



North Dakota Emergency Medical Services System

Christopher Price, MPA, NRP

Director, Emergency Medical Systems / Deputy Director, Health Response and Licensure Section

NORTH
Dakota Be Legendary.
Health & Human Services

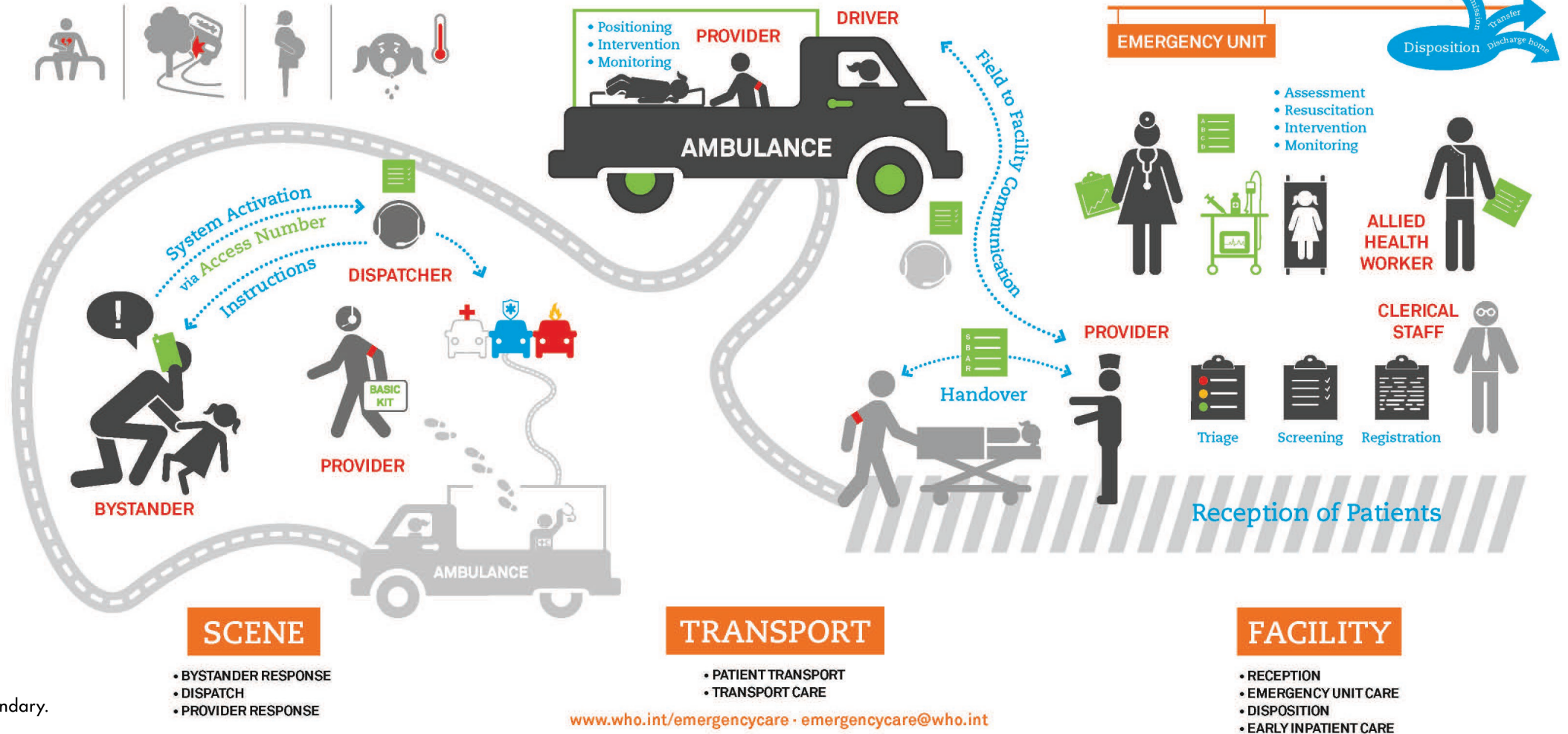


Emergency Medical Services System

- An Emergency Medical Services (EMS) system is not just ambulance services.
- An EMS system refers to a comprehensive and organized network of health care professionals, facilities and resources that work collaboratively to provide timely and effective out-of-hospital emergent medical care, transportation, and medical support to individuals experiencing sudden illnesses, injuries or other urgent medical situations.
- EMS is a key feature of mobile integrated health care, which leverages the expertise and infrastructure of EMS to address non-emergency health care needs within a community.

Time Sensitive Emergency System of Care

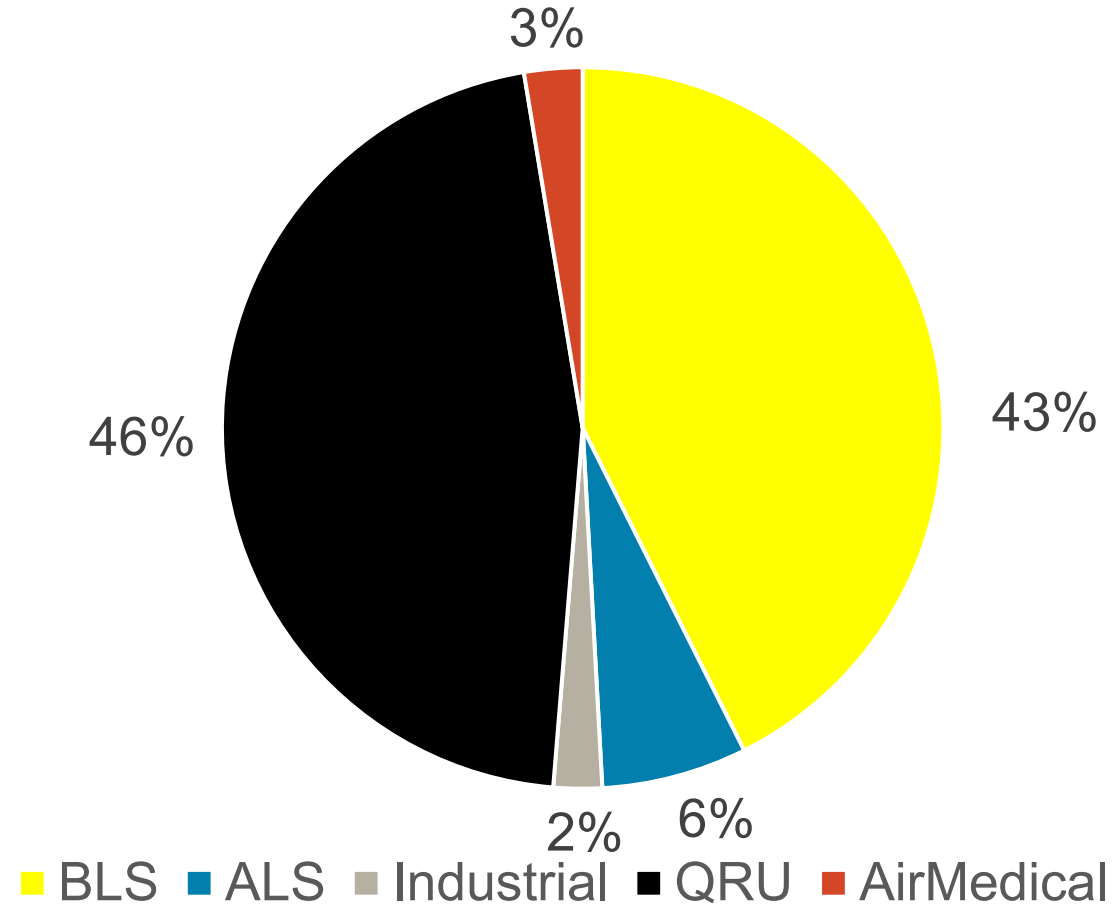
All around the world, acutely ill and injured people seek care every day. Frontline providers manage children and adults with injuries and infections, heart attacks and strokes, asthma and acute complications of pregnancy. An integrated approach to early recognition and management saves lives. This visual summary illustrates the essential functions of a responsive emergency care system, and the key human resources, equipment, and information technologies needed to execute them.

