to: respond more quickly ("We know the roads and where people live."); provide a more personal and trusted level of care ("People trust us because they know us."); and tend to the whole person and family in neighborly ways ("We can call their relatives, take care of the kids and dog."). Some strongly questioned whether "strangers" from an out-of-town ambulance service would provide the same level of care and com-

[61] From an analysis of data from the U.S. Bureau of Labor Statistics and the Census Bureau's Current Population Survey (CPS). Reported in the University of Maryland School of Public Policy, "America's Volunteers? A Look at America's Widespread Decline in Volunteering in Cities and States." 2018. https://dogood.umd.edu/sites/default/files/201907/Where%20Are%20Americas%20Volunteers_Research%20Brief%20_Nov%202018.pdf.

passion.

These concerns reflect important rural values that must be considered when planning for the future of EMS and how to navigate change. While rural Americans live in houses, socialize, go to jobs, have dreams, watch TV, use cell phones and the internet like Americans living in large cities, nearly 7 in 10 rural Americans describe their values as differing from those who live in big cities, and 4 in 10 describe their values are "very different."[62] While it is important to acknowledge rural communities are not homogeneous, researchers have described common American rural values such as industriousness, vigor, neighborliness, optimism, moderation, a distrust of big government and outsiders, and, above all, self-reliance and self-determination.[63]

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[62] The Washington Post/Kaiser Family Foundation. (2017). Survey of Rural America. http://files.kff.org/attachment/The-Health-Care-Views-and-Experiences-of-Rural-Americans.

[63] Wagonfeld, M. O. "A Snapshot of Rural and Frontier America," in B. H. Stamm (Ed.), Rural Behavioral Health Care: An Interdisciplinary Guide. 2003. American Psychological Association.

Boyels, D. Superior, Nebraska: The Common Sense Values of America's Heartland. New York. Doubleday. 2008.

Amato, P. "Urban-Rural Differences in Helping Friends and Family Members," in Social Psychology Quarterly, 1993. 56(4). 249-262. https://www.jstor.org/stable/2786662?seq=1.

Kelly, P. and Lobao, L. "The Social Bases of Rural-Urban Political Divides: Social Status, Work, and Sociocultural Beliefs," in Rural Sociology, 2018. 84(4). 669-705. https://doi.org/10.1111/ruso.12256.

Miller, N. and Besser, T. L., "The Importance of Community Values in Small Business Strategy Formation: Evidence from Rural Iowa," in Journal of Small Business Management, 2000. 38. 68-85.

Moreover, vocal volunteer EMS agencies with vehicles emblazoned with the local town name represent more than the services they provide. Like water towers, school mascots, and local landmarks, they can be symbols of community pride, health, vitality, security, and self-sufficiency. Important symbols have deep emotional roots. When those symbols are threatened or are perceived to be disrespected, passions are likely to flare.

The continuation of a local EMS agency is often viewed as a symbolic way to honor the sacrifice of those who started the service and served throughout the years. Speaking about the possibility of an agency closing, the assessment team heard providers say, "What do you say to the founders? We gave up? We don't care anymore? We're closing the doors?" Volunteers often display a deep sense of responsibility for continuing the service. Like military service, EMS involves dealing with difficult, dangerous, and traumatic experiences where death is never far away. This results in the formation of powerful memories and a deep respect and bond amongst the people who do this work. Ensuring an agency survives and continues becomes essential. Its continuation is an ongoing tribute and memorial to the dedication and sacrifice of the many volunteers who served over the years. Change will likely be experienced locally as a serious loss that results in genuine grief.

Any approach to the future of rural EMS in Nebraska will need likely encounter a strong desire to preserve the status quo and resistance to change. These issues invite careful attention to rural values and the symbolic nature of rural EMS.

KEY FINDING 13

EMS workforce shortages extend beyond volunteer agencies but are not well understood.

The 81 EMS agencies in Nebraska utilizing all paid staff or a combination of paid and volunteer staff are also experiencing recruitment and retention issues. The assessment was unable to determine the extent of these shortages due to incomplete data. However, a variety of themes emerged in talking with providers and agency leaders about paid and career shortages.

