



Emergency Department Cardiac-Related Deaths for Medicare Beneficiaries: A Focused Review

July 2026

Housekeeping

- Reminder, this program is being recorded. All lines have been muted to protect the integrity of the recording.
- After the webinar, participants will receive an email containing links to access the PowerPoint presentation slides as well as the recorded webinar.
- If you are having technical issues, please type a message in the Q&A tool.
- At the end of the presentation, we will be asking for feedback through the Q&A tool. We would appreciate your comments.
- We have resources for providers and stakeholders, including two newsletters: one for providers/stakeholders and one for beneficiaries. We also have a podcast with educational information and a YouTube channel, which includes instructions on how to fill out notices. For more information about our resources, visit our website at www.acentraqio.com.



Presenter



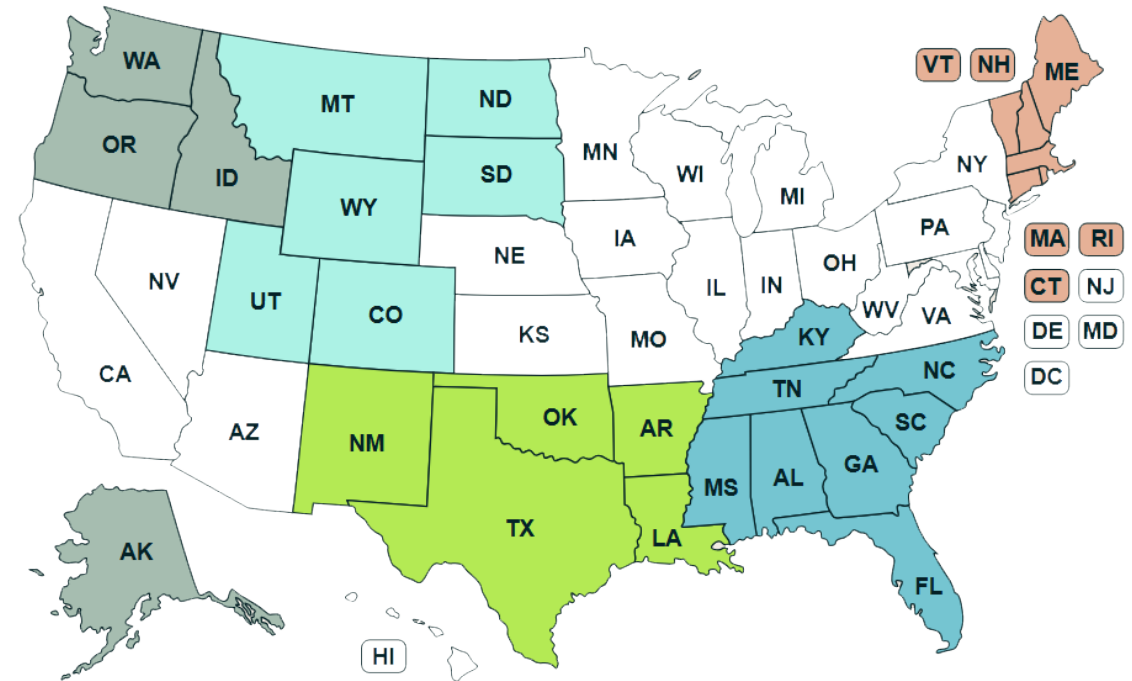
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Appeals Medical Director

Acentra Health, BFCC-QIO

Acentra Health Overview

- Acentra Health is the Beneficiary and Family Centered Care Quality Improvement Organization (BFCC-QIO) for 29 states.
- Through a contract with the Centers for Medicare & Medicaid Services (CMS), BFCC-QIOs:
 - Review hospital discharge and skilled service termination appeals, as well as quality of care (QOC) complaints
 - Help ensure Medicare patients receive fair, timely decisions regarding their appeals
 - Use Immediate Advocacy to help people quickly resolve a problem about medical care or services



Background

- Cardiovascular emergencies remain among the most time-sensitive and fatal presentations in emergency departments (EDs), particularly for Medicare beneficiaries (patients) with complex comorbidities and higher rates of delayed or atypical presentation.
- Despite advances in emergency response systems, significant variation in patient outcomes persists, often driven by differences in in-hospital processes, diagnostic timeliness, and care coordination.
- National evidence demonstrates that lapses in QOC, including diagnostic delays, missed escalation opportunities, and workflow inefficiencies, are strongly correlated with increased mortality in cardiac-related ED encounters.