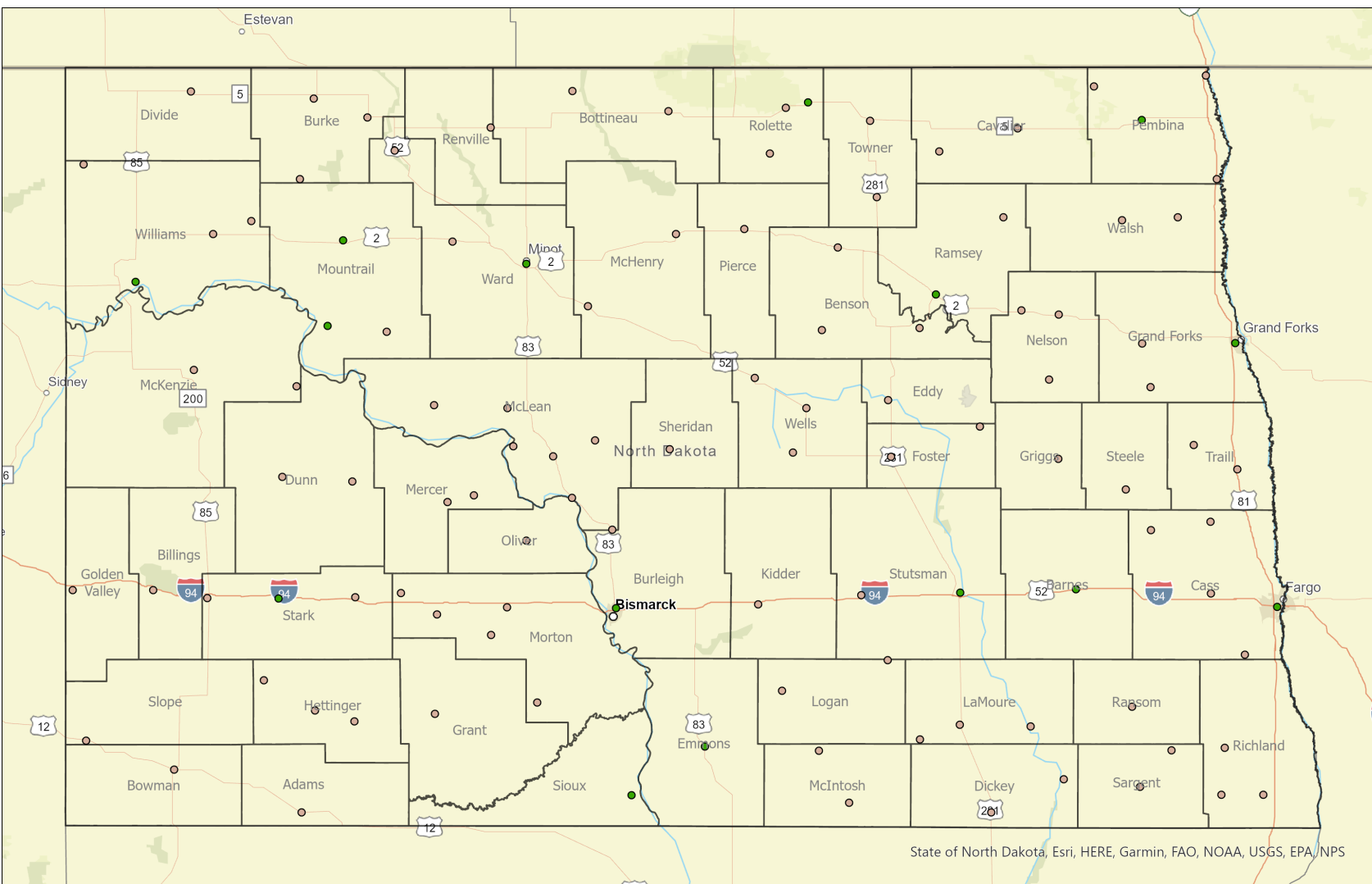


North Dakota EMS by the numbers...