- **Shortages are largely for paramedics.** While the major volunteer shortage is for EMRs and EMTs, the major shortage for paid agencies is reported to be for paramedics. Paramedics have more extensive education

and training than EMTs, and the paramedic role is often viewed as a career position.

- **A growing demand for paramedics.** The demand for paramedics appears larger than the supply. Informants described agencies as competing for paramedic candidates, and paramedics students reported multiple job opportunities. As more Nebraska EMS agencies provide advanced life support, the need for paramedics is growing. However, the demand for paramedics extends beyond 9-1-1 agencies. At the time of the assessment, job postings included a wide variety of positions available across Nebraska, including fire/paramedic positions, critical care transport, interfacility services, hospital emergency department, medical supply, flight services, and education.

- **Pay for paramedics varies widely.** Paramedic wages appear to vary widely across the state. While there is no formal system of tracking wages, the assessment team found paramedic wages varying from approximately $33,000 annually to $98,000.

- **The overall employment value proposition varies.** An employee value proposition (EVP) is the entirety of what an employer promises to employees in exchange for their work. Across the state the paramedic EVP appears to vary, and according to Nebraska paramedics, is extremely important to recruitment and retention. A typical EVP includes wages, benefits (healthcare, disability, vacation time, retirement, educational allowances, etc.) advancement potential, workload, overtime opportunities and other perks, as well as the intrinsic rewards, such as work environment, emergency response opportunities, and the prestige associated with the position and organization. Some providers report that large urban fire/EMS agencies and flight services often offer EVPs that are seen as most attractive.

- **Workers ambivalent or not committed.** EMS employers in Nebraska report some newer EMS providers are ambivalent about EMS as a career. Some are leaving after a year or two in the job, while others are not as committed as the employers would like.

Workforce shortages appear to be part of the current EMS landscape. A 2017 study of Nebraska's EMS workforce found an insufficient supply of EMS workers

emerging around the state due to a variety of issues.[64] This finding is echoed nationally. In 2023, there were hundreds of media reports throughout the United States on EMS workforce shortages, with some proclaiming a crisis. The shortages are characterized by high turnover rates (from 20% to 30% annually) and low wages. In 2021, median pay for EMTs and paramedics nationally was $36,930 per year, or $17.76 per hour.[65] [66]

A 2023 National Association of EMTs Survey articulated the severity of the crisis. Compared to 2019, agencies reported that applications for paramedic/EMT positions are down an average of 13%. Nearly two-thirds (65%) of agencies reported a decrease in applications, and over one-quarter (27%) of agencies reported a decline in applications of more than 25%. Survey respondents reported that the annual turnover rate grew from 8% in 2019 to 11% in 2022. The turnover rate was highest in 2021, at 12%. Turnover rates were reported highest among agencies responding to a higher call volume, with agencies responding to over 25,000 calls annually experiencing double the turnover rate of those responding to fewer than 1,000 calls.[67] EMS services will also need to replace the large number of workers who retire or leave the field for other occupations. EMT and paramedic employment is projected to grow 11% from 2020 to 2030, with an estimated 20,700 positions opening each year.[68] With turnover, attrition, and growth, it will be difficult for EMS to hire its way out of the current worker shortage.

Developing enough EMS workers appears to be one of Nebraska's greatest challenges. However, apart from the anecdotal information gathered by the assessment team, little is known about the workforce shortages and how to overcome them.