Cardiovascular-Related Emergency Department Deaths

National Emergency Department Sample Analysis 2016 – 2020

- 1.4 million patients over the age of 18 years with a cardiac arrest diagnosis
- Annual mean of 270,539 deaths per year
- Annual mean in 2020 was 331,906 deaths
- ED cardiac arrest data showed approximately half expired in the ED (52.6%)
- Of those admitted, half of these patients expired in the hospital (combined mortality from ED and in hospital 71.9 - 75.4%)

The American Heart Association (AHA)

- Approximately 250,000/year out-of-hospital cardiac arrests
- Approximately 70% occur in the home
- Cardiac arrest survival approximately 10%
- Emergency Cardiovascular Care 2030 Impact Goals - target 20%
- Survival to hospital discharge after emergency medical services - treated out-of-hospital cardiac arrest was 9.3% in the 2022 CARES registry (Cardiac Arrest Registry to Enhance Survival)

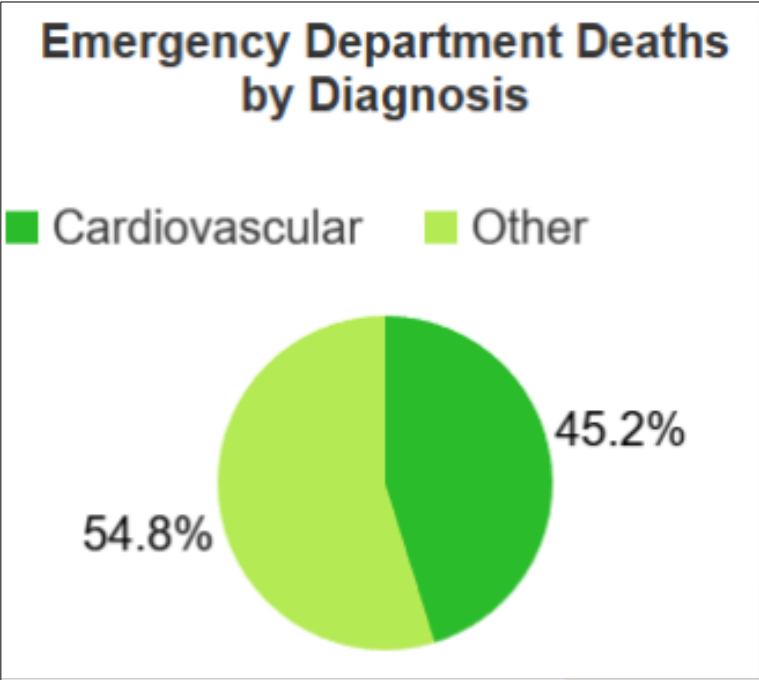
CARES (Cardiac Arrest Registry to Enhance Survival) - 2024

- 42.5% of patients received bystander cardiopulmonary resuscitation (CPR)
- 25.3% of patients survived hospital admission
- 13.9% of patients who arrested in public had a bystander-applied automated external defibrillator (AED)
- 10.5% of patients survived to hospital discharge
- 8.3% of discharged patients had a positive neurological outcome
- 34.9% of admitted patients received hypothermia care

