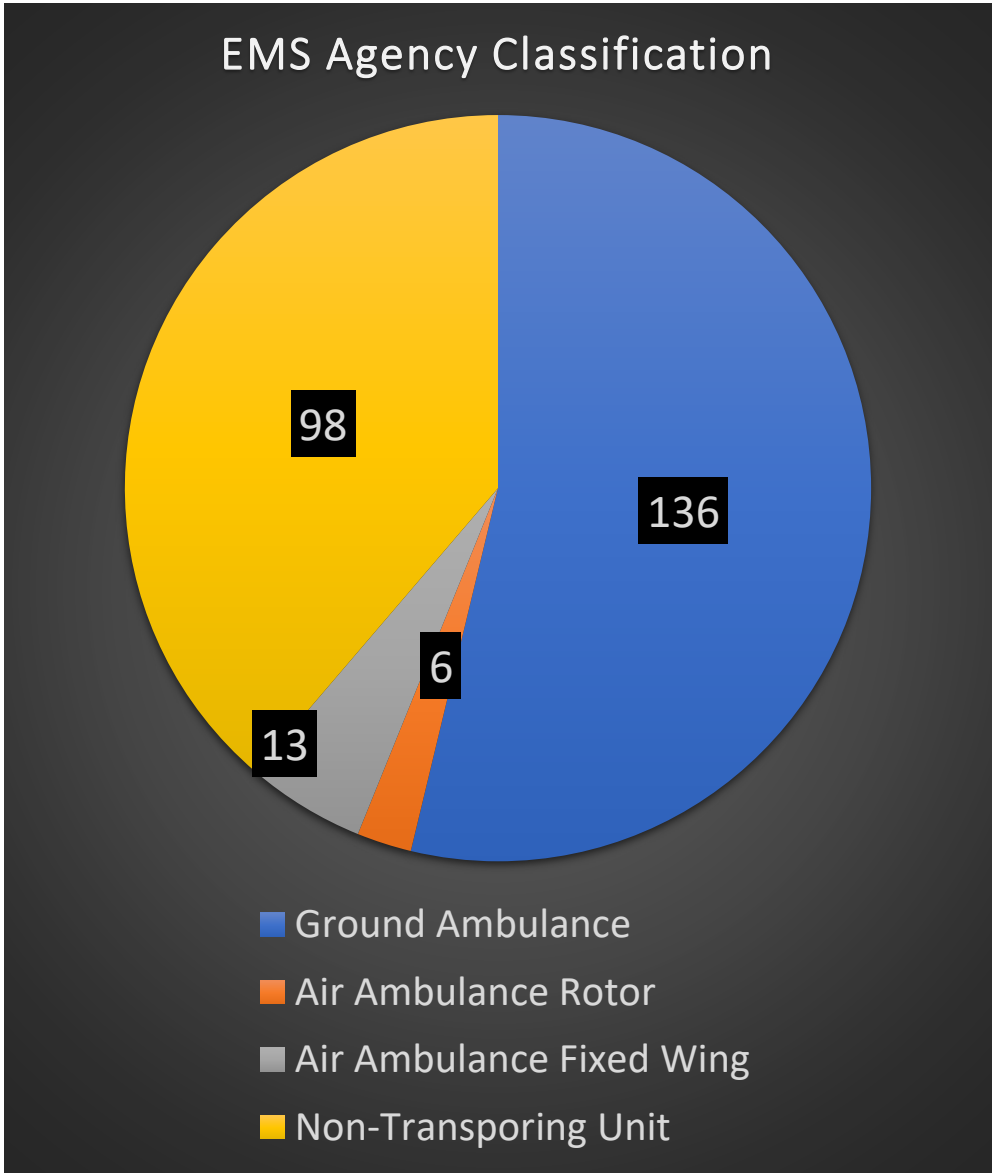
Emergency Medical Services

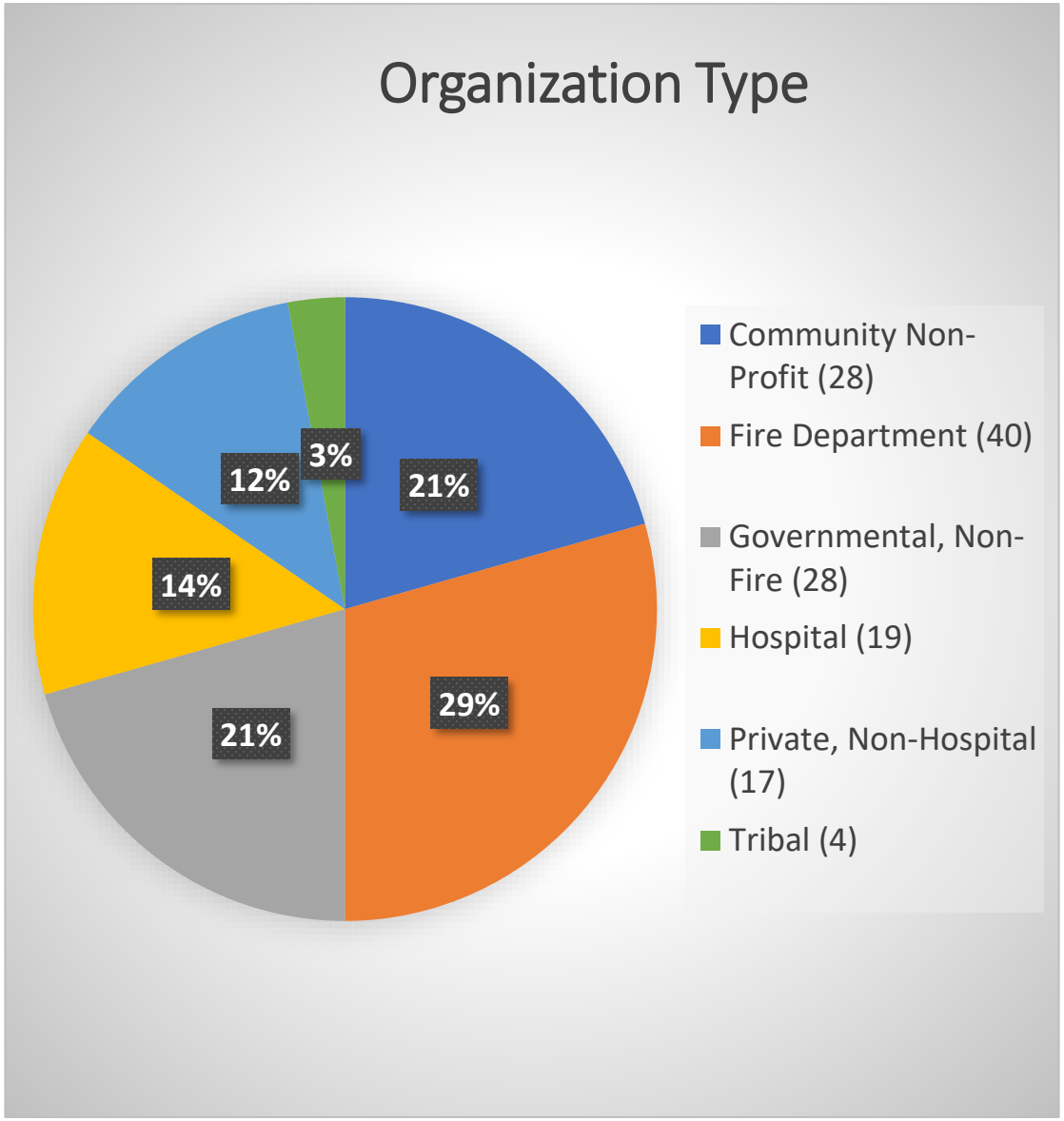
EMS Response Times in Montana

Shari Graham, NRP
EMS System Manager

Montana EMS by the Numbers

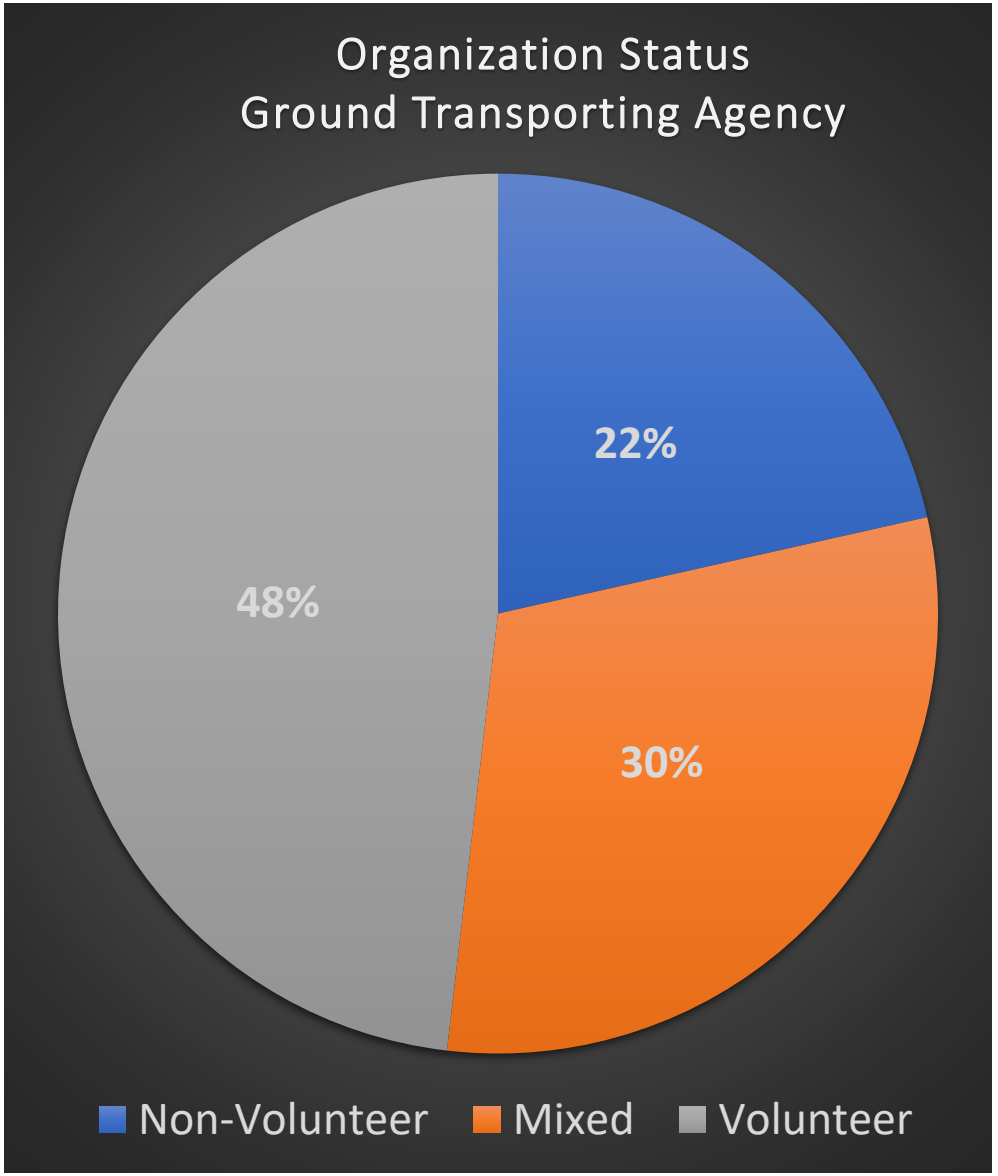


Ground Transport Agencies



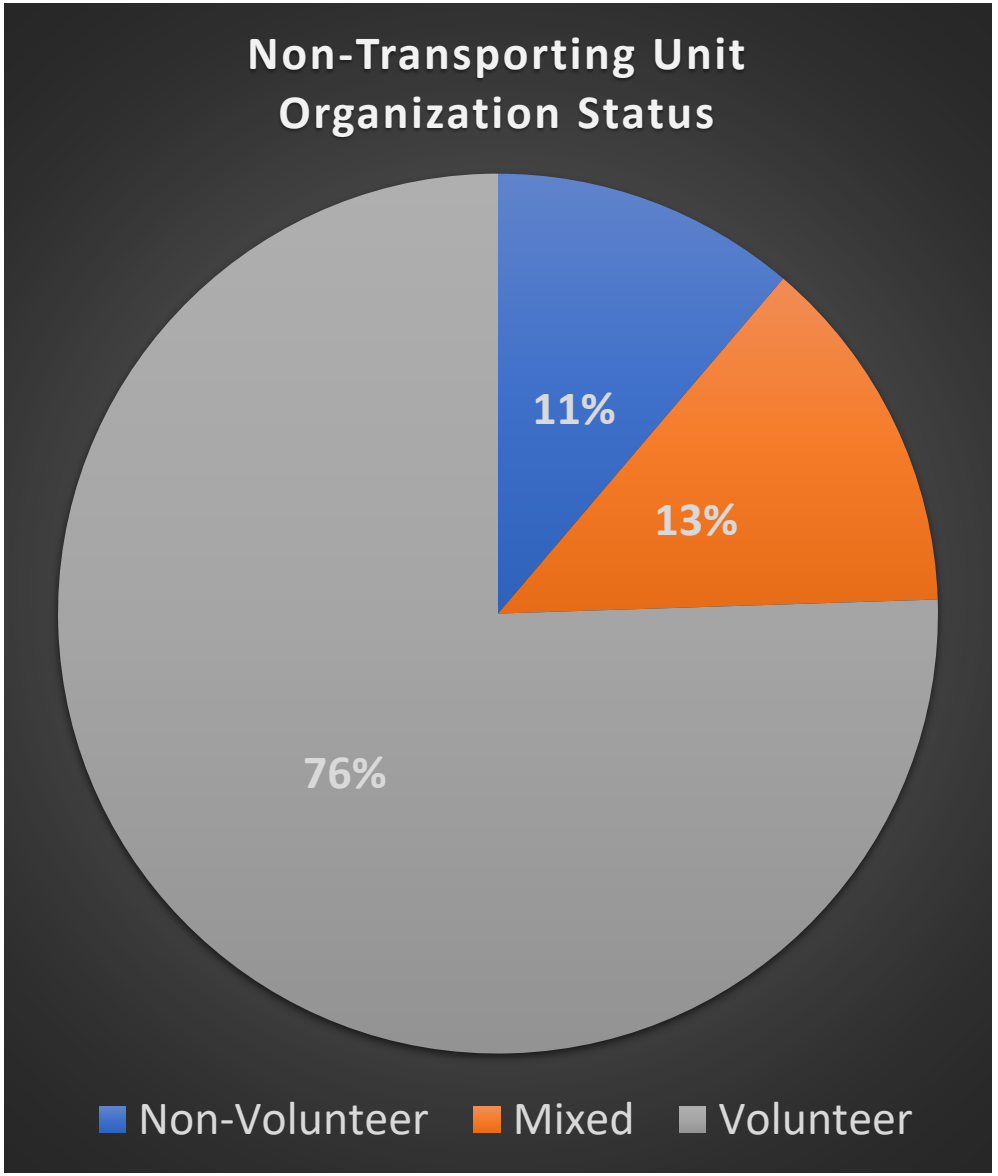
Ambulance Organization Status

78% are either partially or fully volunteer



NTU Organizational Status

89% are either partially or fully volunteer



EMS Response Times

Post-Crash Care

Key Actions

- Expand the use of and support for the National Emergency Medical Services Information System (NEMSIS).

- Improve the delivery of EMS throughout the nation in collaboration with the Federal Interagency Committee on Emergency Medical Services (FICEMS) and the National Emergency Medical Services Advisory Council (NEMSAC) by focusing on shortening ambulance on-scene response times.