[64] Holt, M., "Assessment of EMS Workforce in Nebraska with Future Strategies." 2017. https://digitalcommons.unmc.edu/coph_slce/5.
[65] American Ambulance Association. 2021 Ambulance Industry Employee Turnover Study. American Ambulance Association, Newton 360, Doverspike Consulting, and The Center for Organizational Research. 2021 July [cited 2022 July 21]; Available from: https://ambulance.org/wp-content/uploads/2021/07/2021-AAA-EMS-Turnover-Study.pdf.
[66] U.S. Bureau of Labor Statistics. EMTs and Paramedics: Summary. United States Department of Labor. 2022 Apr [cited 2022 July 21]; Available from: https://www.bls.gov/ooh/healthcare/emts-and-paramedics.htm.
[67] NAEMT 2023 National Survey: EMS Economic and Operational Models. Executive Summary. https://naemt.org/docs/default-source/ems-data/ems-economic-and-operational-models-survey-02-20-2023-final.pdf?sfvrsn=1fb9f493_2.
[68] U.S. Bureau of Labor Statistics. EMTs and Paramedics: Job Outlook. United States Department of Labor. 2022 Apr [cited 2022 July 21]; Available from: https://www.bls.gov/ooh/healthcare/emts-and-paramedics.htm#tab-6.

Developing enough EMS workers appears to be one of Nebraska's greatest challenges. However, apart from the anecdotal information gathered by the assessment team, little is known about the workforce shortages and how to overcome them.

Workforce shortages are likely related to a variety of issues, including: growing demands, insufficient wages and benefits, changing worker expectations, poor working environments, poor leadership, and insufficient workforce planning and development. These issues are not well understood, however, and there is no concerted effort in Nebraska to understand the workforce shortages and the how to plan for the future. Barriers to future planning and development include:

- an inability to quantify the demand for workers (it is unknown how many EMS providers at what levels are needed in Nebraska);
- an inability to quantify the current supply of workers and the pipelines that create supply;
- an incomplete understanding of issues driving turnover;
- not knowing if shortages are more a distribution challenge than a real shortage;
- not understanding what constitutes a compelling employment value proposition (intrinsic and extrinsic rewards) for today's worker;
- not understanding the expectations of a new generation of workers; and
- the need to clarify the specific workforce needs of rural and frontier environments.

Without a better understanding, the development of a sustainable EMS workforce in Nebraska is largely guess work.

KEY FINDING 14

Reliability and sustainability issues create significant local EMS agency leadership challenges and highlight leadership deficits and needs.

Leading a reliable and sustainable EMS agency is becoming increasingly complex and demanding. The daily operational demands, combined with the challenges outlined in this report, are transforming local EMS agency leadership into a specialty.

Traditionally, the EMS field has operated under the assumption that managing an EMS agency automatically translates into effective leadership. Similarly, there has

been a presumption that skilled field providers will naturally excel in leadership roles. However, these assumptions are proving to be unfounded as there is a growing expectation for EMS to operate as a true business and for its providers to perform as professionals. True leadership fundamentally involves the ability to influence people and guide them toward a common goal. Developing effective leadership requires a blend of knowledge, preparation, skills, resources, and ongoing support.

Stakeholders in EMS agencies report that most leadership development occurs locally and on the job. Apart from occasional leadership academies offered by the State and sessions at conferences, there is a notable lack of proactive and sustained efforts to prepare, equip, and support a new generation of local EMS agency leaders to meet the demands of their roles. Some specific needs and concerns are:

- A lack of clarity about what is specifically expected of an EMS agency and its leadership in today's environment;
- A lack of clarity about what specific experience and education is needed to lead in the EMS field;
- A lack of access to educational programming that complements what is needed to lead;
- A lack of clarity about the EMS career ladder and supervision, management, and leadership opportunities;
- The absence of common leadership programming and credentialing that is recognized across organizations;
- The development of a bench of leaders to take over for leaders that are aging out of EMS; and
- The need for ongoing support and resources for emerging and established leaders.

To drive meaningful progress and ensure the future sustainability of EMS, it is imperative to prioritize the development and support of capable EMS leaders locally, regionally, and throughout the state.

KEY FINDING 15

Stakeholders do not have a common or shared vision for the future of EMS in Nebraska.

