EMS In Motion

Connecting Medical Professionals with First Responders

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Introductions

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Southwest MN EMS

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The Critical Need to Effectuate Care in the Golden Hour

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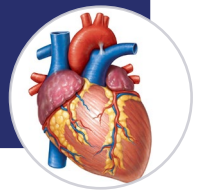
Rural Health Inequities:
Data Snapshot

Trauma

- **#1 case of death** under 46
- **72%** of rural trauma deaths occur on scene (vs. 41% urban)
- **40% higher** rate of occupational/agricultural injuries in rural states
- Key Delays: **Transport time** directly increases mortality (Nasser, 2020)

Stroke and Heart Disease

- Stroke is **1.45x more prevalent** in rural areas (NHIS, 1996)
- **Higher AMI mortality** at 30 & 90 days in rural hospitals (Loccoh, 2022)
- AHA (2021): **Telemedicine is** critical for STEMI care in rural regions



Behavioral Health

- **Suicide risk is 2x higher** in rural communities (CDC, 2021)
- Narcotics death rates **higher** in rural subpopulations
- **85%+** live in mental health professional shortage areas
- Barriers: **Stigma, distance, & privacy concerns**

Barriers to Care

- EMS often **volunteer-based, BLS trained**
- **Delayed response & transport times**, worsened by weather, distance, & hospital scarcity
- **No added resources** during seasonal tourist spikes (e.g., Cook County: 1.5M tourists, pop. 5,600)

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How Did We Get Here?

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Safe Streets and Roads for All (SS4A Grant Program)

NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

- Southwest Minnesota EMS Corp. awarded $9.9 million in Federal Funding
- Arrowhead EMS Association awarded $5 million in Federal Funding

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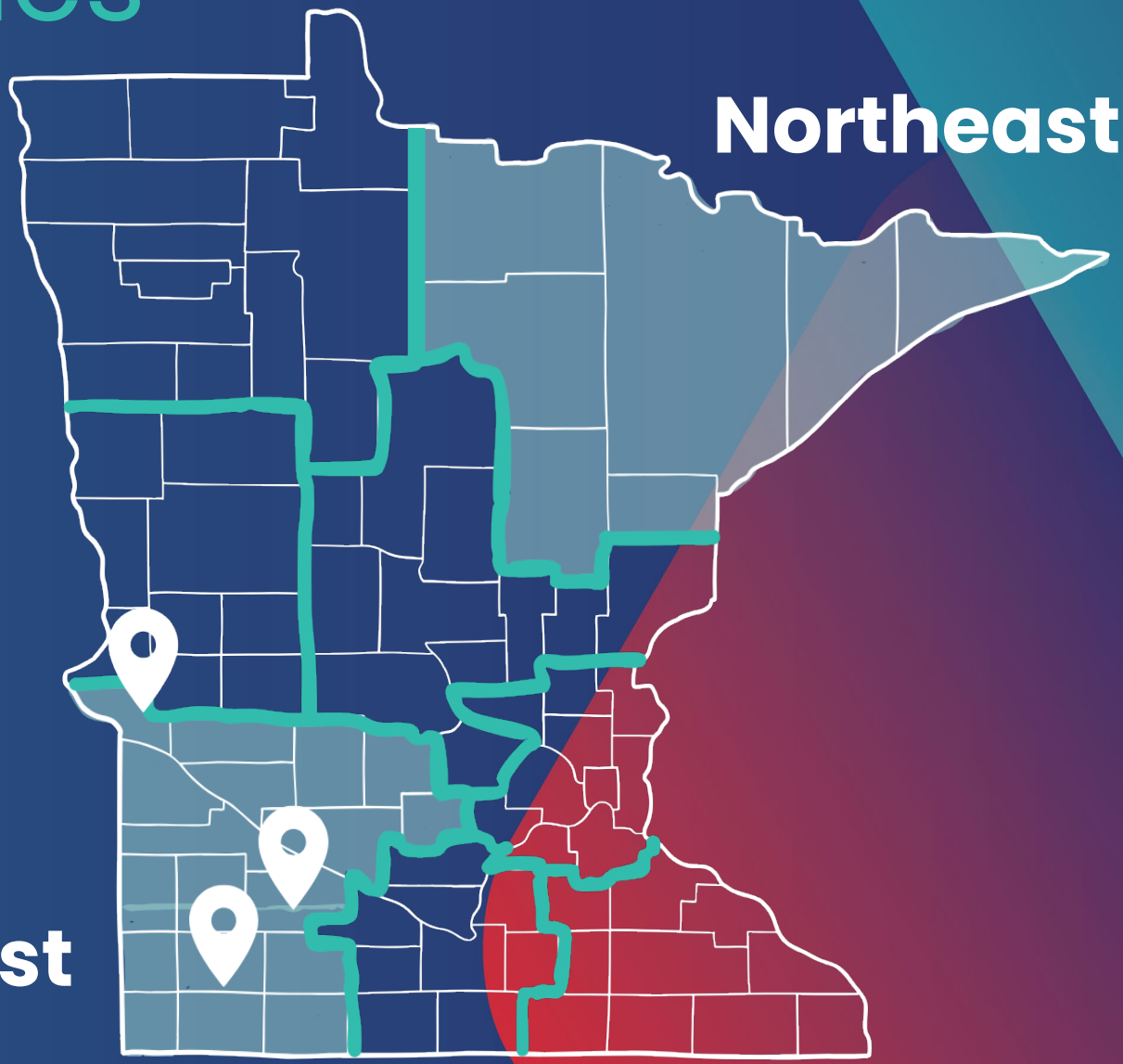
MN EMS Agencies