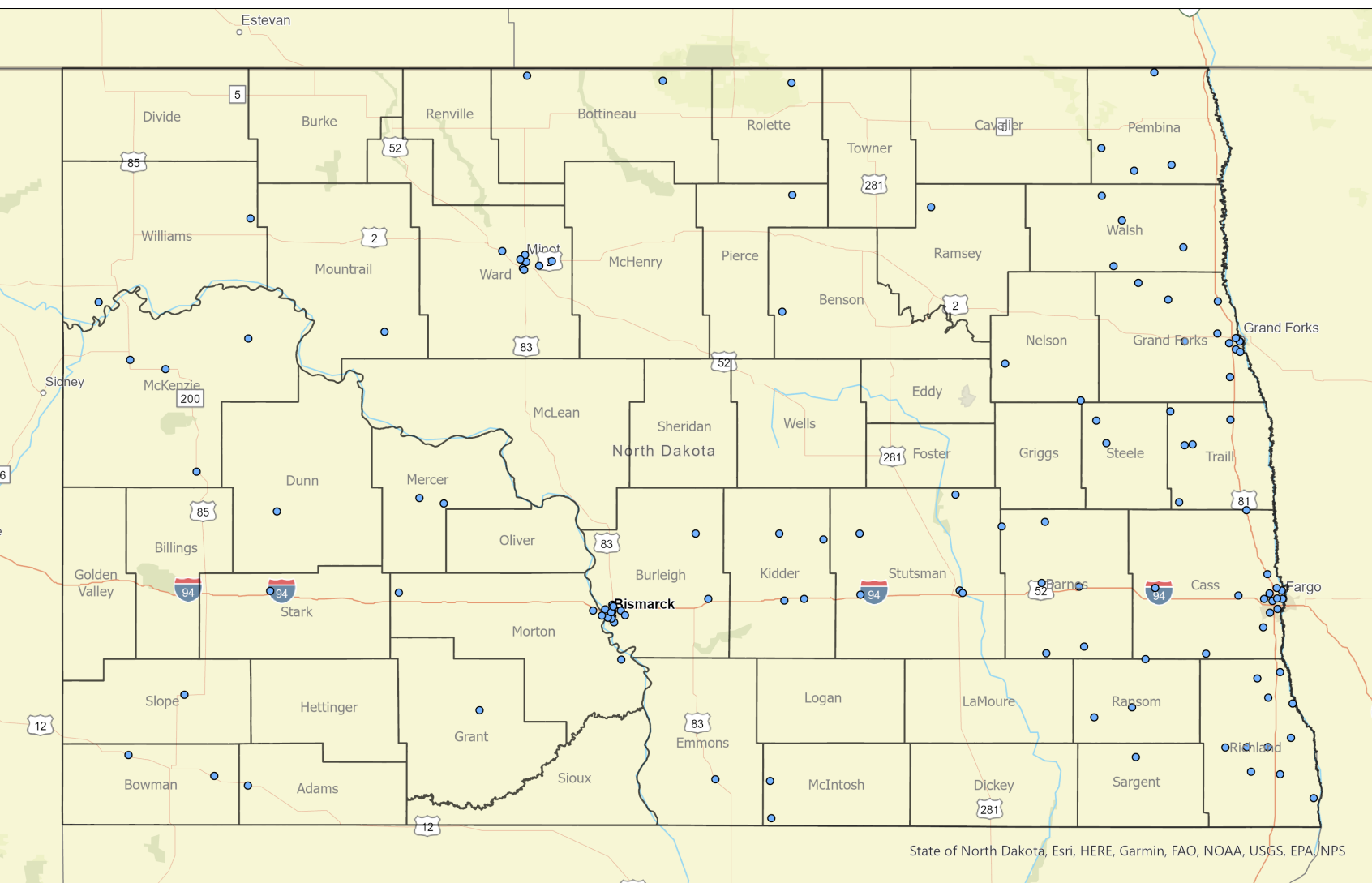
ND-based EMS Agencies:

- 98** Basic Life Support (BLS) Ground Ambulance Services (+2 Out-of-State)
- 15** Advanced Life Support (ALS) Ground Ambulance Services (+1 Out-of-State)
- 5** Industrial Ambulance Services
- 106** Quick Response Units (+1 Out-of-State)
- 6** Air Medical (+4 Out-of-State)





North Dakota Ambulance Services



North Dakota Quick Response Units (QRUs)



911 Responses

- **57,878** by ALS Ground Ambulance Services (76%)
 - **18,121** by BLS Ground Ambulance Services (24%)
 - **75,999** Total
-
- **95** 911 responses/1000 population
 - **6.6** 911 responses/hour by ALS Ground Ambulance Services
 - **2.1** 911 responses/hour by BLS Ground Ambulance Services
 - **5.1** 911 responses/hour by the four (4) ambulance services serving Bismarck, Fargo, Grand Forks, Mandan, Minot, West Fargo

All Call Types

95,617 Ground ambulance responses for all call types

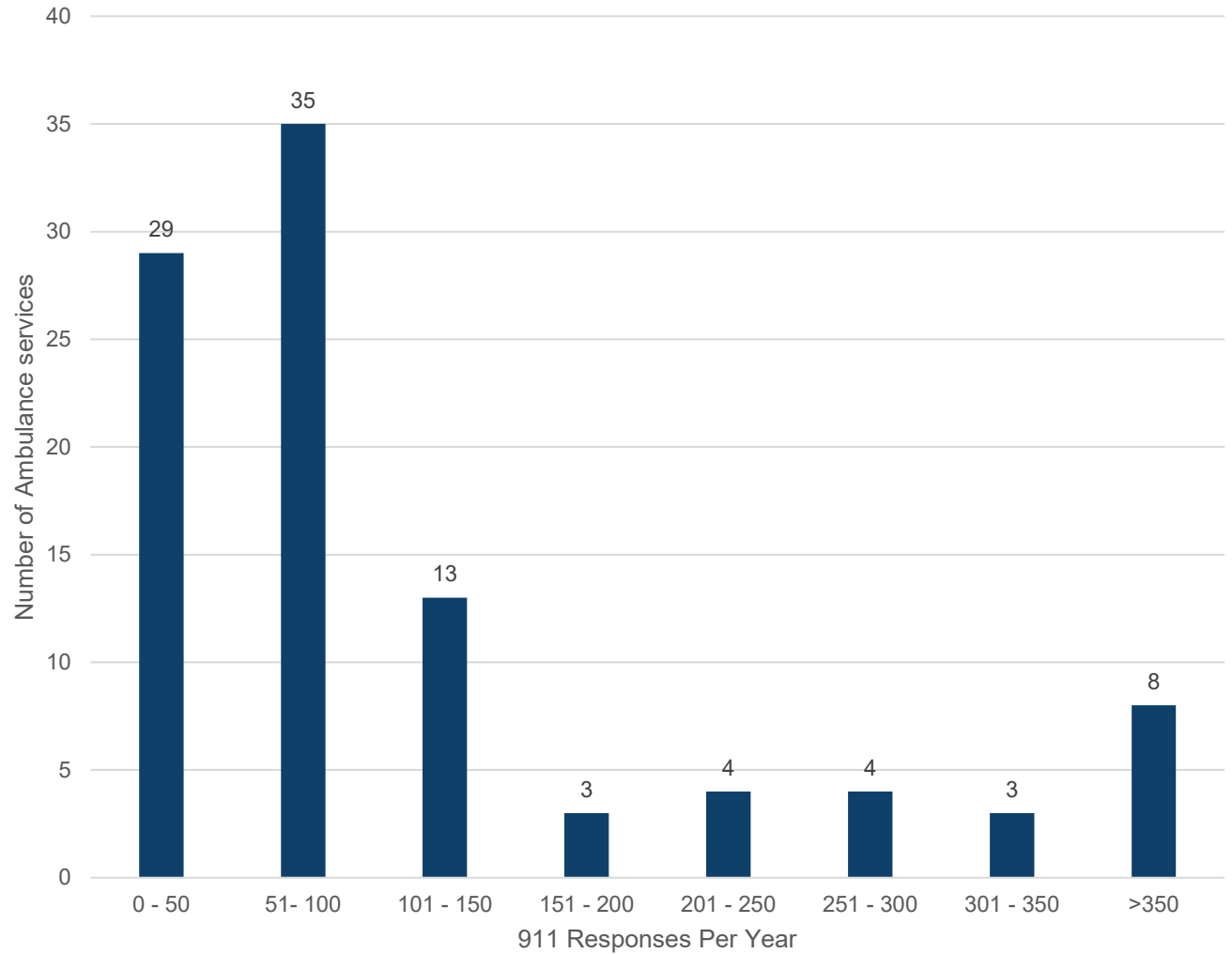
Patient Transports

42,718 Transports resulting from 911 Response

56.2 Percent of all 911 Responses resulting in transport of the patient



BLS Ground Ambulance Services Volume



Chute Time

- The time from ambulance dispatch to the time that the ambulance is responding (“wheels turning”). NDAC §33-11-01.2-17(1)(a) requires that an ambulance be responding within 10 minutes 90% of the time.
- **All** ALS Ground Ambulance Services are in compliance with this rule.
- **62.5%** of BLS Ground Ambulance Services are in compliance with this rule (Range for non-compliant BLS Ground Ambulance Services: 24% - 89%).