Components of Response Time

- Call Taking
- Dispatch
- Chute Time
- Distance to Scene


Ambulance Desert
Cell Towers
Stacked Calls
Traffic
Dispatch
Volunteer
Staffing
Discovery
Severity
Rain
Weather
Location
Gravel Roads
Road Conditions

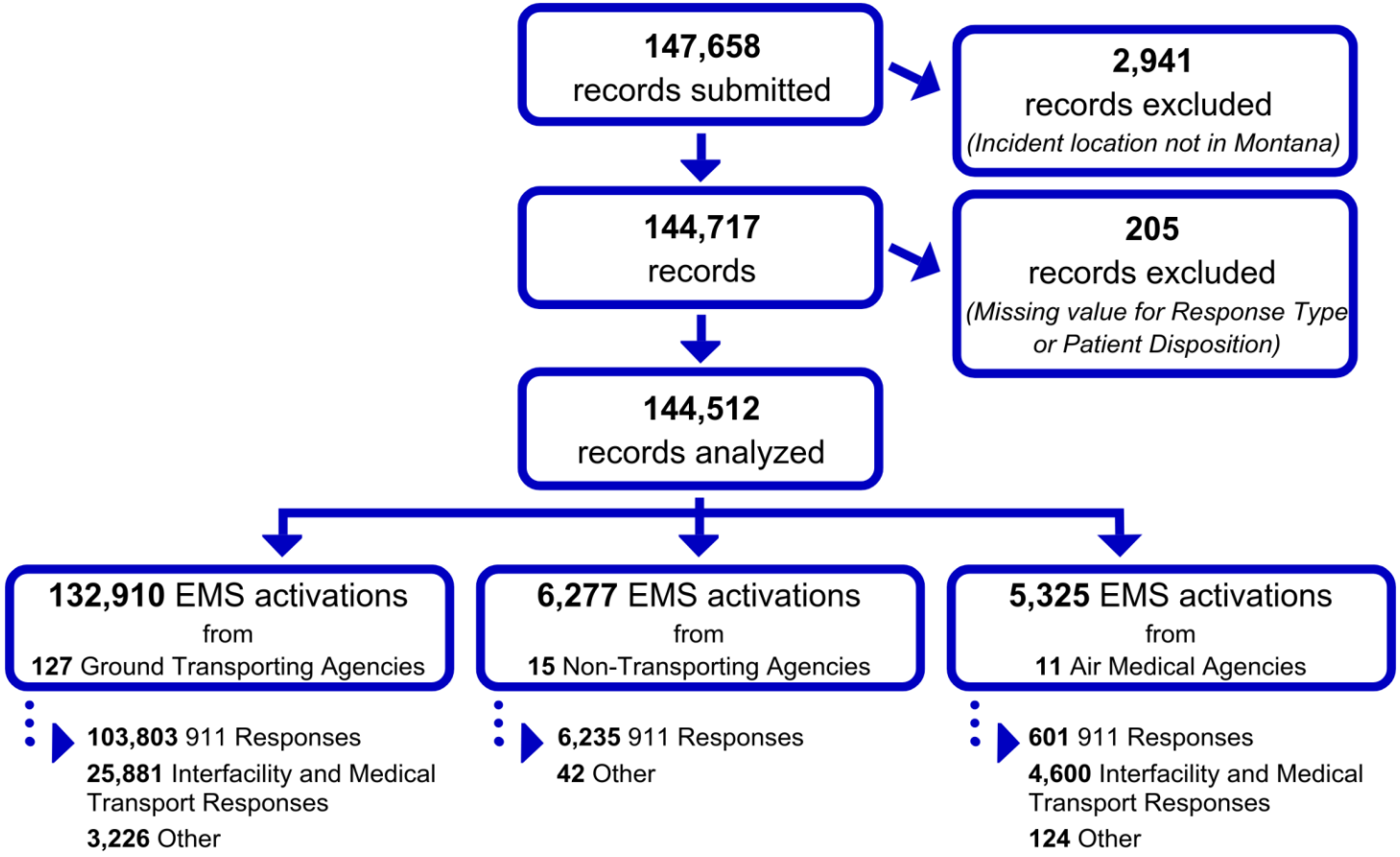
How do we measure?

