



North Dakota Emergency Medical Services System

Christopher Price, MPA, NRP

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



Emergency Medical Services System

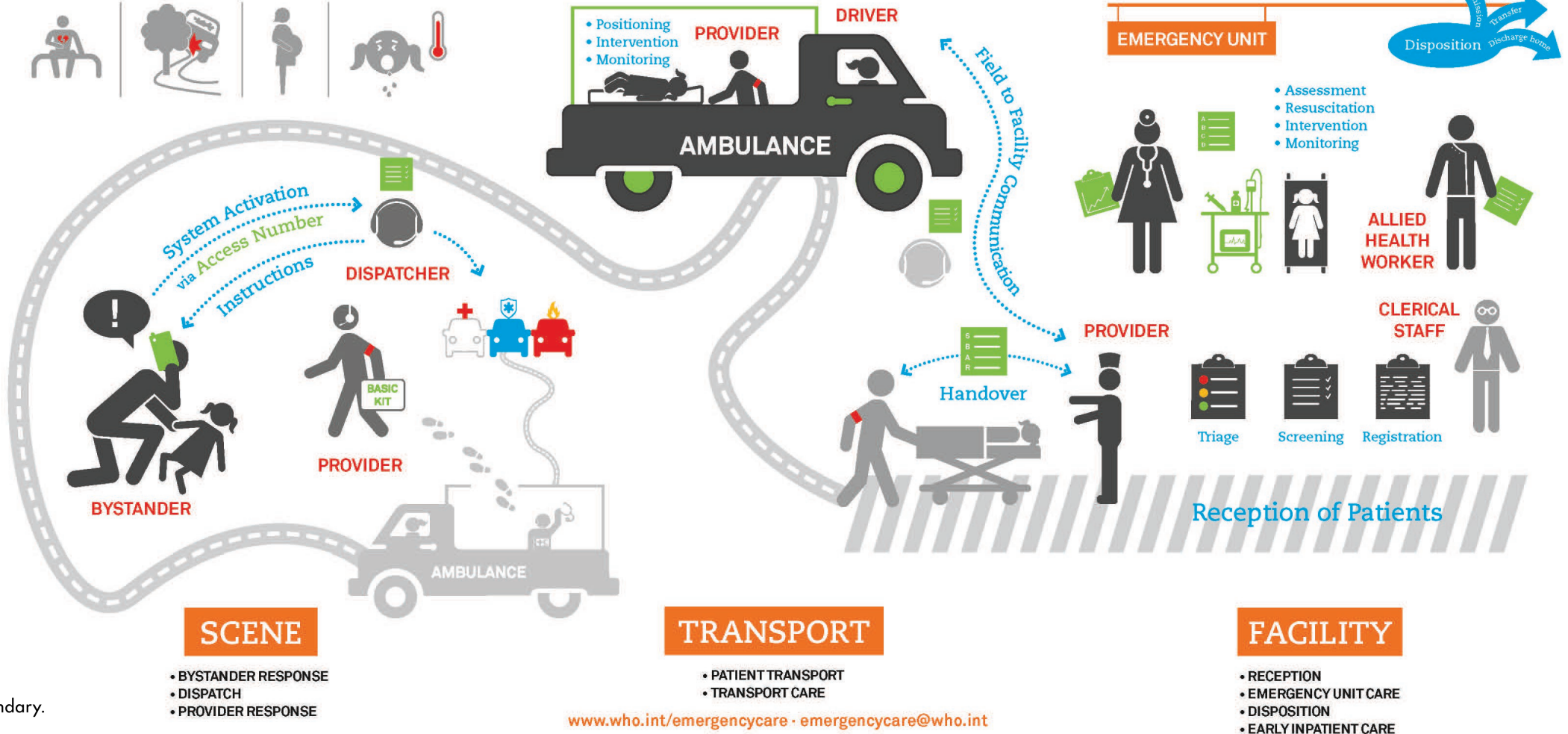
- An Emergency Medical Services (EMS) system is not just ambulance services.
- An EMS system refers to a comprehensive and organized network of health care professionals, facilities and resources that work collaboratively to provide timely and effective out-of-hospital emergent medical care, transportation, 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.



■ HUMAN RESOURCES ■ FUNCTIONS ■ VEHICLES, EQUIPMENT, SUPPLIES, INFORMATION TECHNOLOGIES



Systems of Care

The Emergency Medical System Unit (EMSU) includes other time-sensitive systems of care as Emergency Medical Services (EMS) plays an integral role in all care systems.

- Emergency Medical Services for Children (EMSC)
- Trauma
- Cardiac
- Stroke
- Other projects include: the Cardiac Ready Community Program and Community Paramedic



Systems of Care

Trauma System

- Functions to establish and maintain a statewide trauma system to include designation of hospitals as Level I - Level V trauma centers.
- Trauma Centers
 - 1 Level I
 - 5 Level II
 - 8 Level IV
 - 30 Level V



Systems of Care

Stroke System

- Works to establish and maintain a system of care designed to assure stroke patients are quickly identified and transported to the appropriate stroke center to receive timely and effective treatment.
- Stroke Centers
 - 2 Comprehensive
 - 2 Thrombectomy Capable
 - 2 Primary
 - 30 Acute Stroke Ready Hospitals
 - 8 Undesignated (but submit data)



Systems of Care

Cardiac System

- Encourages the adherence to national evidence-based cardiac standards of care. Work includes the designation of STEMI referring centers called Acute Cardiac Ready Hospitals.
- New program, and the first of its kind in the U.S.