A paramedic in a green uniform is standing next to an ambulance, holding a blue medical bag. The ambulance is yellow and white, and the paramedic is looking towards the camera.

Response Time

The time from ambulance dispatch to the time that the ambulance reports that it is on scene:

14:19 All ground ambulance services (74% arrive in under 10 minutes)

7:23 The four (4) ambulance services serving Bismarck, Fargo, Grand Forks, Mandan, Minot, West Fargo (80% arrive in under 10 minutes)



Call Time Average

Time from ambulance dispatch to the time the ambulance is available for the next response

1:36:00 All ground ambulance responses

37:48 The four (4) ambulance services serving Bismarck, Fargo, Grand Forks, Mandan, Minot, West Fargo

Closures

There have been 10 ambulance service closures over the past six biennia. *(However, three added over the same time period.)*



EMS Personnel

	August 2025	August 2023	August 2022	April 2020	Change from 04/2020 (%)
Paramedics	707	688	648	661	+7.0
Advanced Emergency Medical Technicians (AEMT)	120	109	95	97	+23.7
Emergency Medical Technicians (EMT)	1757	1703	1818	2003	-12.3
Emergency Medical Responders (EMR)	1202	1547	1743	2073	-42.0

EMS Personnel

- 114 Instructors/Coordinators
 - 502 CPR/Drivers
 - 180 Nurses
- } Not licensed
by ND HHS



Ambulance Service Employment

BLS Ground Ambulance Service Employment		
Full-time	Part-time	On-Call
295	328	1177

ALS Ground Ambulance Service Employment		
Full-time	Part-time	On-Call
391	167	63

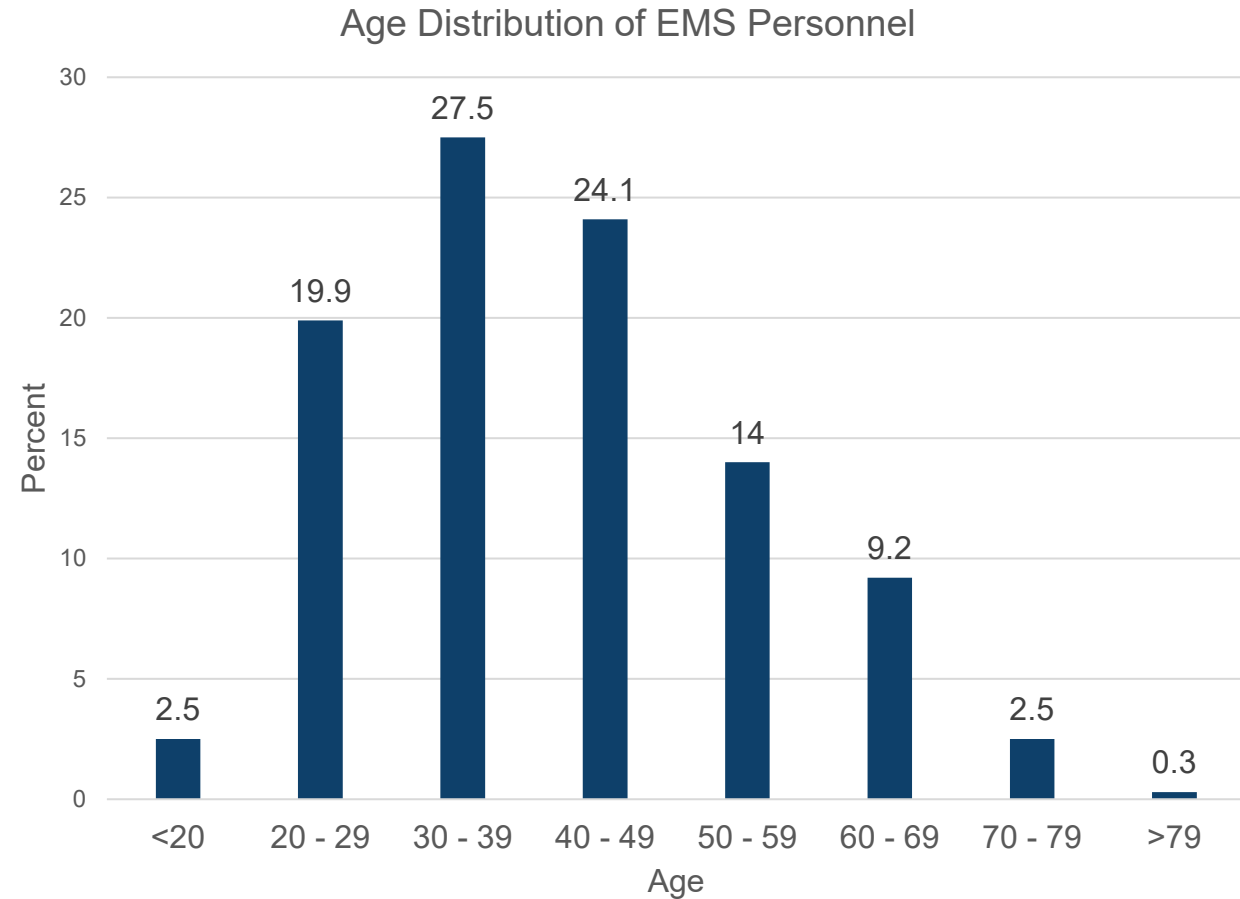
- Five (5) ground ambulance services report that they do not provide any compensation to EMS personnel.

Average Age of EMS Personnel

	Age	≥ 55 (%)
EMT	41	18
Paramedic	41	15



Age Distribution



EMS System Finance

EMS system participants in the United States are funded through a combination of methods, which can vary based on factors such as the location and the specific service provider. Funding methods include, but are not limited to:

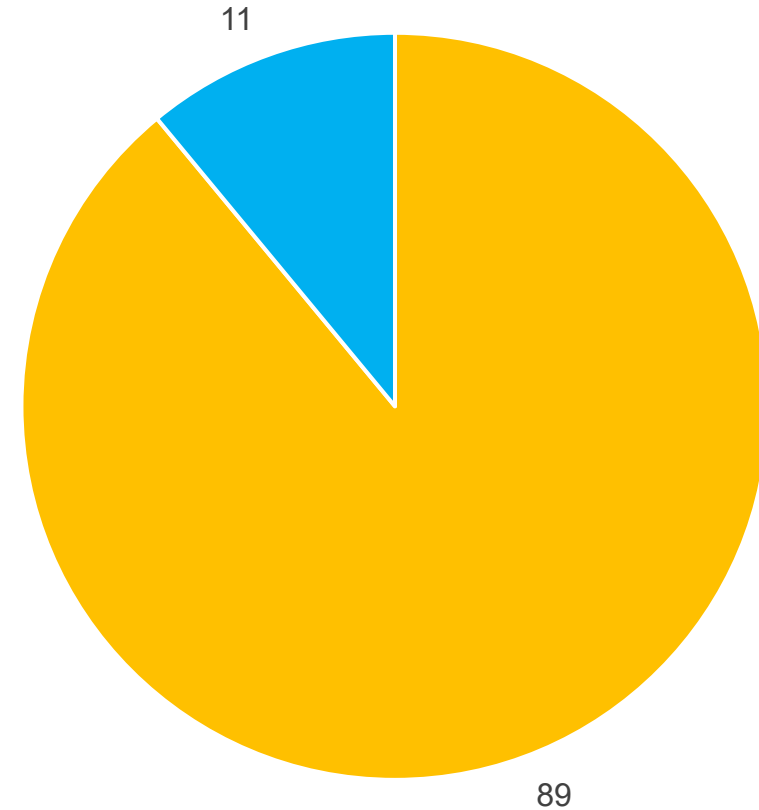
- User fees
- Insurance reimbursements
- Medicaid and Medicare
- Local/County Government subsidy
- Donations/Fundraising
- Grants
- Tax revenue (e.g., rural ambulance service taxing district)



EMS System Finance

\$16,304,525 of the EMSU budget (89%) is passed through to organizations and individuals within the EMS, Trauma, and Cardiac/Stroke Systems.

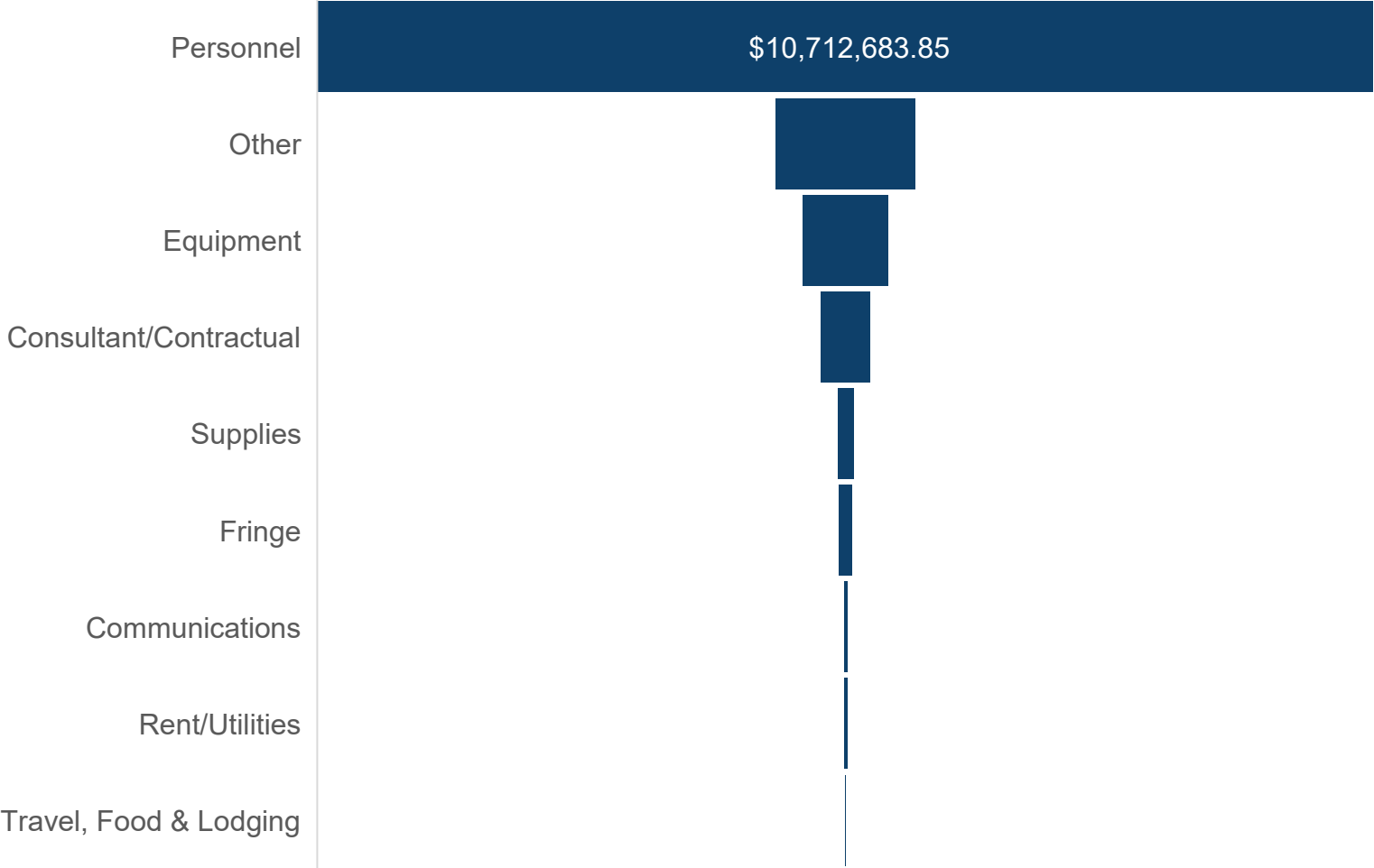
EMSU Budget 2025 - 2027 (Percent)