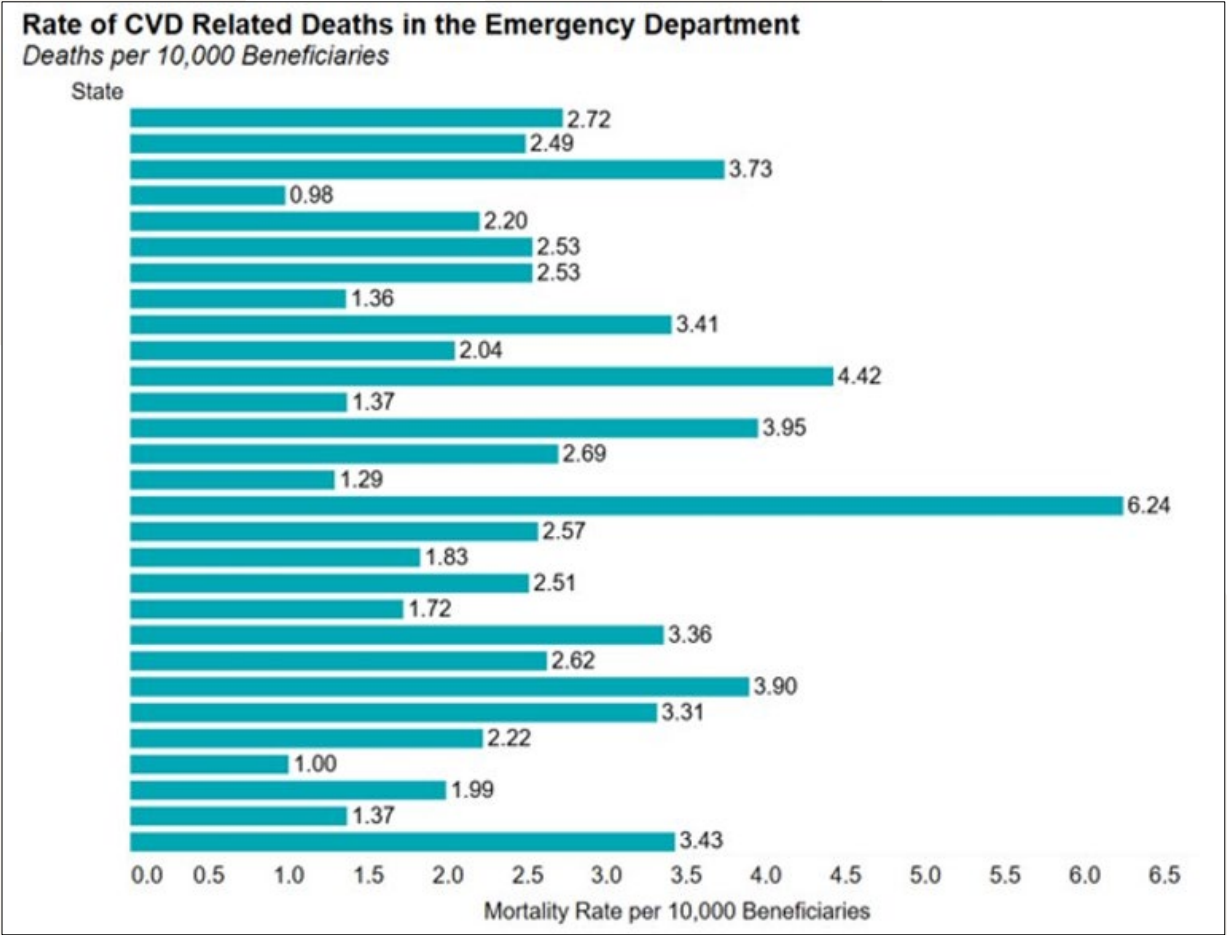


2024 Data Trends

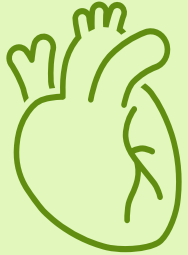
2024 Medicare Beneficiary Emergency Department Mortality by Diagnosis



Rate of 2024 Medicare Beneficiary Cardiovascular Disease (CVD)-Related Deaths in the Emergency Department



Focused Review Objectives



Identify QOC issues regarding clinical management concerns in cardiovascular-related deaths in the ED



Identify other potential contributors to cardiovascular-related deaths in the ED, such as geographic location and access to emergency response systems