Systems of Care

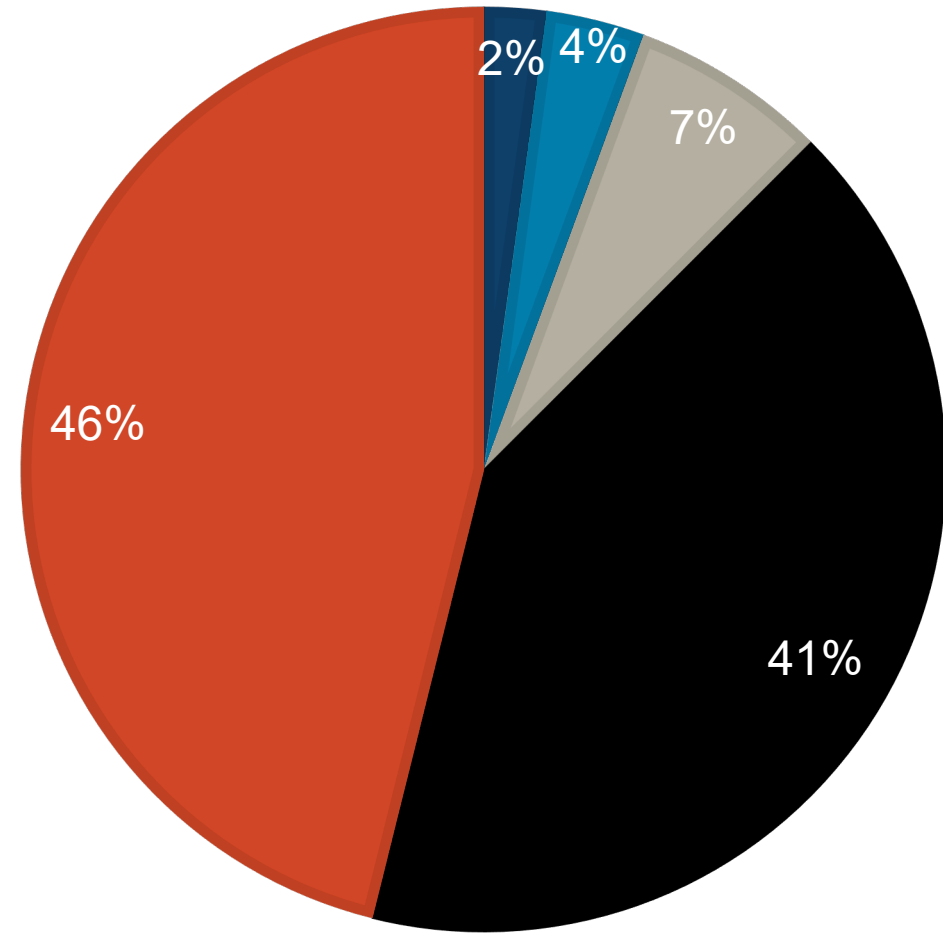
Emergency Medical Systems for Children (EMSC) Program

- EMS for Children is a federal program aimed at integrating pediatric planning and delivery of emergency care into all systems. EMSC facilitates state assessments to measure the ability of hospital and ambulance services to care for pediatric patients and to assist with training and resources should gaps exist. EMSC works to designate Pediatric Ready Ambulances.

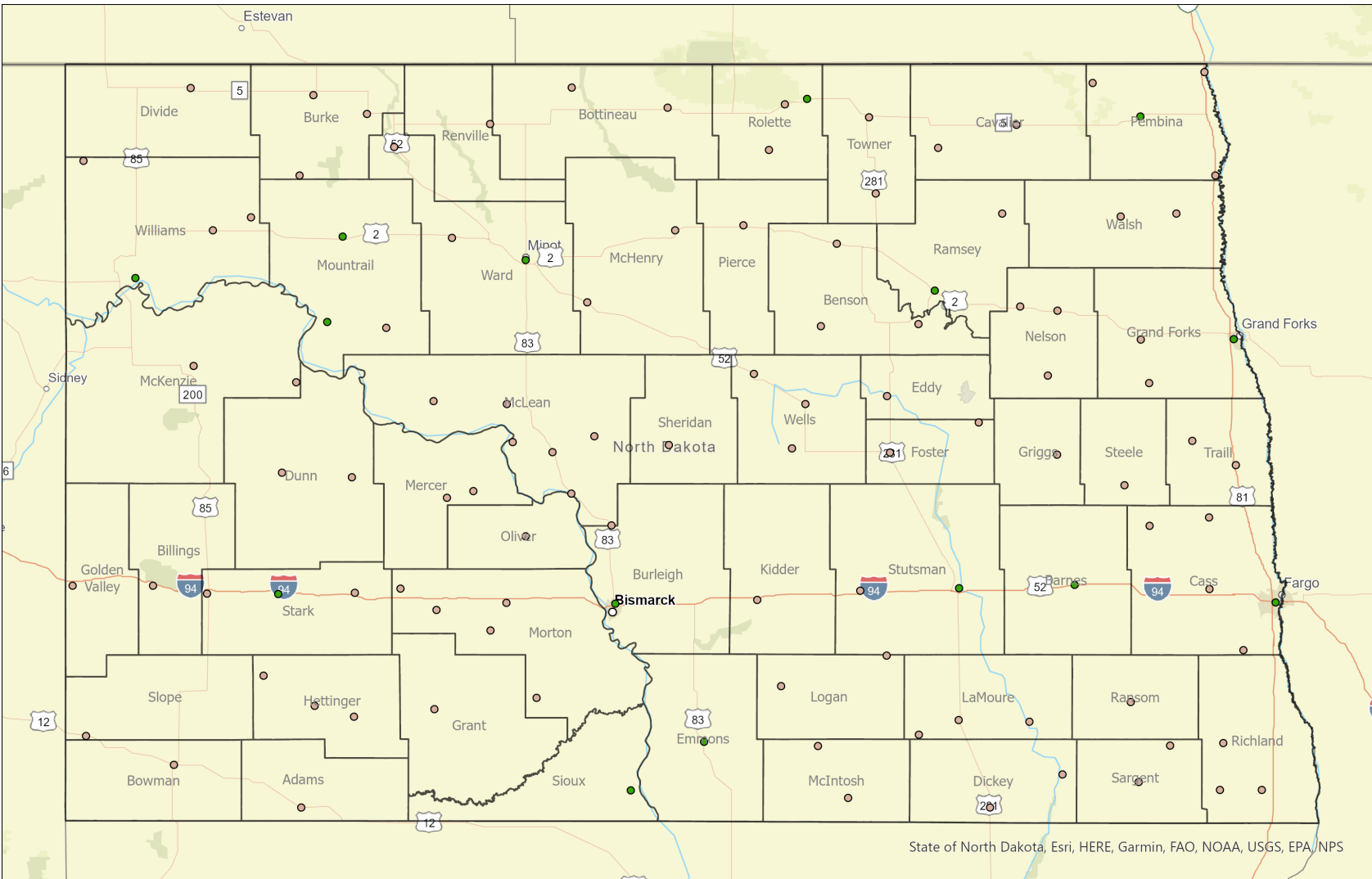
North Dakota EMS by the numbers...