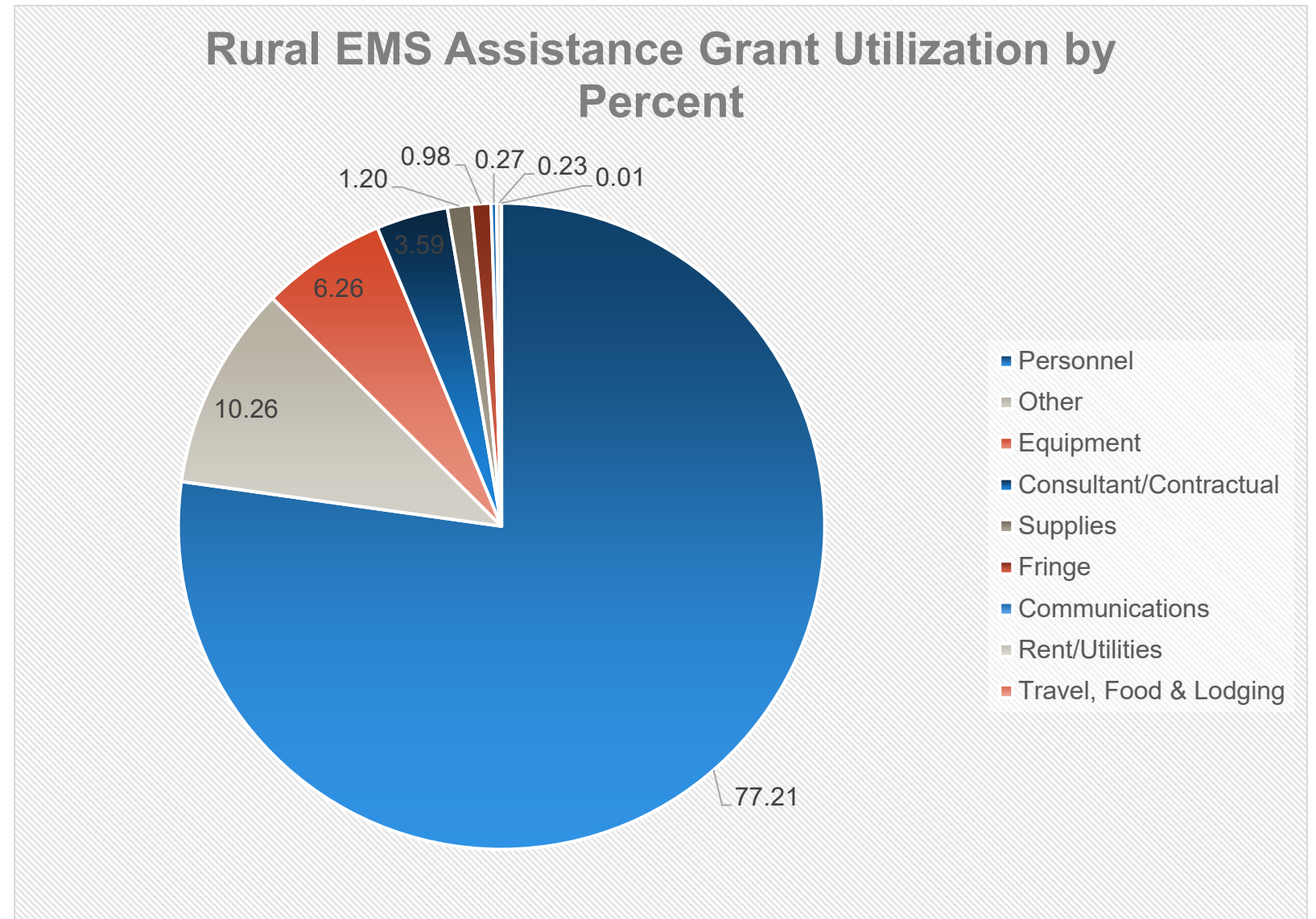
- Financial Support to Organizations and Individuals
- System Development and Regulatory Activities

EMS System Finance

Rural EMS Assistance Grant Utilization 2023 – 2025 Biennium (in USD)
\$13,874,995 reimbursed