Key Finding: Pre-hospital Care

Care concerns among patients who arrived by Basic Life Support (BLS) ambulance

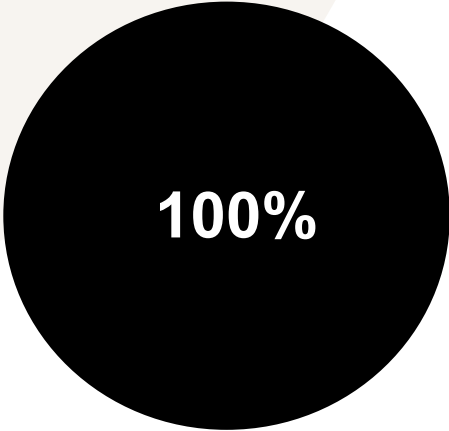


Presenting Concerns
Patient presented mottled, hypotensive, and in respiratory distress. The ambulance that responded to the call was BLS and unable to address the hypotension. No treatments or electrocardiogram (ECG) were performed, and no intravenous (IV) access obtained. EMS to Hospital Time: 7 minutes for arrival, 14 minutes on scene, and 4 minutes transport for a total of 25 minutes.
45-year-old patient with witnessed cardiac arrest. BLS unit responded. No attempt to obtain IV, intraosseous (IO), or intubation. In addition, no medications were given, including Narcan. Transport time: Not found, run sheet not provided.
Presented as cardiopulmonary resuscitation (CPR) in progress. BLS unit responded. No advanced cardiovascular life support (ACLS) measures could be performed. Patient transferred to an advanced life support (ALS) unit. Emergency medical services (EMS) to Hospital Time: 12 minutes for arrival, 11 minutes on scene, and 12 minutes for transport, for a total of 35 minutes.
95-year-old presenting with nausea, vomiting, and abdominal pain. Vital signs stable. Transport time: Not found, run sheet not provided.



Key Finding: Pre-hospital Care (Continued)

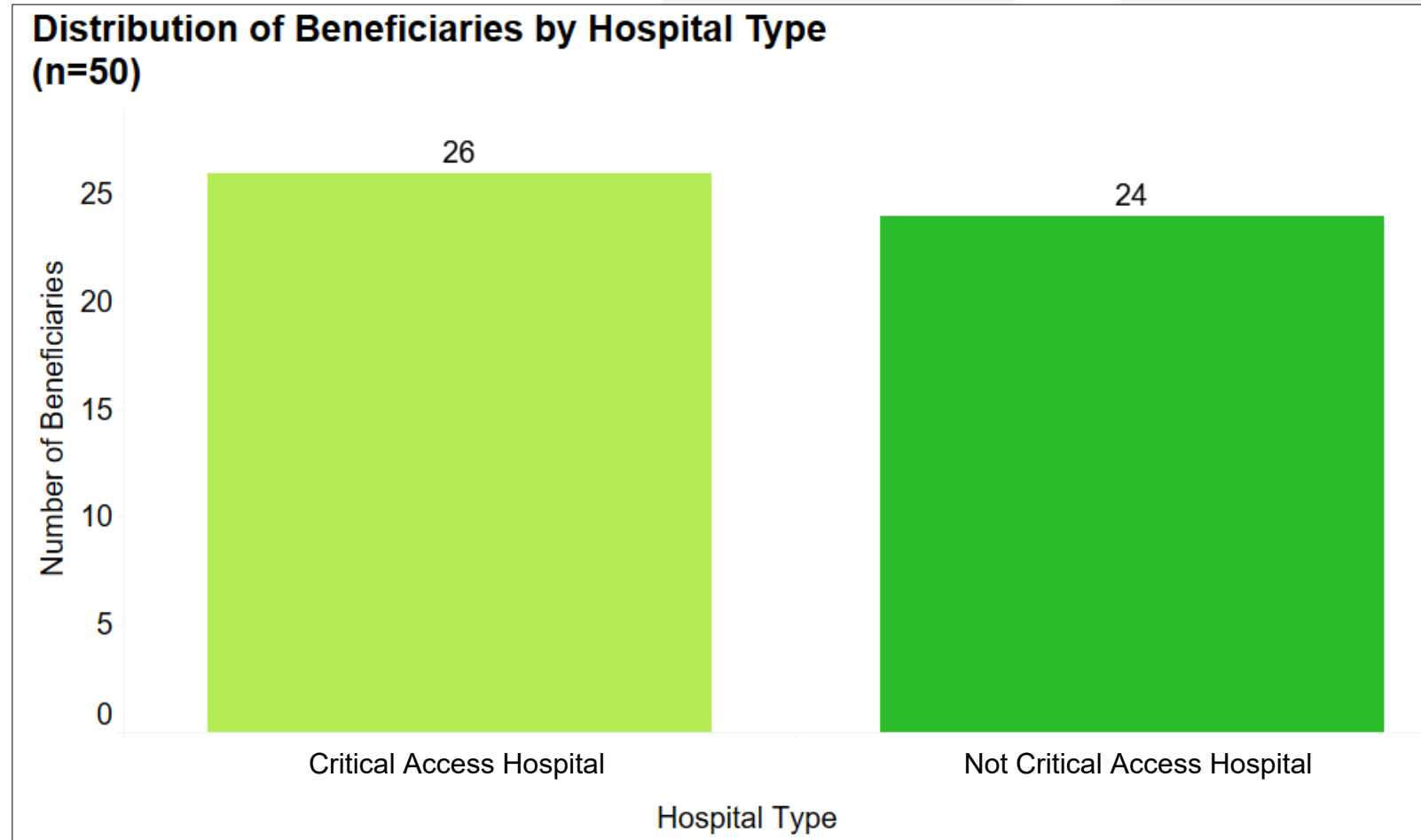
Care concerns among patients who arrived by BLS ambulance