- 2 Minnesota EMS Regions
- 3 Live Sites



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How it Works

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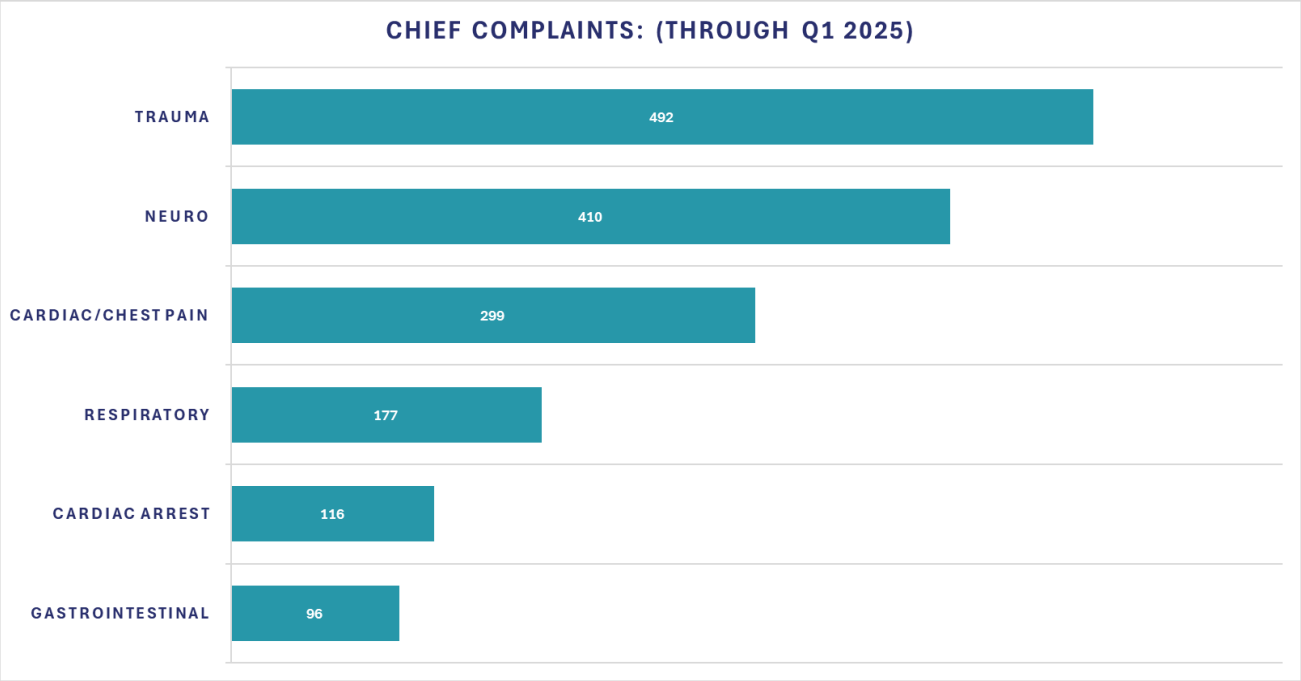
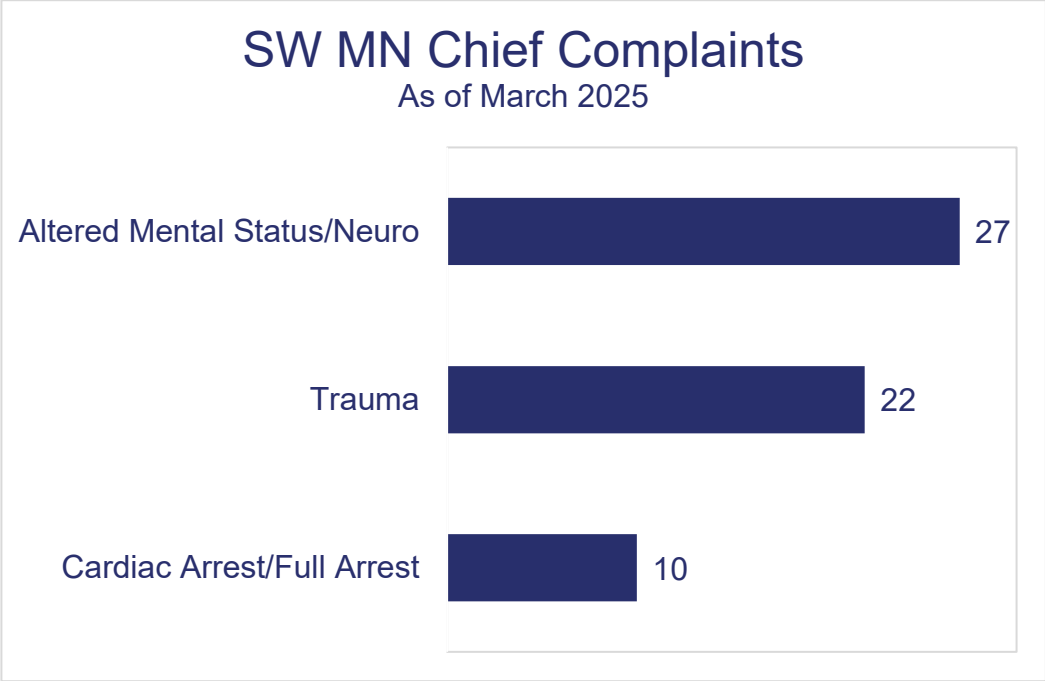
Avel Partnership Outcomes