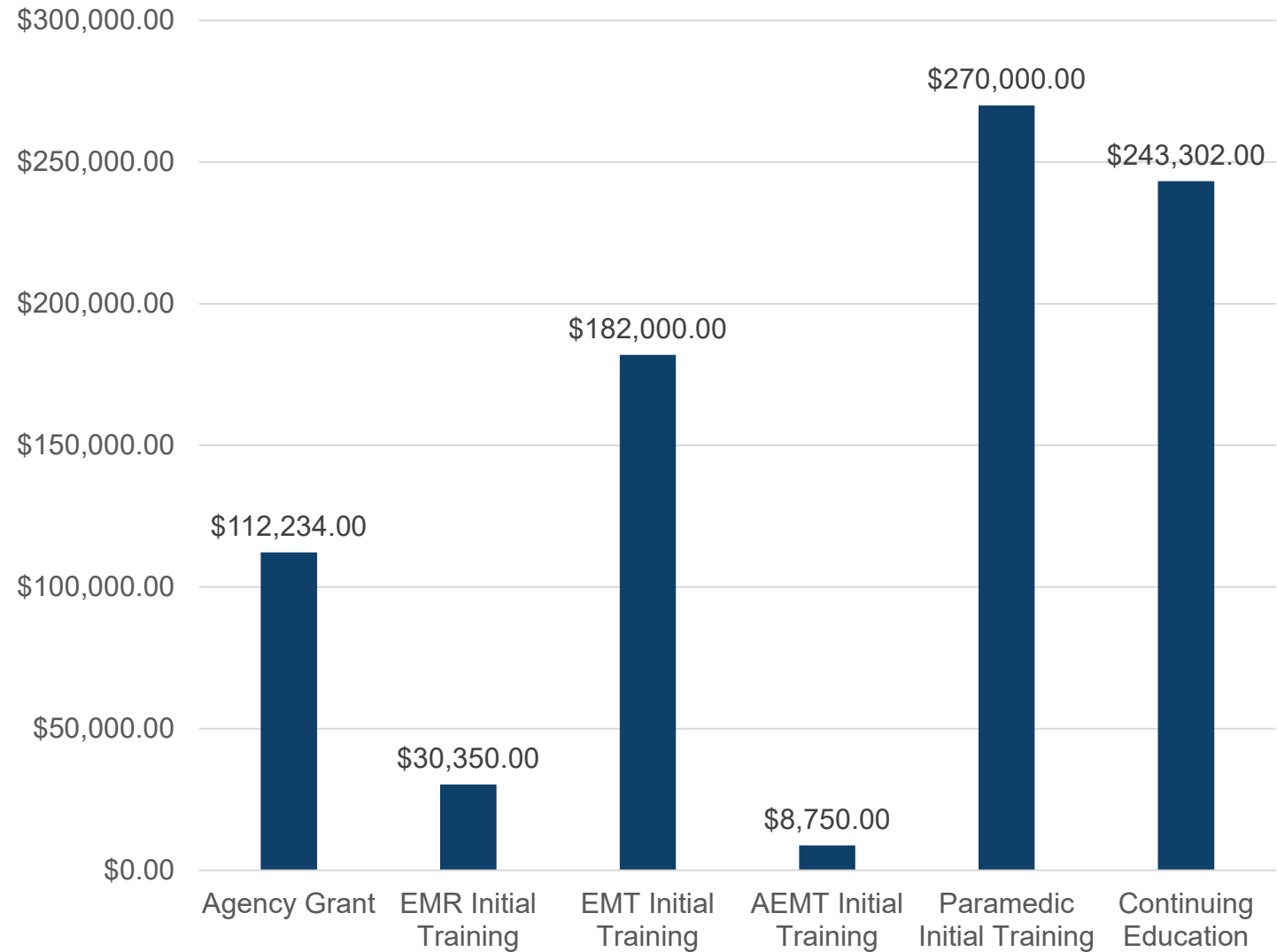


EMS System Finance

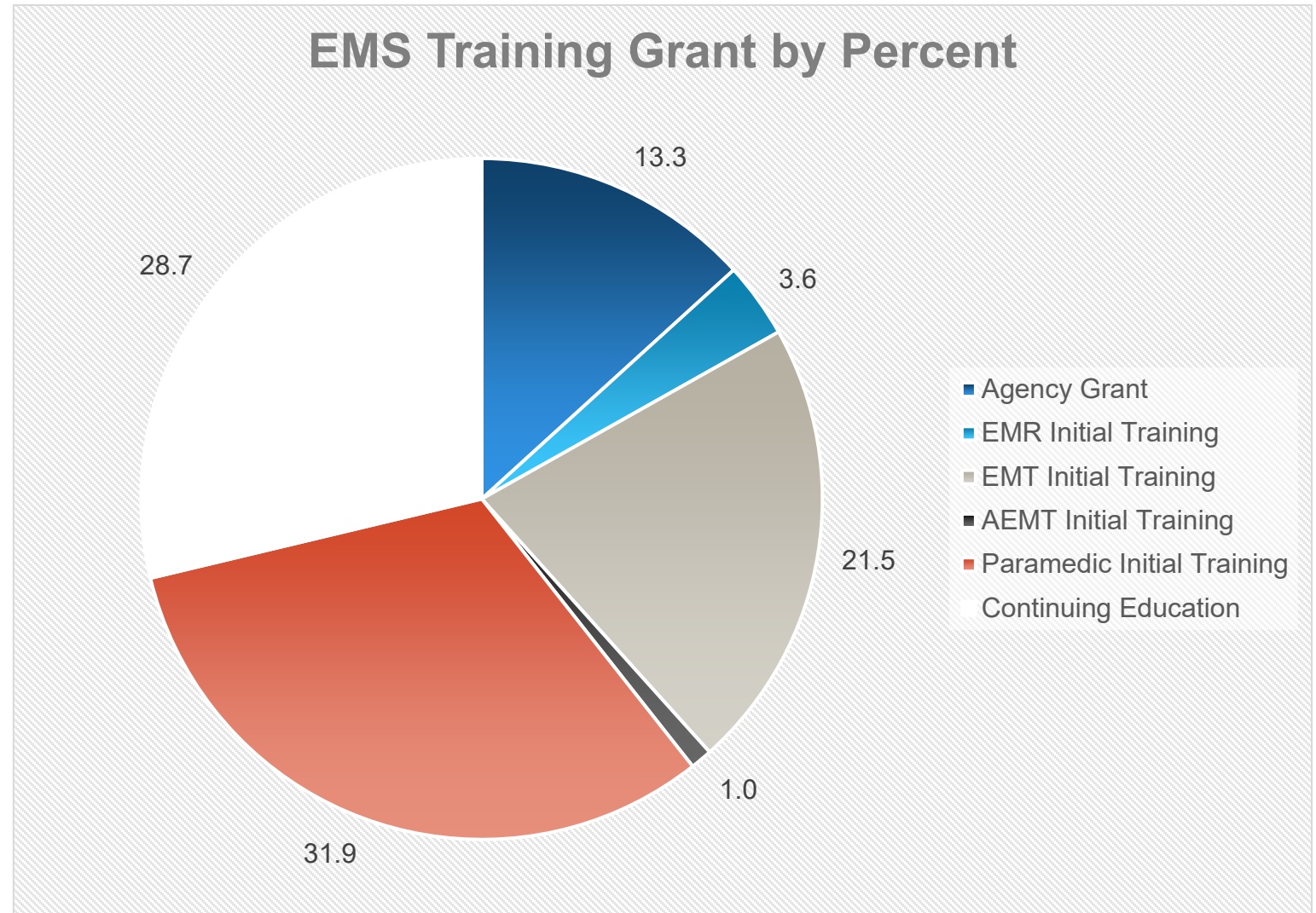


EMS Training Grant

EMS Training Grant By Amount
(\$846,000 Appropriated, \$846,636 Spent)



EMS Training Grant





Challenges Facing Ambulance Services in ND

1. Workforce shortages
2. Financial Sustainability

Additional challenges facing rural ambulance services:

- Large geographic area served
- Limited resources
- Long transport times
- Road conditions
- Patient Demographics (patients are older, sicker)
- Age out/Burnout of EMS personnel

QUESTIONS?



- 1 Good morning, Chairman Grueneich, and members of the Committee. My name is Chris Price, and I am the Director of the Emergency Medical Systems Unit for the North Dakota Department of Health and Human Services. I am here to share information about North Dakota's Emergency Medical Services system.
- 2 I want to begin by noting that an Emergency Medical Services system is more than just ambulance services. In general, an EMS system is a network of personnel, facilities, and resources designed to provide emergent medical care, transportation, and medical support to individuals experiencing sudden illnesses or injuries. More recently, the definition of an EMS system has been expanded to include the use of existing EMS resources to address non-emergency health care needs within a community. This is often referred to as community paramedicine.
- 3 This is a graphical depiction of an EMS system that illustrates the system components from bystander care through patient disposition at a critical access or tertiary care hospital and identifies the human resources, functions, and necessary infrastructure needed to provide effective care.
- 4 North Dakota licenses several distinct types of EMS resources based upon staffing and capabilities.

Advanced Life Support (ALS) Ground Ambulance Services provide advanced care including administration of IV medications, 12-lead ECG interpretation, and endotracheal intubation. ALS Ground Ambulance Services must always be staffed with a minimum of an EMT and Paramedic.

Basic Life Support Ambulance Services, despite the name, provide much of the same care as an ALS Ground Ambulance Service, minus the invasive procedures already mentioned. BLS Ground Ambulance Services must always be staffed with a minimum of a CPR/Driver and

EMT; however, if a BLS Ground Ambulance Service has a paramedic, it may provide the same care as an ALS Ground Ambulance Service. Several North Dakota licensed BLS Ground Ambulance Services staff as if they are ALS Ground Ambulance Services but elect to license at the lower level due to the staffing flexibility.

Industrial Ambulance Services may be ALS or BLS but do not respond off the industry property, typically a mine or power plant.

Quick Response Units are intended to close the response time gap from dispatch to the arrival of an ambulance. QRUs may provide ALS or BLS level care but do not transport.

Lastly, air medical services all provide, at minimum, ALS level care and may be helicopters or fixed-wing aircraft.

- 5 This map identifies the distribution of Ground Ambulance Services throughout North Dakota. ALS Ground Ambulance Services are indicated in green and BLS Ground Ambulance Services are indicated in red. With a few exceptions, ALS Ground Ambulance Services are located in the more populous cities.
- 6 This map identifies the distribution of Quick Response Units. QRUs may be affiliated with ground ambulance services or fire departments or may be independent organizations. QRUs are not required to have vehicles.
- 7 In 2024, there were 75,999 911 responses in the state, or about nine (9) per hour. Roughly 60 percent of the responses are in those areas served by the ground ambulance services based in Bismarck, Fargo, Grand Forks, and Minot. There are 95 911 responses for every 1000 residents.
- 8 The total ambulance service call volume was 95,617 in 2024. Other than 911 responses, ambulance services perform interfacility transfers, non-emergency transports to home or other non-health care

facilities, and participate in event standbys and community events. It is worth noting that only 56.2 percent of 911 responses result in a transport to a hospital. In general, ambulance services are only reimbursed for the services they provide when the response results in a transport.