ND-based EMS Agencies:

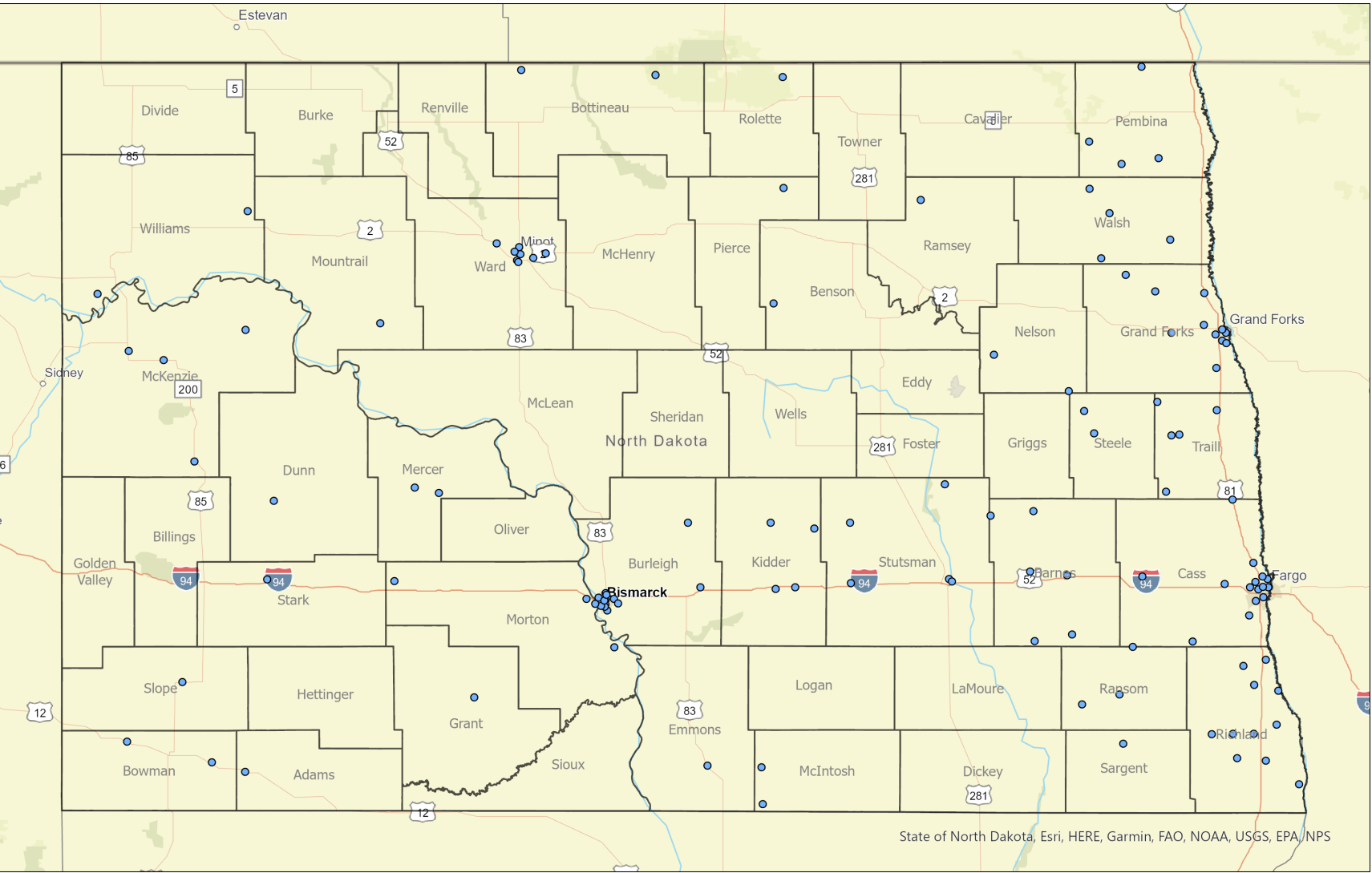
- 96** Basic Life Support (BLS) Ground Ambulance Services (+2 Out-of-State)
- 15** Advanced Life Support (ALS) Ground Ambulance Services (+1 Out-of-State)
- 5** Industrial Ambulance Services
- 106** Quick Response Units (+1 Out-of-State)
- 5** Air Medical (+3 Out-of-State)