Throughout the assessment, EMS stakeholders were asked about their vision for the future of EMS in the state, and their projections for the coming years and decades. Responses varied widely. Many admitted they had not spent much time contemplating it. Some hope to return to an era when volunteers were plentiful, and provider requirements were less stringent. Some foresee a difficult future for EMS, with agencies struggling to remain operational and little support forthcoming from the government, the public, or reimbursement systems. Conversely, many others envision a future in which EMS in Nebraska operates more systematically, with an appropriate distribution of resources, adequate funding, and a sufficient workforce.

However, the significant finding is that there is no commonly shared vision for the future of EMS in Nebraska.

KEY FINDING 16

Many EMS stakeholders are passionate about evolving a strong, sustainable, next-generation EMS system.

In discussions about the future of EMS, stakeholders largely concur that EMS across Nebraska must continue to progress to the next phase or generation of service. The hope is that EMS will become stronger through its current challenges. Although there isn't necessarily a consensus on how this evolution will occur, there is a shared desire for EMS to improve. Stakeholders want to ensure that there are sufficient EMS resources throughout the state, the responsibility for providing these services is distributed more equitably, the quality of care matches what one would want for one's own family, and that those providing care are treated well.

Stakeholders generally expect that guidance and leadership for this evolution will come from the Board of Emergency Medical Services and the Office of Emergency Health Systems.

KEY FINDING 17

Local EMS agencies have limited capacity and resources to navigate the change and evolution needed for long-term reliability and sustainability.

Struggling rural Nebraska EMS agencies find themselves in a challenging situation. A leader from the Southeast Region described it well. "We don't have enough people," the leader said. "We can't keep going like this, but I don't know what to do. Should we shut down? I don't want to wait til something bad

happens."

The challenge is multifaceted and can be described in the following questions and statements frequently heard in listening sessions, discussions, and interviews:

- What can we do now to address declining volunteerism and the need for staff?
- Shouldn't we try again to fix the current model?
- Is change even possible?
- How can we try something new? We're barely keeping the doors open.
- If our current volunteer model fails, there's no other feasible way to have EMS in our town.
- I didn't sign up to be an activist or lead a change in EMS.
- Who can we call for help?
- How can we get the public to recognize the seriousness of our challenges?
- How do we get our community to recognize they need to pay for these services?
- When will we know it's time to do something different or shut down?
- What's the best model for our community?
- How do we convince people to support change?

These questions and statements represent an important observation of this assessment. Many of the leaders and providers of rural EMS agencies in Nebraska do not have the time, resources, and expertise to guide their agencies through a change process.

A change process will likely include: acknowledging that the current model is not sustainable; convincing others that change is needed; overcoming the sense that there are no options; exploring alternative delivery models; exploring new avenues for funding; identifying the full cost of providing EMS; working with agency leaders in neighboring communities; educating residents and community leaders about EMS; navigating the politics and the emotional fallout that are inherent in any significant community change; and successfully leading the change. All of this must be done while maintaining operations.

When an agency or community realizes that current EMS operations are not sustainable, they will likely need outside help. Projects in Maine, South Dakota,

North Dakota, Utah, Wyoming, and other states have found that the process of changing from unsustainable models to sustainable models benefits from help from the outside to provide guidance, facilitation, leadership, and support. Transition processes have been defined and tested and are now being used throughout the nation.[69] These processes guide the agency and community through steps to help them explore a variety of options and determine what is best for the agency and community.[70]

The change process will include: accepting that a significant change is needed; developing a team beyond the volunteer agency personnel to lead the change; assessing the current situation (needs, resources, unique challenges, and opportunities); understanding the full and true costs of EMS; considering a variety of options; choosing what is best for the community; creating a road map to making the change; and taking concrete steps to change.

To navigate this process requires services from experts who are familiar with the change process and can provide assessment, guidance, and facilitation – support that is often referred to as technical assistance. Today, there is a lack of resources in Nebraska to support this change process.

KEY FINDING 18

The current structure and resourcing of EMS Regions limit regional support.

A natural method of offering local agencies expertise and guidance (often referred to as technical assistance) to transition from unsustainable to sustainable models is through a regional approach. Nebraska is divided into four EMS regions, each staffed by one OEHS (Office of Emergency Health Systems) Regional Specialist. These four regions provide a natural framework for delivering the guidance, expertise, and support that local agencies could use to shift from unsustainable to sustainable models.