- 9 78 percent of the BLS ground ambulance services have call volumes that do not exceed 150 per year. Due to the predominately rural nature of the state, there are ground ambulance services that make less than 10 responses per year.
- 10 Within the administrative code are performance measures for ground ambulance services. One of these measures is referred to as "chute time." This is the time from ambulance dispatch to the time that the ambulance is responding. The standard is ambulance response within 10 minutes of dispatch 90 percent of the time. All ALS ground ambulance services meet the standard; however, only 62.5 percent of the BLS ground ambulance services are in compliance. While overall this is a slight improvement over the results from 2022, this measure is sometimes a flag for identifying ground ambulance services that are in distress, particularly those with low compliance rates.
- 11 Despite large geographical response areas, the statewide average ground ambulance service response time is 14 minutes 19 seconds. This reflects a reasonable, but perhaps not optimal, distribution of ground ambulance services. Recent evidence suggests that response time is only clinically significant in roughly five (5) percent of 911 responses. In these cases, other responders, such as Quick Response Units and community members, may be able to close the response time gap.
- 12 The average time to complete a call for all call types is 1 hour 36 minutes. Though the probability of simultaneous calls for service in rural areas is very small, ground ambulance services cooperate to

provide coverage when a neighboring ground ambulance service is already attending a call. In other words, a system is in place so that all requests for ambulance response are answered.

- 13 Unfortunately, the state's EMS system has incurred 10 ground ambulance service closures over the past six biennia. During that same period three have been added in underserved areas. There has not been an ambulance service closure in over two and one-half years.

- 14 North Dakota has 3,786 licensed EMS personnel.

Paramedics, those credentialed to do invasive medical procedures and administer medications, make up 19 percent of the licensed EMS providers.

Advanced Emergency Medical Technicians make up the smallest, but fastest growing, cohort of EMS providers. AEMTs can administer a limited number of medications via IV or other administration routes. Both Paramedic and AEMT are built on the foundational prerequisite of Emergency Medical Technician.

Forty-six percent of licensed EMS providers are Emergency Medical Technicians. Because of the broad scope of practice permitted in North Dakota, EMTs can perform skills that just a few years ago were within the domain of paramedics, including the administration of certain injected and inhaled medications and the placement of supraglottic airways. EMT is the minimum licensure level permitted to be the primary care provider in a ground ambulance.

Lastly, Emergency Medical Responders are intended to provide immediate basic care for life threatening illnesses and injuries.

Though sometimes a part of a ground ambulance crew, EMRs are the predominant EMS providers on Quick Response Units.

In general, due to the lengthy education process, paramedics, and most AEMTs, are primarily career EMS providers. Though many EMTs are also career EMS providers, many, if not most, have other non-EMS full-time jobs. This is a component of the decline in the numbers of EMTs as is the changing rural demographics of the state.

- 15 There are 114 Instructor/Coordinators providing EMS education in North Dakota. Many, but not all, teach for one of the 21 licensed training institutions. Each is additionally licensed as an EMT or higher EMS Provider. Though not licensed by the Department of Health & Human Services, CPR/Drivers and Nurses are integral to out-of-hospital emergency care. Nurses primarily function as part of air medical crews but some do provide staffing on ground ambulance services.
- 16 Ground Ambulance Services report that they employ 686 full-time personnel. Many compensated EMS personnel are paid on-call, meaning they are paid to remain available to respond but are not required to be present at the ambulance station and may go about the daily activities of life constrained only by the requirement to have the ambulance responding within 10 minutes of dispatch. Only six (6) ground ambulance services provide no compensation to EMS personnel.
- 17 North Dakota's EMS providers tend to be older than the average North Dakotan and roughly one-fifth are at or older than the "customary" public safety retirement age of 55.
- 18 Twelve (12) percent of EMS providers are 60 years of age or older. Looked at another way – a ground ambulance service with a roster of 10 will have one member that is at least 60 and one or two more that are at least 50. Our EMS Workforce is aging.
- 19 Though there are several options for funding EMS, many, if not most, ground ambulance services rely on fee-for-service as their primary

source of revenue. This is generally in the form of reimbursements from health insurance companies and Medicare. In 2002, Medicare implemented the ambulance fee schedule to replace the reasonable cost payment system. Reimbursements received through the ambulance fee schedule vary based upon the level of care provided and the distance the patient was transported. Health insurance companies generally track the ambulance fee schedule when providing reimbursement. In general, reimbursement is not provided if a patient is not transported. Unfortunately, the cost of providing EMS exceeds what is provided by revenue generated by fee-for-service.

- 20 Of the total EMS Unit budget, 89 percent is passed through to individuals and organizations. Most of the funds provided are for participants in the Rural EMS Assistance grant and EMS training grant programs. In addition, supporting statutorily required patient care registries for hospitals has become increasingly costly due to IT inflationary pressure. Far less amounts are provided to hospitals for rural trauma team development, Advanced Trauma Life Support training for emergency department providers, trauma nurse training, and pediatric appropriate equipment for ambulance services.
- 21 By far, ground ambulance services use the Rural EMS Assistance grant for personnel costs – 10.7 million of the 13.8 million dollars expended for the biennium. In general, any operational cost is eligible for reimbursement and some ground ambulance services elect to use alternative sources to cover personnel costs and use the grant to cover expenses for equipment and supplies, among other things.
- 22 Seventy-seven (77) percent of the grant goes toward staffing ambulances – a reflection of the trend toward career staffing to address the decrease in community-spirited individuals available to respond.

- 23 The EMS training grant program is designed to offset most of the cost of initial and continuing education for EMS providers. Reimbursement amounts are set, and periodically adjusted, to reflect the average cost to conduct the various courses, as reported by training institutions and instructors. Reimbursements are provided to EMS agencies on behalf of individuals completing training and being licensed. For EMT, AEMT, and paramedic initial training a time commitment to the sponsoring EMS agency is required of the individual benefitting from the grant.
- 24 Thirty-three (33) new Paramedics and 143 new EMTs benefitted from the grant during the past biennium. The higher percentage of funding for paramedic initial training reflects the current \$10,000 reimbursement per student. Unfortunately, this amount lags behind the actual cost of attending a paramedic course. Fifty-nine (59) EMS agencies took advantage of the agency training grant which serves to cover other training costs not otherwise reimbursable. This includes instructor wages, training equipment, and National Registry testing fees.
- 25 And finally, I leave you with the challenges facing our EMS system. Most, if not all, EMS agencies in North Dakota are facing workforce shortages and concerns regarding their long-term financial sustainability, though the recently implemented rural ambulance service district initiative provides the opportunity for a supplementary, community-determined, revenue source. In addition, rural ambulance services are confronted by large response areas, limited resources, long transport times, questionable road conditions, older and sicker patients, an aging workforce, and a workforce that is burned out from the years of dedication with little hope that a younger cohort will rise to replace them.
- 26 Thank you for the opportunity to testify. I am happy to answer any questions you may have.