■ Industrial ■ Air Medical ■ ALS ■ BLS ■ QRU

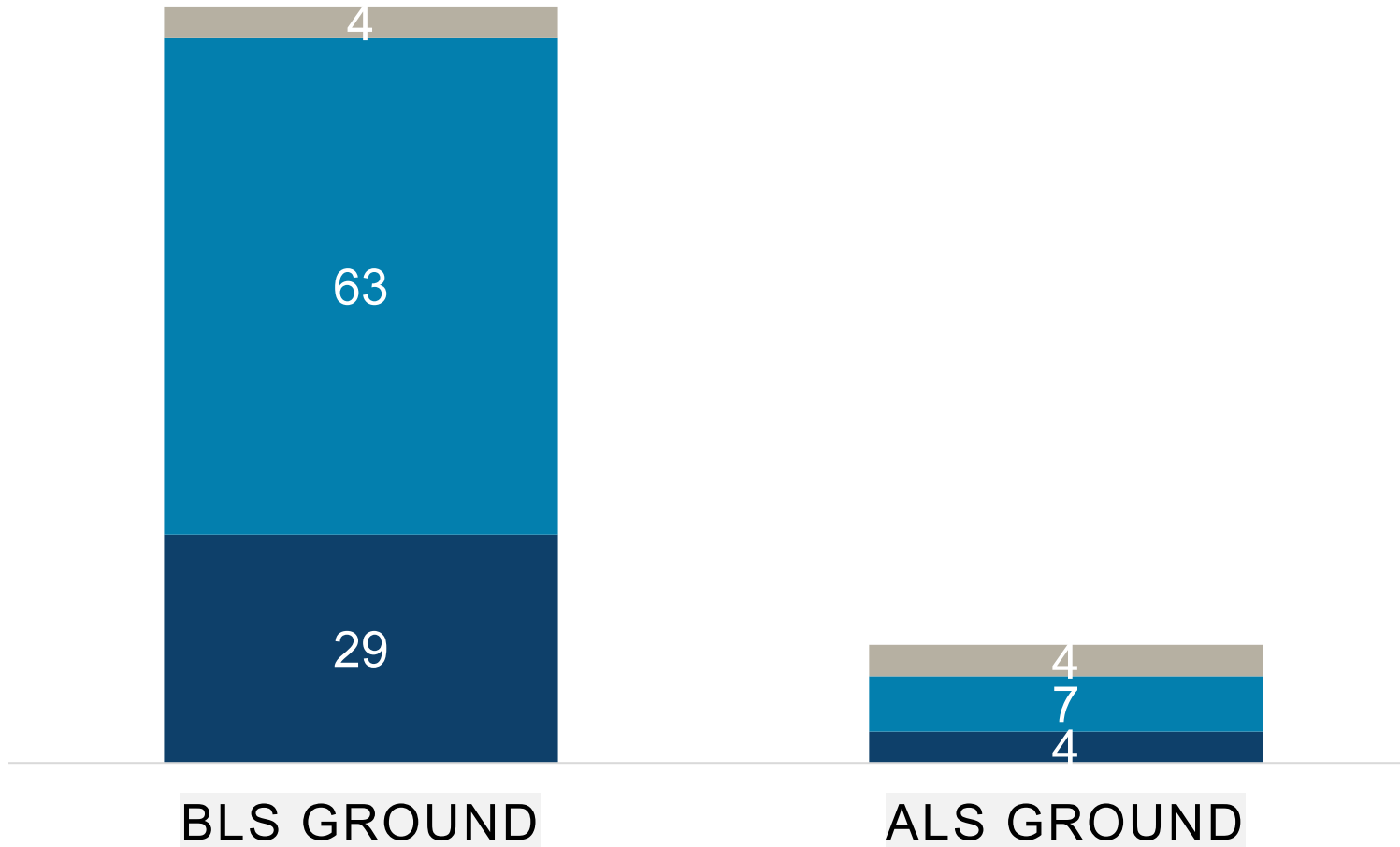


North Dakota Ambulance Services



North Dakota Quick Response Units (QRUs)

■ Government ■ Private/Nonprofit ■ Private/For Profit



Ambulance Service Ownership



911 Responses

- **67,265** by ALS Ground Ambulance Services (82%)
 - **15,288** by BLS Ground Ambulance Services (18%)
 - **82,553** Total
-
- **106** 911 responses/1000 population
 - **7.7** 911 responses/hour by ALS Ground Ambulance Services
 - **1.7** 911 responses/hour by BLS Ground Ambulance Services
 - **6.2** 911 responses/hour by the four (4) ambulance services serving Bismarck, Fargo, Grand Forks, Mandan, Minot, West Fargo

All Call Types

94,945 Ground ambulance responses for all call types

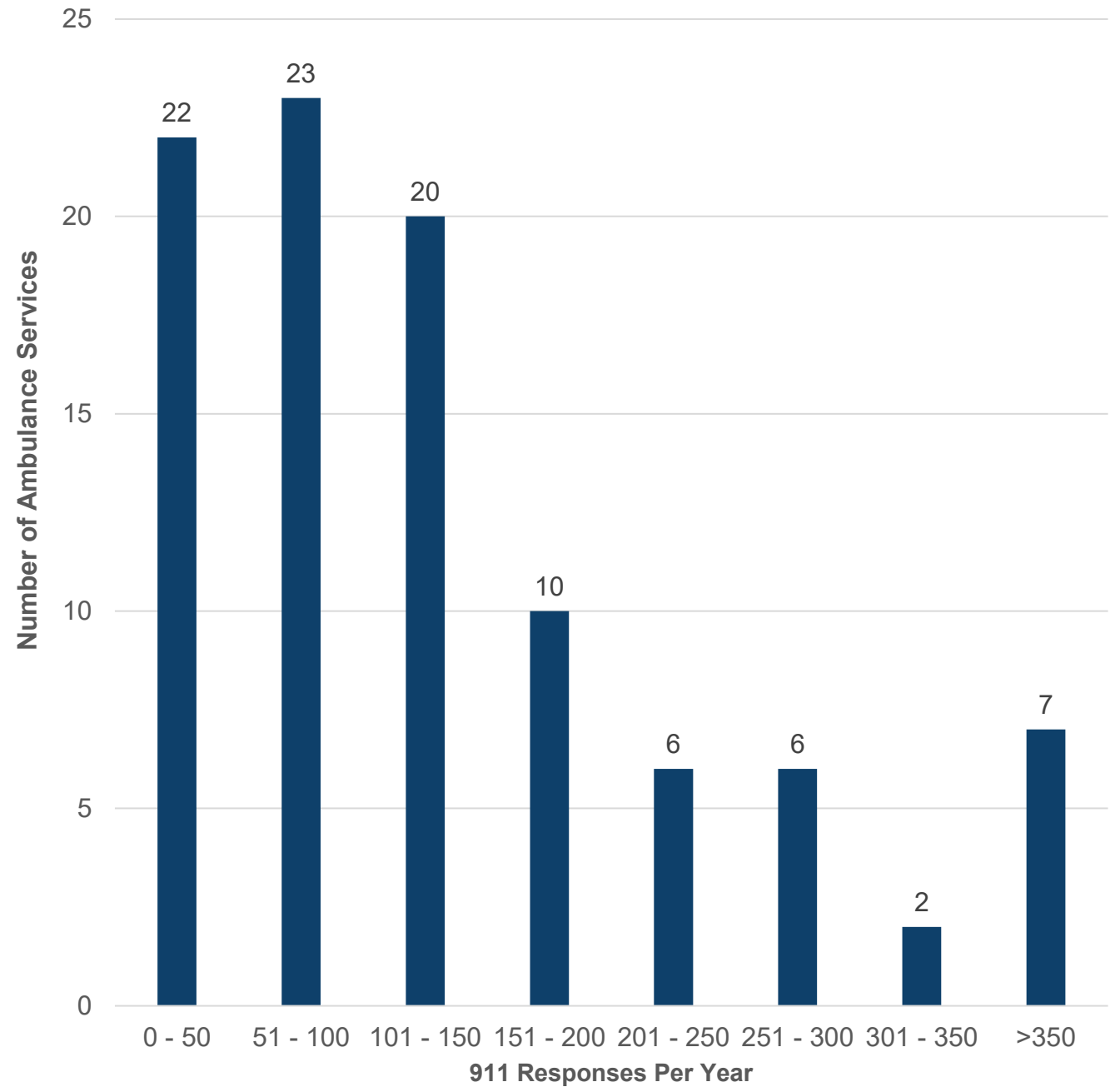
Patient Transports

56,715 Transports resulting from 911 Response

68.7 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.
- **55%** of BLS Ground Ambulance Services are in compliance with this rule (Range for non-compliant BLS Ground Ambulance Services: 38% - 89%).





Response Time

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

- 8:36** All ground ambulance services (74% arrive in under 10 minutes)
- 7:11** The four (4) ambulance services serving Bismarck, Fargo, Grand Forks, Mandan, Minot, West Fargo (84% arrive in under 10 minutes)
- 11:05** All other ambulance services (58% arrive in under 10 minutes)*

* Distribution of Ambulance Services throughout rural North Dakota permits reasonable response times despite large geographic response areas.