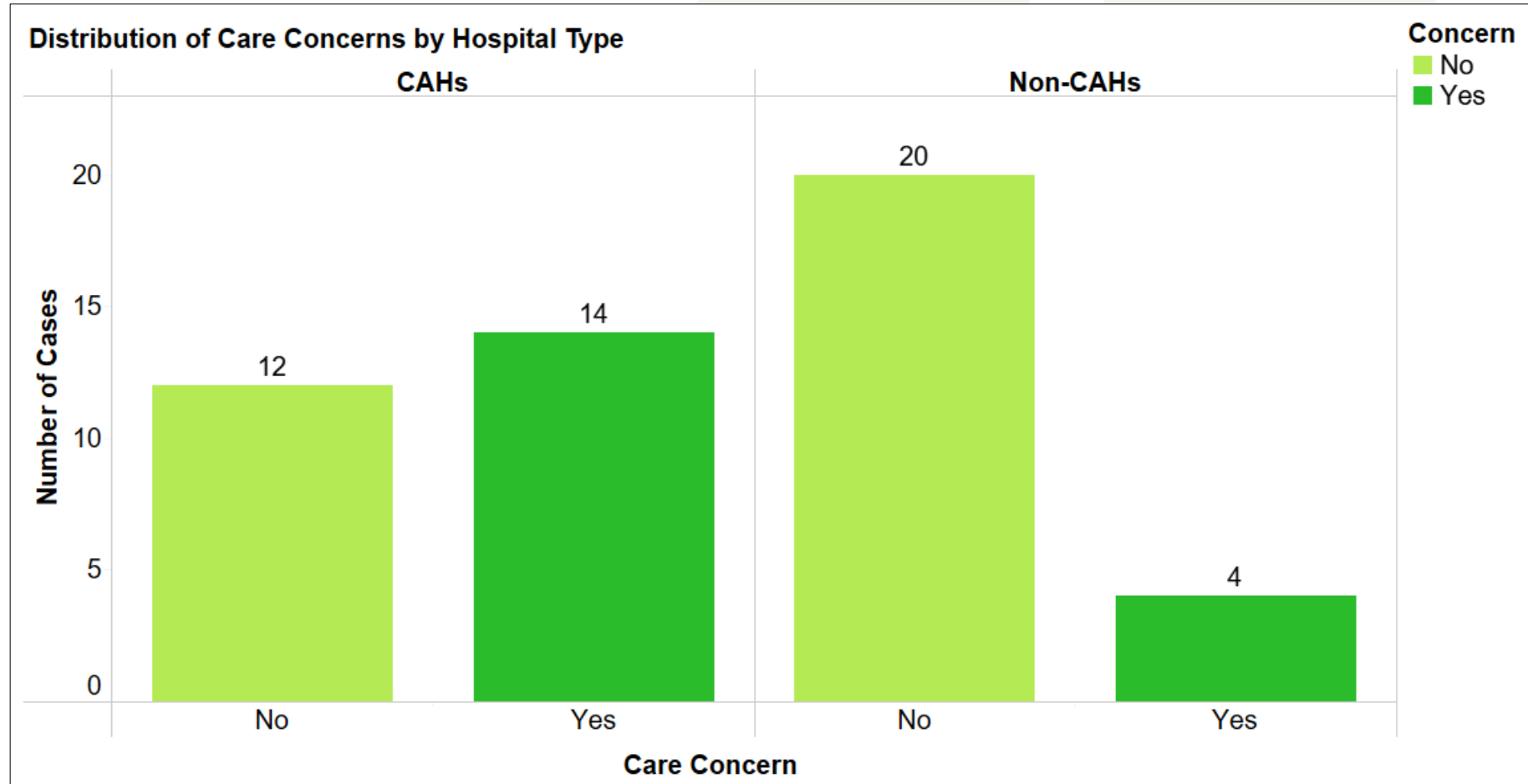
100%

All pre-hospital care concerns identified among BLS ambulance arrivals occurred at critical access hospitals (CAH).