2300+ Encounters for all Avel EMS sites

110+ Encounters in Minnesota

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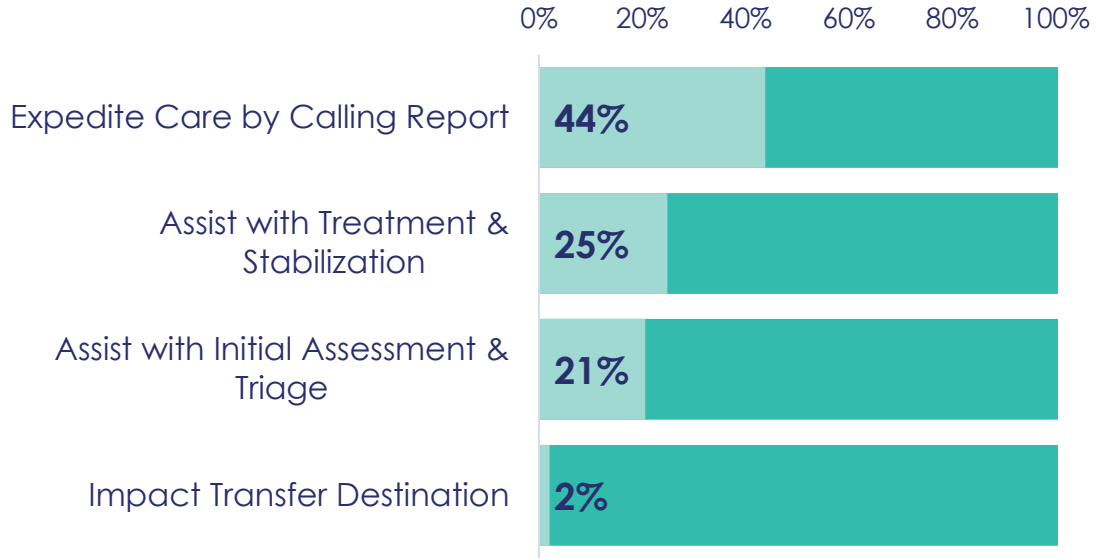
Avel Partnership Outcomes

% Technical Success	95%
Avg Exp w/eCare Staff	4.7
Avg. Value of Service	4.6

Avel EMS Clinical Impact



Agency Feedback Survey (62% completion)

- 80% = Helps with Recruitment
- 4.53 of 5 = Improves the quality of care in my community

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Clinical Measures

Patient Outcomes

- **30 Day Mortality**
- **Emergency Department Mortality**
- **Hospital Mortality**
- **Hospital Length of Stay**

Provider-Related Outcomes

- Recruitment and Retention
- Satisfaction surveys
  - After Call
  - Every 6 Months
- **Exploratory Safety Measures**
  - **Siren Usage**
  - **Seat Belt Usage**

Medical Interventions Used

- **Airway**
- **Tourniquet**
- **Pelvic Binder**
- Opioid Antagonist Use
- Epinephrine Use

Timing Related to Critical Conditions

- **Number of Transfers**
- **Number of Stops**
- **EMSRB Clinical Advisory Performance Measures**
- **EMS arrival to Definitive Care**
- **Type of Transport (Ground vs Air)**

MI

- Time to EKG
- Total Time from EMS Call to Balloon Time
  - Door to Balloon Time

Trauma

- **Time to Trauma Center (Level 3, Level 2, Level 1)**

Altered Mental Status

- Time to Glucose Measurement
- Opioid Antagonist Administration

Stroke

- EMS Arrival to Lytic Therapy

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Empowering EMS Providers

Enabling Focused Patient Care

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Electrocution Response

Questions?

Murray County

Scotland
911

LEOLA

CENTERVILLE
AMBULANCE

GREGORY
COMMUNITY
AMBULANCE
CALL 911
RED