Call Time Average

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

51:21 All ground ambulance responses

1:05:13 All ground ambulance responses except the four (4) ambulance services serving Bismarck, Fargo, Grand Forks, Mandan, Minot, West Fargo

Closures

Average of 2 ambulance service closures per biennium over the past 10 years. *(However, 2 added over the same time period.)*



EMS Personnel

	August 2023	August 2022	YOY Change (%)	April 2020	Change from 4/2020 (%)
Paramedics	688	648	+6.2	661	+4.1
Advanced Emergency Medical Technicians (AEMT)	109	95	+14.7	97	+12.4
Emergency Medical Technicians (EMT)	1703	1818	-6.3	2003	-15.0
Emergency Medical Responders (EMR)	1547	1743	-11.2	2073	-25.4

EMS Personnel

- 107 Instructors/Coordinators
 - 1099 CPR/Drivers
 - 230 Nurses
- } Not licensed by ND HHS



Ambulance Service Employment

BLS Ground Ambulance Service Employment		
Full-time	Part-time	On-Call
240	331	863

ALS Ground Ambulance Service Employment		
Full-time	Part-time	On-Call
403	132	33

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

Average Age of EMS Personnel

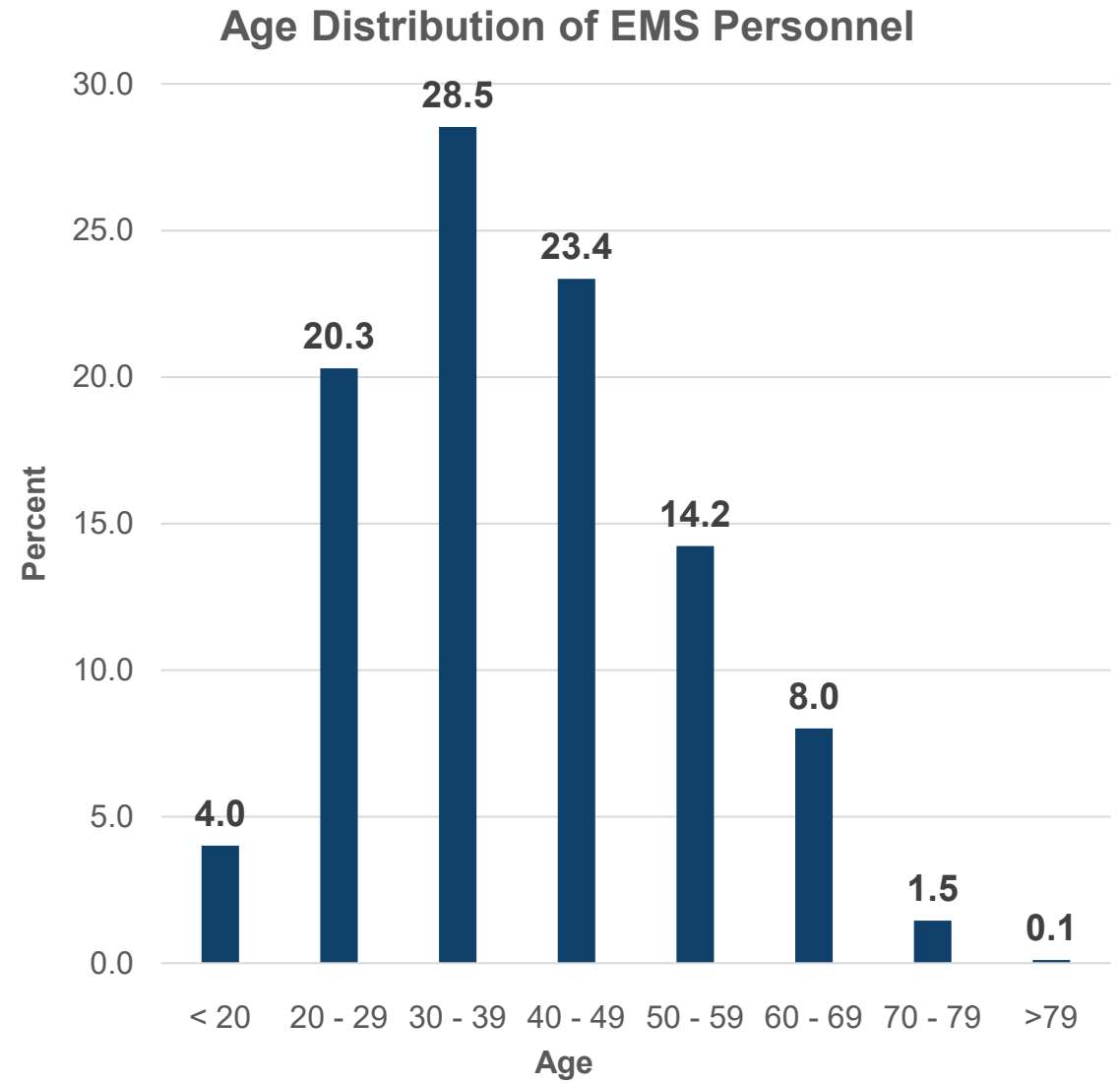
	Age	≥ 55 (%)
EMT	41	20
Paramedic	41	19

Average Age of EMS Personnel

	Age	≥ 55 (%)
EMT	41	20
Paramedic	41	19



Age Distribution



EMS System Finance

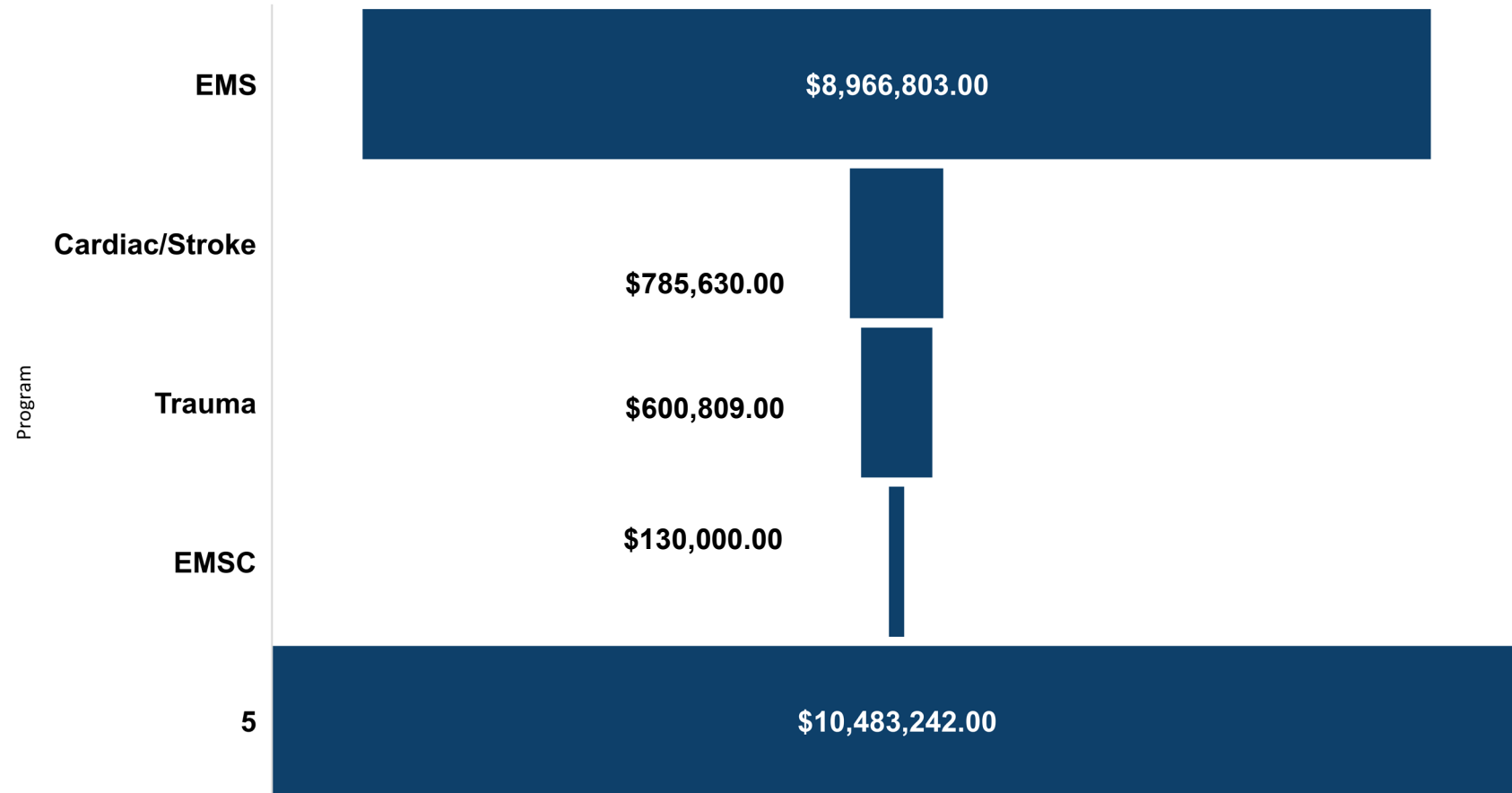
EMS system participants in the United States are funded through a combination of methods, which can vary based on factors such as the location and the specific service provider. Funding methods include, but are not limited to:

- 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

EMSU Budget 2021 - 2023

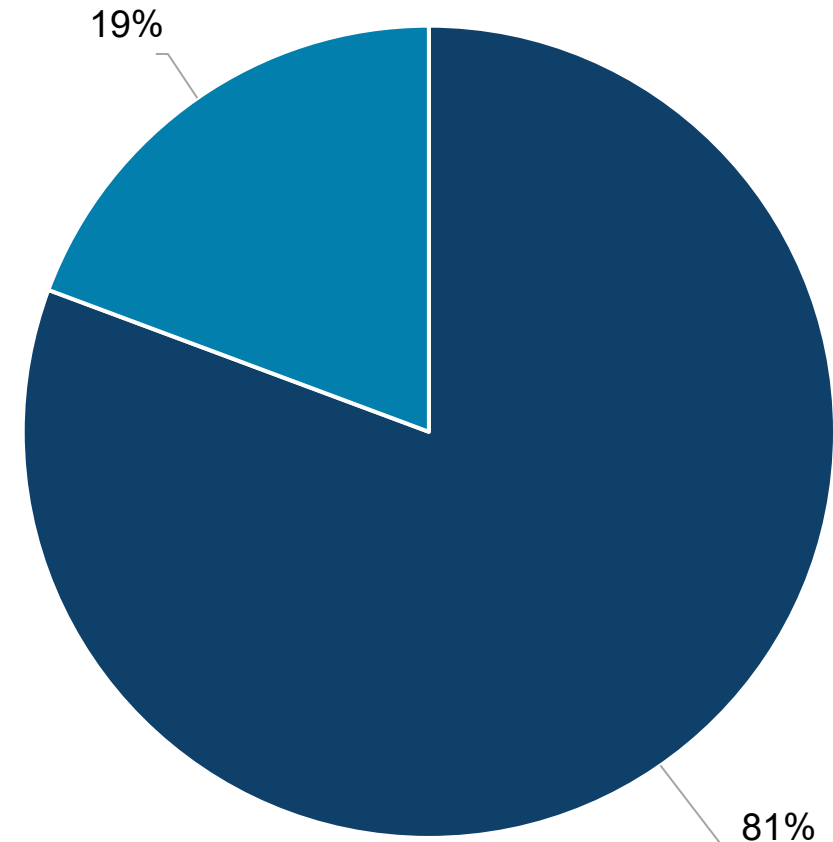


EMS System Finance

\$8,109,205 of the EMSU budget (77.4%) is passed through to organizations and individuals within the EMS, Trauma, and Cardiac/Stroke Systems.

- This amount will increase to \$15,109,205 due to an increase in the Rural EMS Assistance grant.
- Another \$348,658 supports statutorily required registries used by personnel within these systems.
- This amount will increase to \$701,553 due to inflationary increases.