NEMSIS

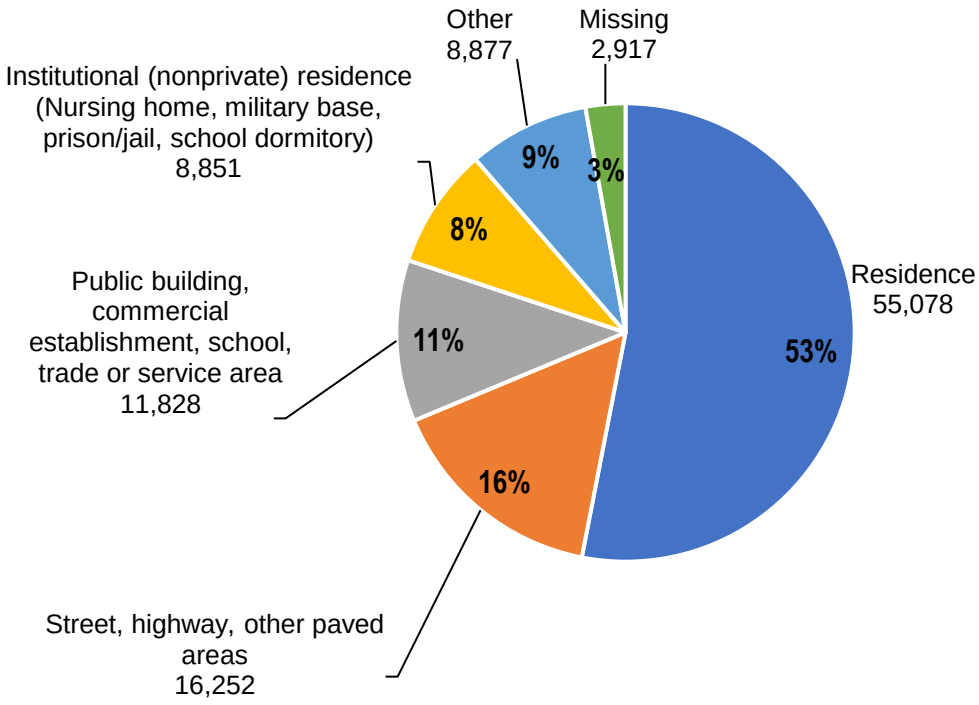
- NEMSIS – framework that provides a national standard for EMS out-of-hospital patient care reporting
- Defines data elements, values, and a standard for data exchange
- Patient care reports are created by EMS clinicians in the out-of-hospital setting and are sent to state-level data repositories
- States and territories submit data to the National EMS database
- In 2021, more than 49 million EMS activations were submitted by approximately 14,000 EMS agencies