At present, however, the regions and the regional specialists are primarily organ-

[69] "Template for Emergency Medical Services Informed Community Self Determination (ICSD)." 2020 NASEMSO Rural Committee. https://nasemso.org/wp-content/uploads/2020-Template-for-Informed-Community-Self-Determination-v-6.1.pdf.

[70] Sustainable Rural EMS: Navigating Change, An Introduction and Guide. 2021. The National Rural Health Resource Center. This resource can be obtained at: https://www.ruralcenter.org/sites/default/files/Sustaining%20Rural%20EMS%20Guide%20Nov%202021.pdf.

ized and tasked with regulatory functions such as inspections and compliance. They currently lack the capacity and preparation to guide agencies through the processes defined above.

KEY FINDING 19

Nebraska may have an excess of licensed EMS transporting agencies. This excess may be exacerbating shortages and creating inefficiencies.

Nebraska has 373 transporting EMS agencies for a population of just under 2 million. Compared to neighboring states, this number of transporting agencies is high. Other states provide EMS with fewer EMS agencies. This does not mean less EMS resources or coverage. Agencies may use multiple stations and vehicles deployed in multiple locations to provider robust coverage and services but with more efficiencies in management, training, personnel, vehicles, equipment and supplies. While Nebraska's many agencies represent deep EMS development and local ownership, it may not be efficient and may be difficult to maintain considering the decline in volunteerism, increasing costs, and workforce shortages. Informants and EMS stakeholders expressed concerns about communities trying to maintain EMS agencies that are close to other agencies, forcing them to compete for resources.

STATE	POPULATION	NUMBER OF AGENCIES	AGENCIES PER CAPITA
Nebraska	1,964,000	373	5,265
South Dakota	895,376	122	7,339
North Dakota	774,948	120	6,458
Colorado	5,812,000	235	24,732
Wyoming	578,803	80	7,235
Minnesota	5,707,000	277	20,603
Kansas	2,935,000	160	18,344

KEY FINDING 20

Geographic service areas are informal and driven by history, market factors, and informal agreements.

Across Nebraska, many EMS stakeholders are concerned about who is responsible for ensuring EMS is provided in specific geographic areas. Service areas are the designated zones in which an EMS agency responds to 911 calls

and, theoretically, is responsible for serving. However, service areas in Nebraska are not formally designated, assigned, or regulated. The decision about which agency serves an area has largely been made based on historical response, informal gentleman's agreements, natural boundaries, and market factors (such as the volume of calls in an area, interfacility transfers, and competition).

This approach has worked well until recently. The informal nature of service areas becomes problematic when an agency closes its doors or becomes unreliable—unable to respond due to staffing issues or other problems. This raises the question of who is then responsible for that geographic area.

In addition to the question of responsibility, there is the question concerning competition. As it stands today, service areas are not protected and, therefore, are open to competition. Any EMS agency licensed in the state may conduct business in another agency's historical area.

EMS stakeholders suggest that more clarity regarding service areas and the emerging issues would be helpful in planning for the future.

KEY FINDING 21

Concern about the emotional and psychological wellbeing of EMS providers is highlighting a deficit in mental fitness programming and EMS-knowledgeable/-experienced mental health resources.

A strong and recurring theme of the assessment is the need for more attention on the psychological wellbeing of EMS providers. Stakeholders across Nebraska have expressed both hopes and concerns for the wellbeing of EMS providers. Eighty-seven percent of agencies reported that the physical, mental, and emotional health of employees is a priority. However, finding ways to support the wellbeing of providers presents challenges for many agencies.

Psychological care for first responders often concentrates on mitigating the impact of critical incidents. Nebraska has a large and active statewide CISM (Critical Incident Stress Management) team that supports providers following psychologically challenging calls or events. The CISM team conducted more than 200 critical incident sessions in 2023.