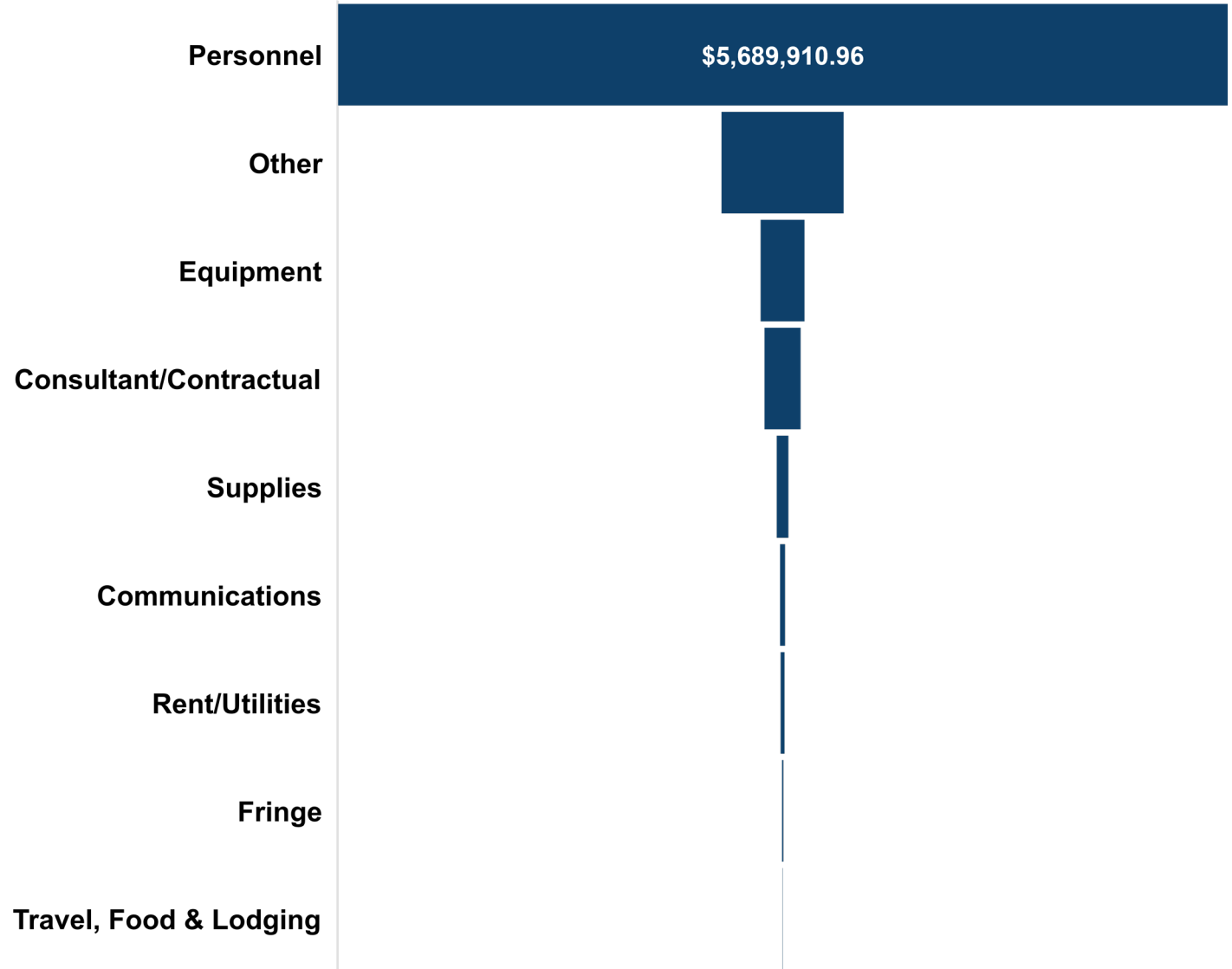
EMSU Budget 2021 – 2123 (percent)



- Pass through to Individuals and Organizations
- System Development and Regulatory Activities