Hospital Types



Key Finding: Hospital Systems



**Seven hospital systems were included in the study.
CAHs accounted for 77.8% (14 of 18) of identified care concerns.**

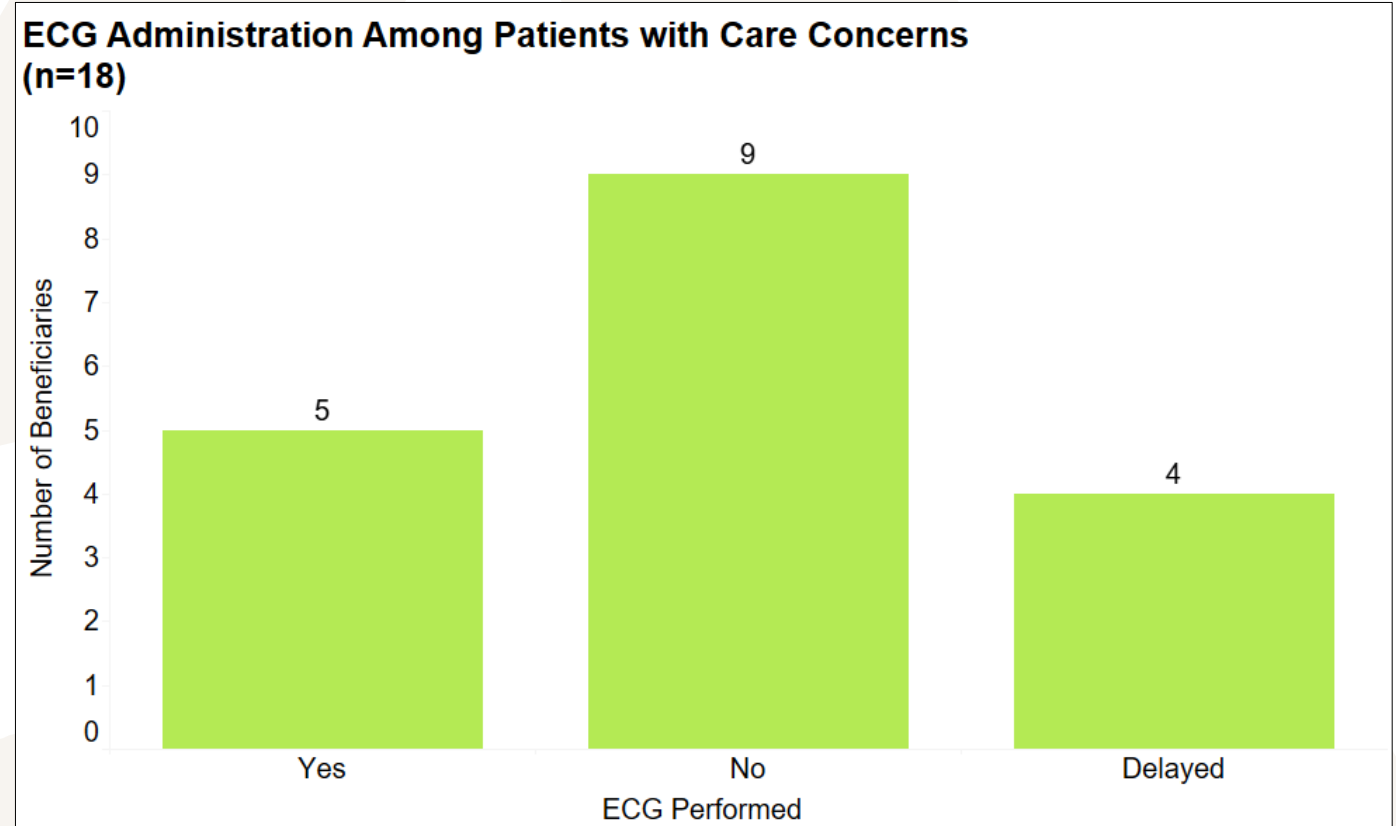


Key Finding: ECG Acquisition (All Hospitals)

The bar chart shows electrocardiogram (ECG) acquisition among the 18 beneficiaries with care concerns:

- **5 (28%)** received a timely ECG
- **9 (50%)** did **not** receive an ECG
- **4 (22%)** received a **delayed** ECG

Overall, **72% (13 of 18)** did not receive ECG care consistent with standards (either not performed or delayed), indicating a significant care gap.