Montana EMS Annual Report 2022

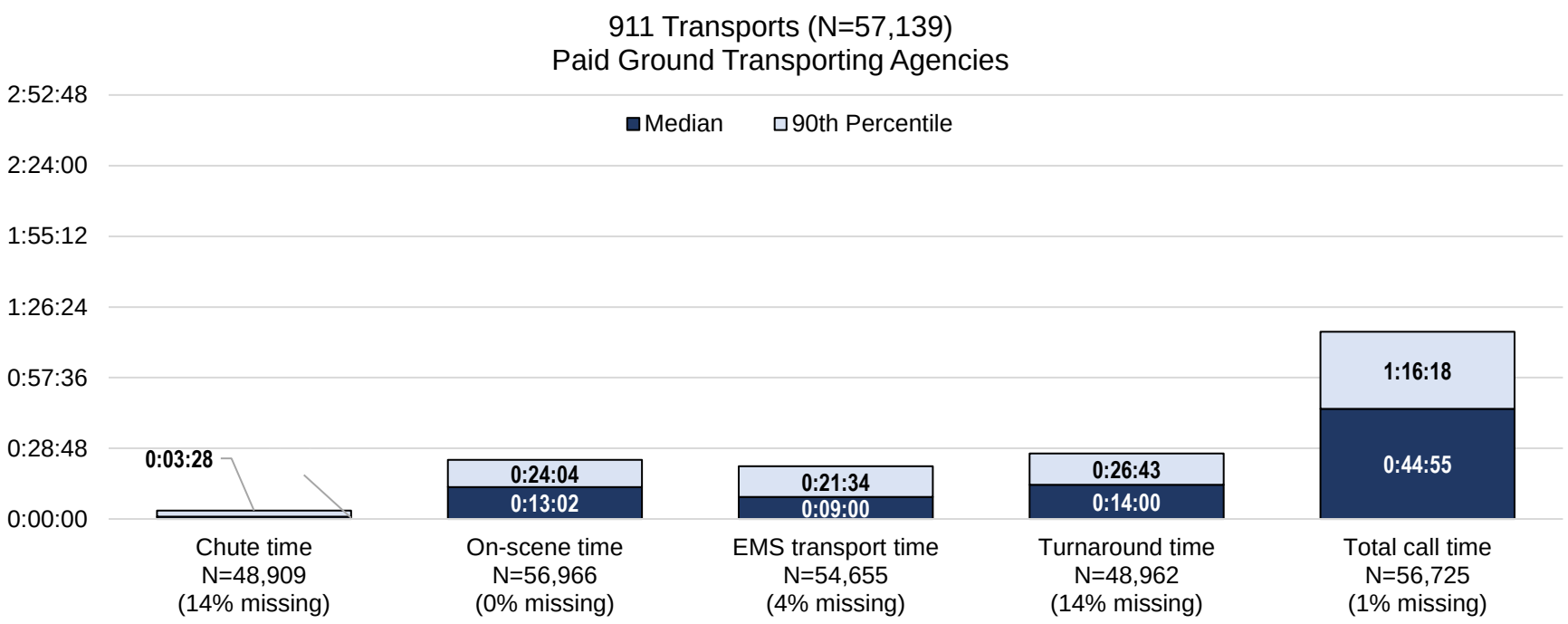
2021 Montana EMS Data



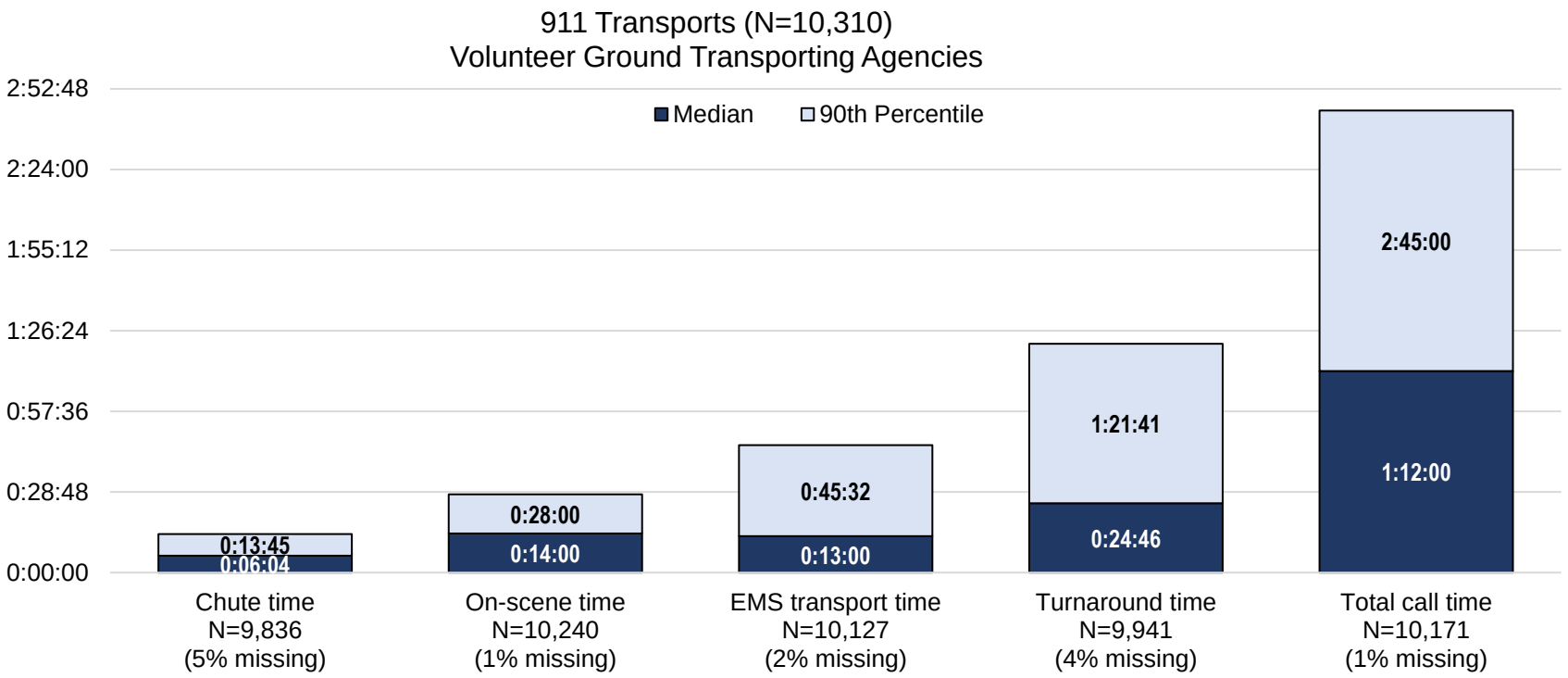
Scene Location, 911 Responses



Response Times for Paid Agencies
911 Transports



Response Time for Volunteer Agencies 911 Transports

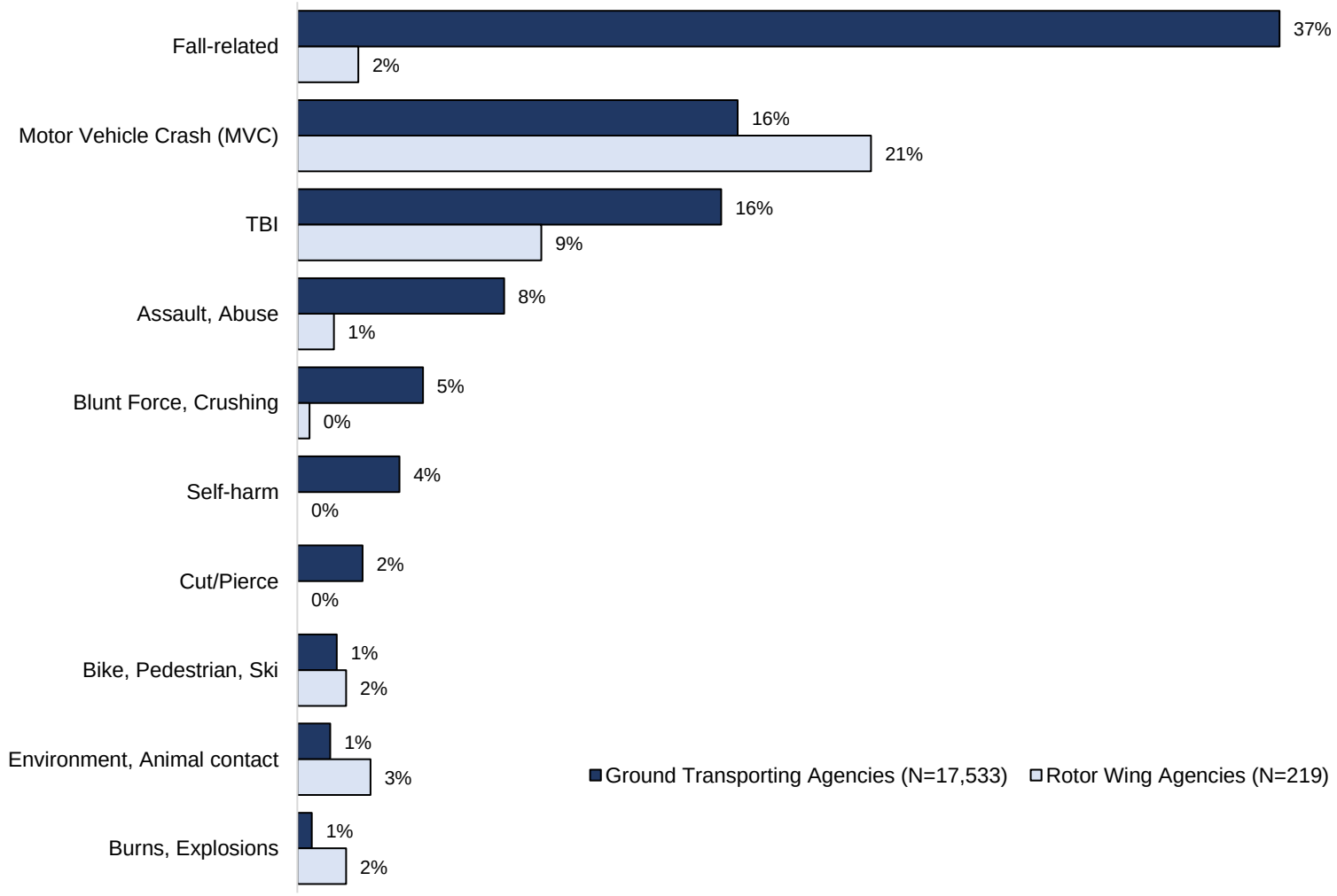


Primary Impression
All 911 Responses

All 911 Responses, Ground Transporting Agencies