However, the assessment has revealed other concerning aspects of provider

wellbeing. There are worries about young providers entering EMS without the psychological robustness needed for the inherent stress of emergency work. Short staffing often necessitates that providers work excessive hours, sometimes in varying states of exhaustion. Rural providers regularly care for patients who may be family, friends, or acquaintances, often in traumatic circumstances. Providers also deal with frustrations associated with social issues such as poverty, addiction, and untreated mental illness. Some providers reported that organizational drama, ugly politics, poor leadership, and short staffing create more stress than the calls typically considered psychologically traumatizing.

The needs are twofold. The first is the provision of more proactive psychological preparation for the role, including easy access to education, training, and ongoing support to develop and maintain mental fitness and resilience. The second need is for more mental health professionals knowledgeable about EMS/first responders. Providers report difficulty finding individuals who understand their experiences and whom they can trust.

RECOMMENDATIONS

EMS in Nebraska is ready to move to its next generation. The challenges around workforce and funding and the deeper issues of understanding, attention, valuing, and supporting EMS are all opportunities. The following seven recommendations seek to avoid the trap of wallowing in the current problems and becoming stuck in a cycle of reactivity, symptom management, and scarcity. The recommendations are bold and sweeping and reflect the optimism and pioneering spirit the assessment team witnessed across Nebraska during the course of this project.

RECOMMENDATION 1

Strengthen public and governmental knowledge, understanding, valuing, and support of and for EMS.

To value and support EMS, the public and government at all levels must understand: EMS is necessary and expected; EMS has been a gift and bargain for 50 years because of the local grassroots dedication of a few; the true and full costs of providing EMS today and in the future; the current state of EMS; and what it will take to continue to enjoy high quality EMS across the state.

Some possible strategies:

- Use this report as a catalyst to engage key EMS stakeholders and deliver an awareness campaign designed to highlight: the growing expectations and demands for EMS; the fragile nature of its current structure in many rural areas; and the need for ongoing evolution.
- Create a process to continuously educate government and elected officials at all levels in the basics of EMS structure, operations, finance, and regulation, with the goal of arming them to bring more of the right attention to EMS.
- Help local EMS agency leaders develop and provide transparent data and information on current performance and needs and the expenses associated with delivering EMS services including the full cost of labor, equipment, training, and infrastructure.
- Foster a culture of appreciation for the historical development of EMS and its providers and their contributions to public health and safety.

RECOMMENDATION 2

Codify in law the responsibility for ensuring EMS provision.

Nebraska needs to expand upon its view of EMS as an essential service. A governmental entity should be charged with ensuring EMS is provided in a geographic area. While this has political challenges, this is needed to ensure both the public and government is moving EMS into its next generation and ensuring it has the resources EMS deserves. This also honors all the work that has brought EMS thus far.

Some possible strategies:

- Advocate for legislation that clearly outlines which governmental entity is responsible for the provision of EMS services.
- Welcome and host the ensuing discussion and debate with all of its concerns and fears around the cost of EMS, responsibility for the provision of EMS, and how EMS will be paid for.
- Collaborate with stakeholders and legislators to create the needed legislation and navigate the political challenges and garner support for legislation.

RECOMMENDATION 3

Envision the future of EMS and engage in ongoing statewide planning.

A bright future begins with imagining what the future will look like. A shared visioning and ongoing planning process will propel Nebraska toward the creation of a systematic approach to EMS throughout the state that matches resources with need and creates the necessary access, capacity and equity.

Some possible strategies:

- Facilitate a visioning process that includes broad EMS stakeholder involvement to develop a shared vision for the future of EMS in Nebraska.
- Build on the national vision that describes the EMS future as follows:

> A people-centered EMS system includes processes, protocols, technology, policies and practices designed to provide the best possible outcome for individuals and communities—every day and during major disasters. EMS is a versatile and mobile community healthcare resource, integral to regional systems of care that prevent

and treat acute illness and injury, as well as chronic ailments.[71]

- Conduct ongoing statewide planning to address key areas such as rurality, resource allocation, workforce development, funding mechanisms, and service quality.
- Foster open communication channels between the OEHS and EMS agencies/providers to promote collaboration and coordination.