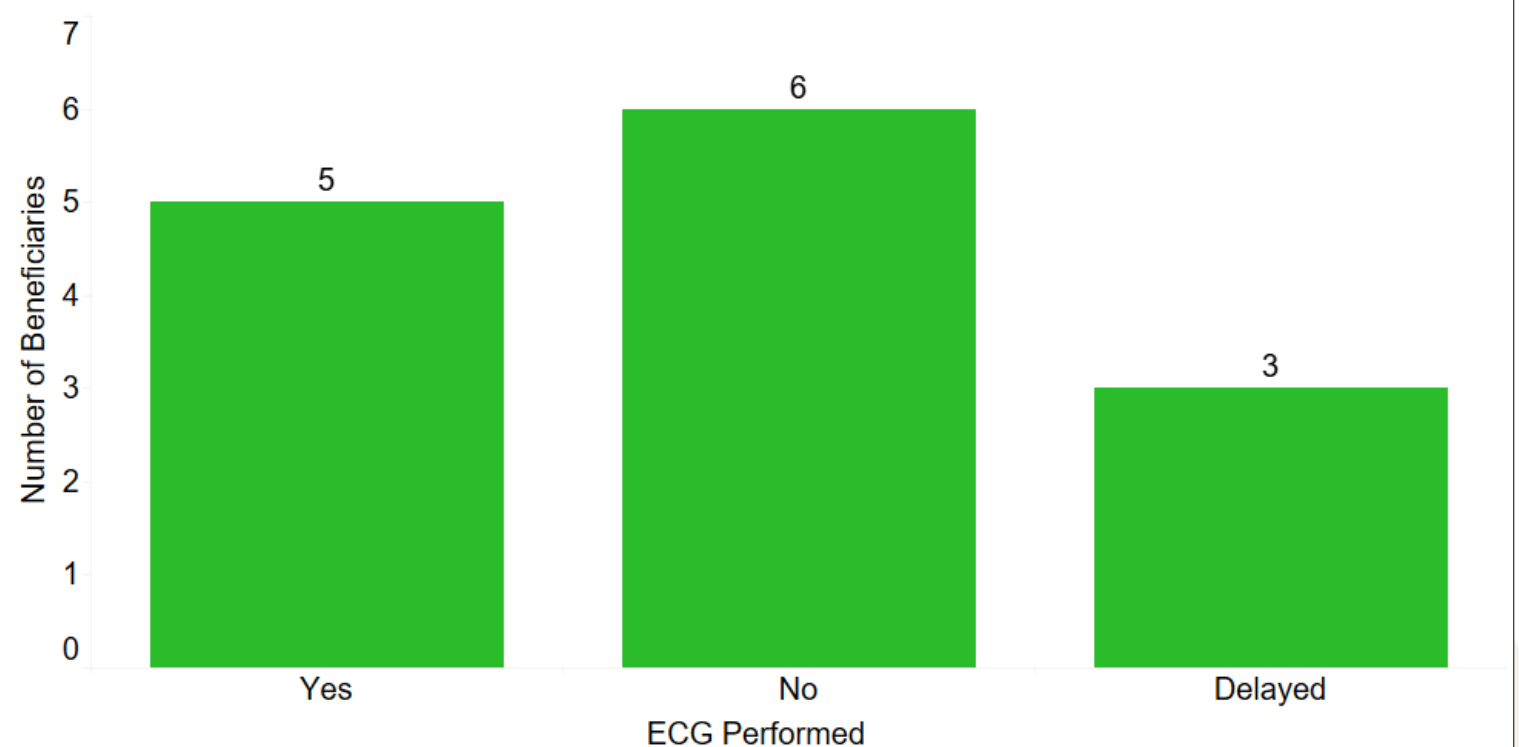
Key Finding: ECG Acquisition (CAHs)