#	Primary Impression Pediatrics (Age 0-17)	N	%	Primary Impression Adults (Age 18 and Over)	N	%
1	Injury/Trauma	1,291	26%	Injury/Trauma	14,239	17%
2	Neurological	486	10%	Cardiovascular/Circulatory	7,308	8%
3	Mental Health/Behavioral	486	10%	Pain	6,100	7%
4	Level of Consciousness	227	5%	Respiratory	6,058	7%
5	Alcohol, Drug, or Other Substance Exposure	219	4%	Level of Consciousness	5,905	7%
6	Pain	206	4%	Neurological	5,657	7%
7	Respiratory	195	4%	Malaise	5,497	6%
8	Observation/Exam (No Patient Complaint)	181	4%	Alcohol, Drug, or Other Substance Exposure	5,363	6%
9	Abdominal	94	2%	Mental Health/Behavioral	5,180	6%
10	Illness and Infectious Disease	68	1%	Abdominal	3,867	4%
	All Top 10	3,453	69%	All Top 10	65,174	76%
	Other	373	7%	Other	13,059	15%
	Missing Impression	1,167	23%	Missing Impression	7,920	9%
	Total (Patient Age 0-17)	4,993	100%	Total (Patient Age 18+)	86,153	100%

Top 10 Causes of Injury
Trauma-related 911 Transports



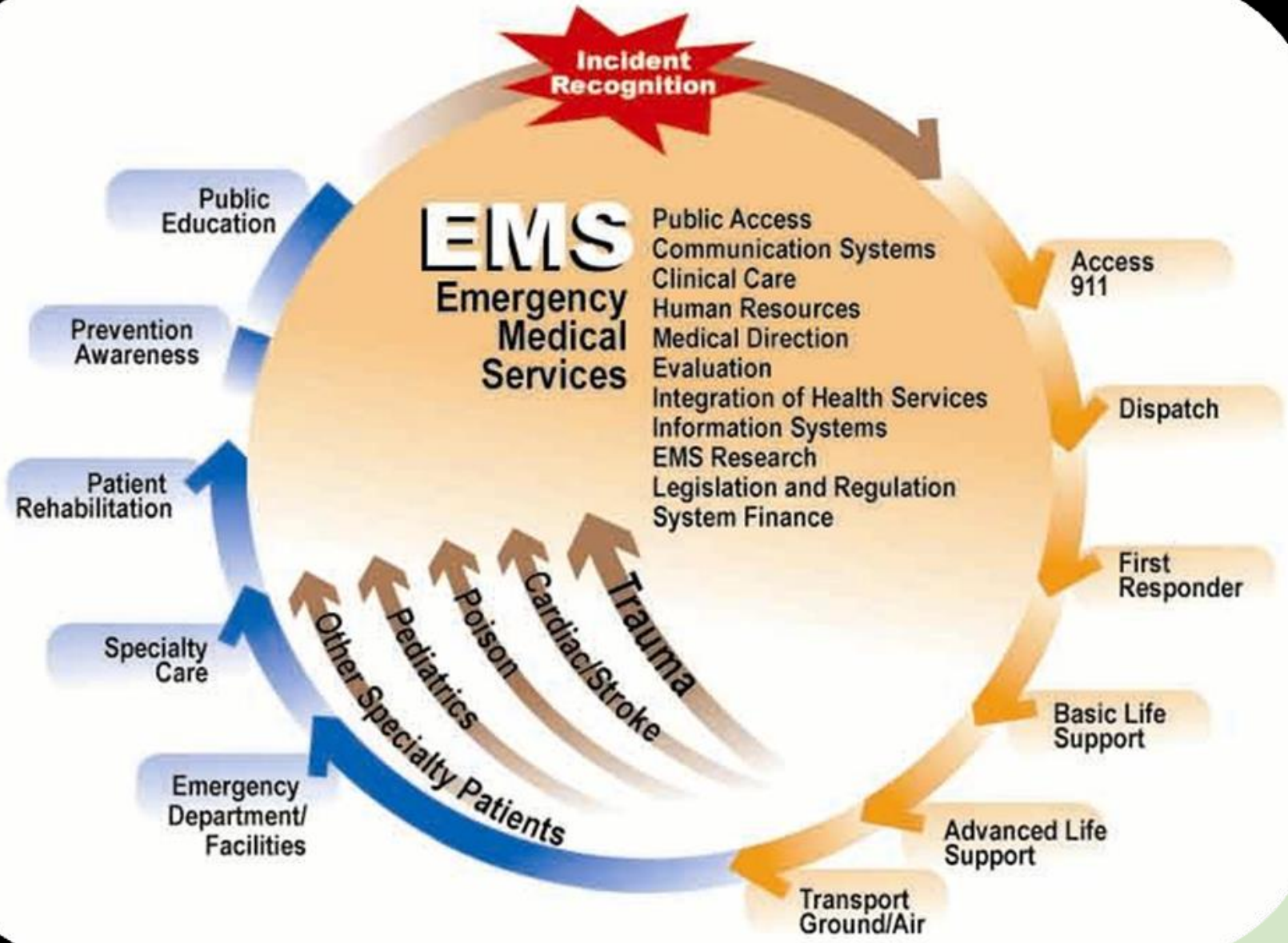
How do we improve?