RECOMMENDATION 4

Drive next-generation EMS evolution and change systemwide.

Realizing the desired future of EMS in Nebraska will require proactive effort and action at all levels. Proactive change is driven through ideas, leadership, coalitions and action. The next generation of EMS will need capable, courageous and prepared leaders. Agencies and communities will need assistance seeing beyond the current structures and help navigating the slow process of evolving sustainable models that match local needs, resources and opportunities.

Some possible strategies:

- Prioritize and invest in the development and support leaders at all levels who can lead evolution and change. This includes identification of leaders, initial and ongoing education, and the ongoing support of leaders.
- Develop the expertise needed to help unsustainable EMS agencies navigate the change process to become sustainable. This includes aiding communities in the long transition from unsustainable volunteer staffing models to sustainable staffing models.
- Resource and equip regional programming and coordination to provide the needed guidance and assistance.
- Create a technical assistance center.
- Identify agency performance expectations that specifically address reliability and sustainability.

RECOMMENDATION 5

Grow tomorrow's EMS workforce.

The next generation of EMS in Nebraska will need many workers. Creating this

[71] EMS Agenda for The Future 2050: A People Centered Vision for the Future of Emergency Medical Services. U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA), Office of EMS. 2019.

workforce will require data, knowledge, and understanding, as well as new ideas, creativity, and innovation. This must become a top priority.

Some possible strategies:

- Allocate resources at the state level for comprehensive workforce planning initiatives to address current and future staffing needs.
- Collect the data to fully understand the workforce in terms of workforce need, demand, pipeline, supply, turnover, safety, and wellbeing.
- Understand and begin to create an appropriate EMS workforce employment value proposition (this includes incentives, rewards, stepped-programs, and career pathing).
- Collaborate with educational institutions to enhance EMS training programs and ensure a steady pipeline of qualified professionals.
- Develop proactive mental health and wellbeing programming that prioritizes mental fitness, long-term satisfaction and resilience while continuing critical incident support.

RECOMMENDATION 6

Develop funding to support next-generation EMS.

The next generation of EMS will cost more. With gratitude for how a small cadre of dedicated people donated their time to make EMS possible, it is essential Nebraska find new and sustainable ways to fund operational EMS. This will necessitate valuing EMS in the same manner that public safety, public works and education are funded. It will require moving through sticker shock to getting serious about truly funding EMS as an essential service.

Some possible strategies:

- Conduct a thorough assessment of the true cost of providing EMS in Nebraska, including the value of donated labor and resources.
- Explore opportunities for cost containment and efficiency improvement within the EMS system.
- Develop the tools and enabling legislation to ensure that EMS is appropriately funded.
- Identify areas where low populations and distances necessitate outside funding to ensure all highways and communities are served by quality EMS responding within reasonable times.

- Advocate for reimbursement policies that reflect the value of EMS services and support the financial sustainability of EMS agencies.

RECOMMENDATION 7

Invest in data-driven information to understand EMS system development and performance.

Comprehensive data will be foundational to the next generation of EMS in Nebraska. This entails prioritizing efforts to collect and analyze data that encompasses clinical performance, workforce dynamics, operational efficiency, and financial metrics. Nebraska must transition beyond relying solely on NEMSIS-style data collection methods to ensure that the data gathered is aligned with specific operational, financial, and workforce requirements. This shift will enable EMS organizations to derive actionable insights necessary for driving operational excellence, financial sustainability, and workforce optimization.

Some possible strategies:

- Identify the relevant EMS opportunities, challenges, topics of today and tomorrow.
- Develop practical and simple to use data collection processes to support the needed data.
- Use data to inform decision-making processes related to workforce planning, resource allocation, and service improvement initiatives.
- Prioritize investments in information technology infrastructure (especial human resources for collection and analysis) to support data management and analysis efforts.
- Promote a culture of continuous quality improvement within the EMS sector through the use of data-driven insights and best practices.

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