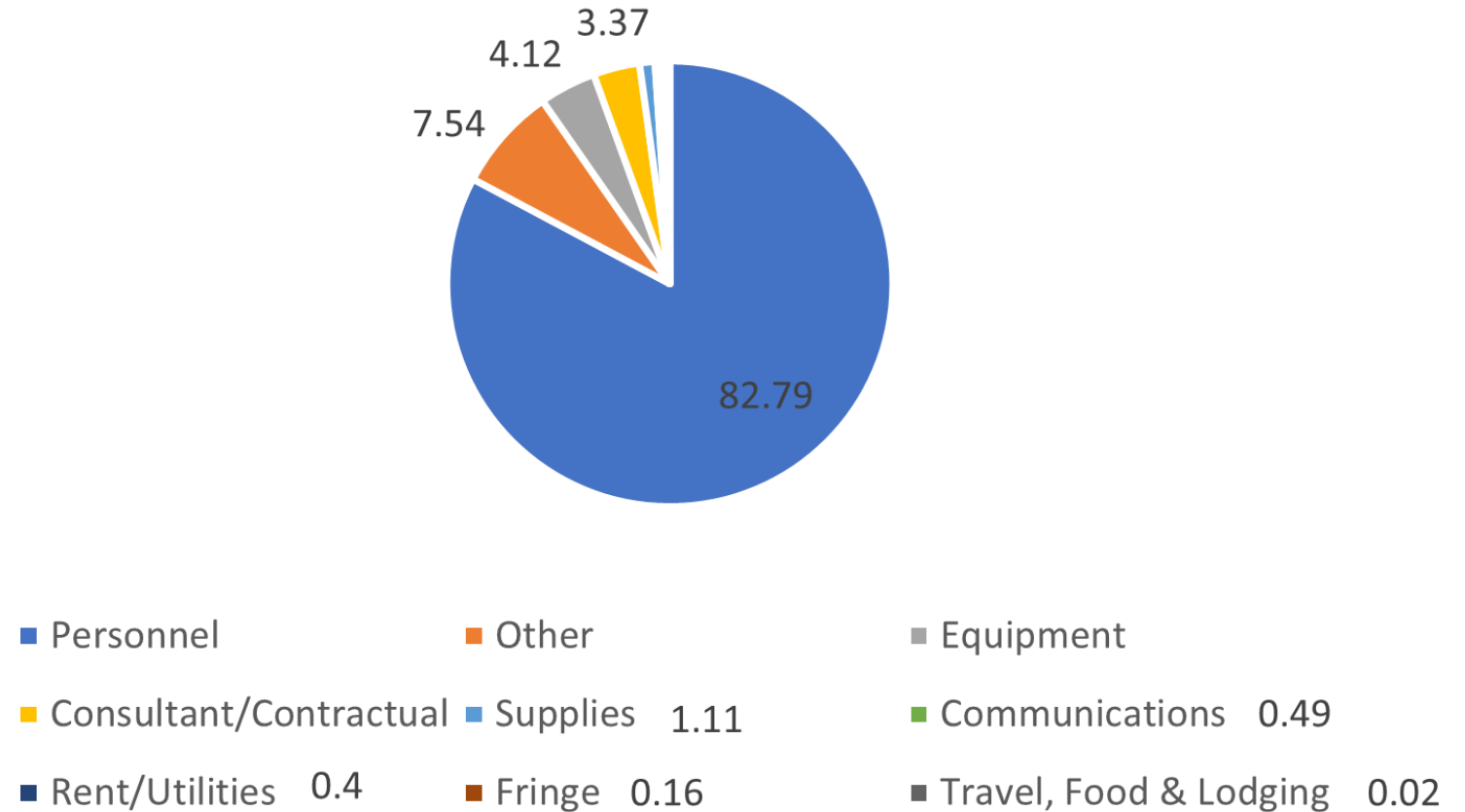
EMS System Finance

Rural EMS Assistance Grant Utilization in USD



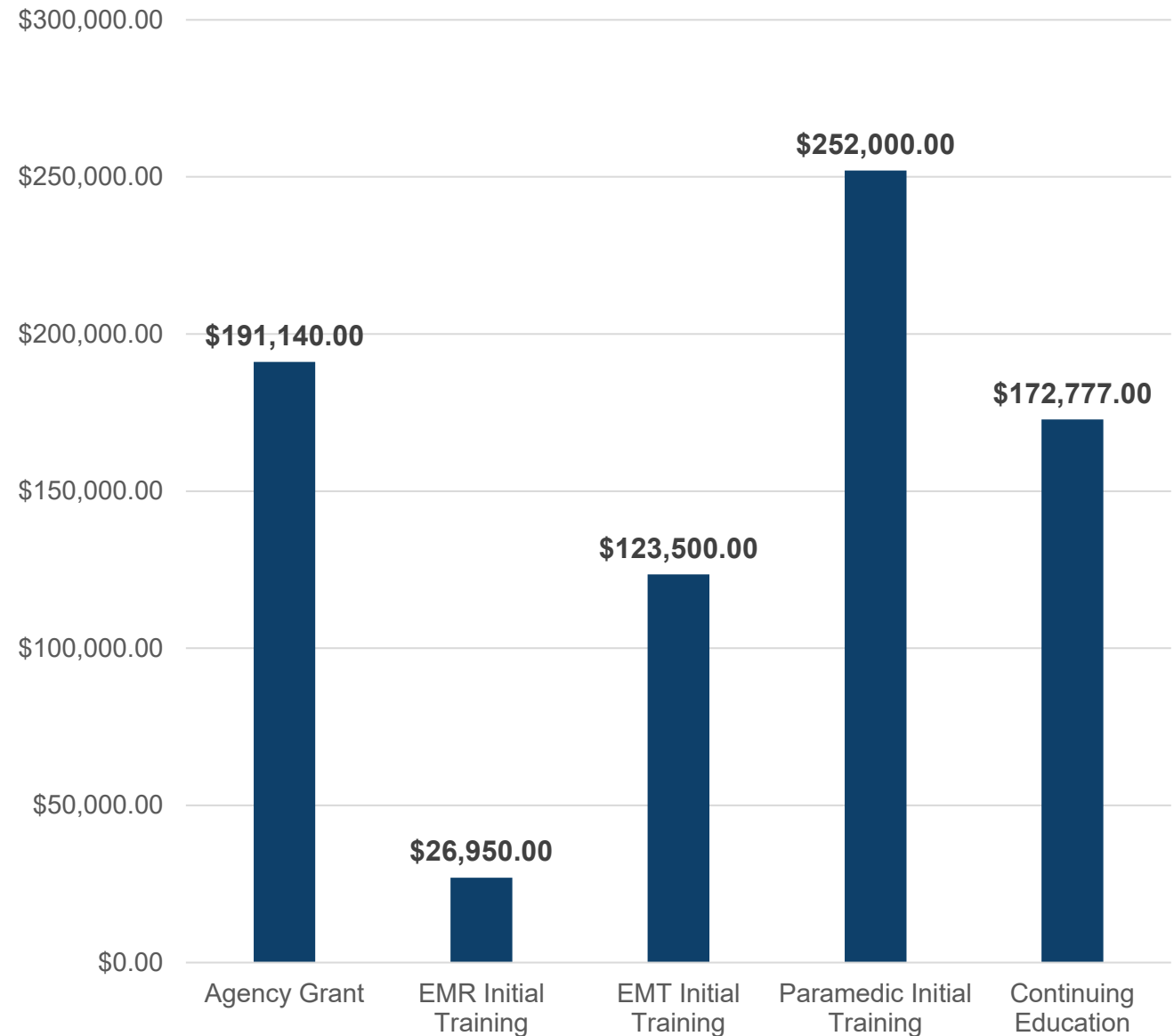
EMS System Finance

Rural EMS Assistance Grant Utilization by Percent



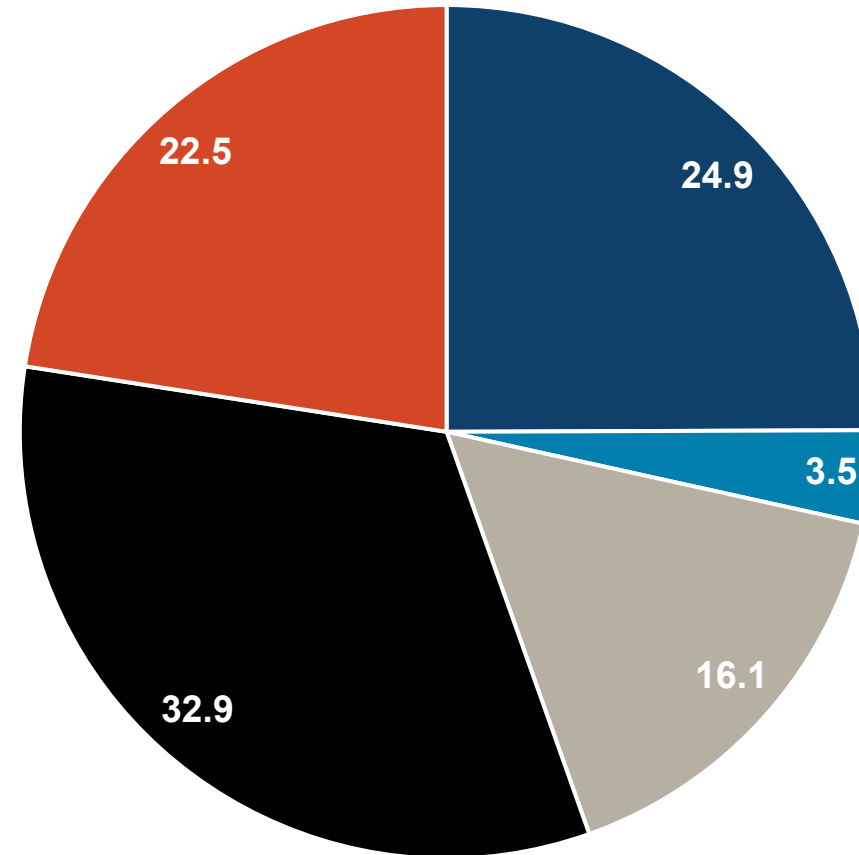
EMS Training Grant

EMS Training Grant By Amount
(\$846,000 Appropriated, \$766,367 Spent)



EMS Training Grant

EMS Training Grant By Percent



- Agency Grant
- EMT Initial Training
- Continuing Education
- EMR Initial Training
- Paramedic Initial Training

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?