Montana EMS Quality Improvement Project

- Contract Position
- Data Quality
- Quarterly QI Report
- Education

NEMSIS 3.5 Update

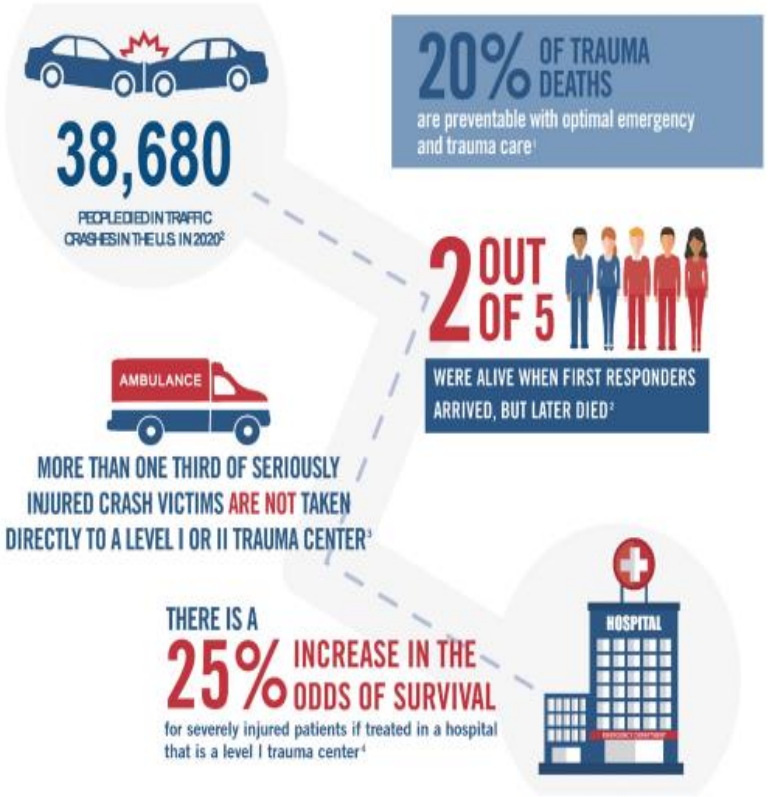
- Less Complicated
- Increased Clarity
- Better Incident Flow
- Improved Accuracy
- Universally Unique Identifier


Incident Recognition
EMS
Emergency Medical Services
Public Access
Communication Systems
Clinical Care
Human Resources
Medical Direction
Evaluation
Integration of Health Services
Information Systems
EMS Research
Legislation and Regulation
System Finance
Access 911
Dispatch
First Responder
Basic Life Support
Advanced Life Support
Transport Ground/Air
Emergency Department/ Facilities
Specialty Care
Patient Rehabilitation
Prevention Awareness
Public Education
Other Specialty Patients
Pediatrics
Poison
Cardiac/Stroke
Trauma

National Roadway Safety Strategy 2022

Safe System Approach
Post-Crash Care

Access to emergency and trauma care is critical to the survivability of crashes.[35]



Sources: (1) National Academies of Sciences, Engineering and Medicine. A National Trauma Care System: Integrating Military and Civilian Trauma Systems to Achieve Zero Preventable Deaths After Injury. (2) Early estimate, NHTSA Fatality Analysis Reporting System (FARS). (3) NHTSA National Automotive Sampling System-Crashworthiness Data System (NASS-CDS). It is not known the percentage who were later transferred to a level I or II trauma center. (4) Mackenzie et al, 2006. This study compared level I trauma centers to non-trauma centers.