The bar chart shows ECG acquisition among the 14 beneficiaries with care concerns:

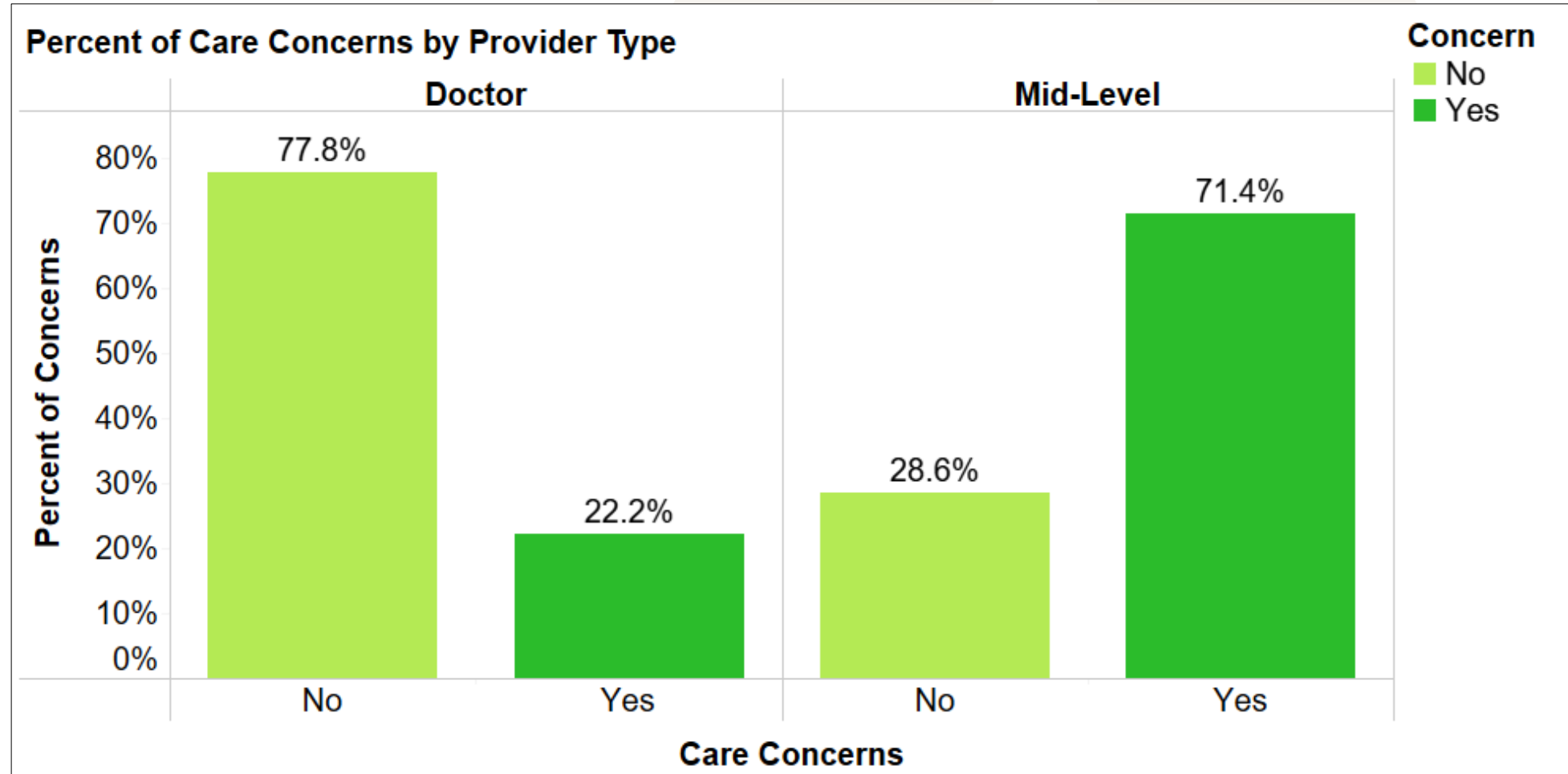
- **5 (28%)** received a timely ECG
- **6 (43%)** did **not** receive an ECG
- **3 (21%)** received a **delayed** ECG

Among CAHs, 64% (**9 of 14**) did not receive ECG care consistent with standards (either not performed or delayed), indicating a significant care gap.

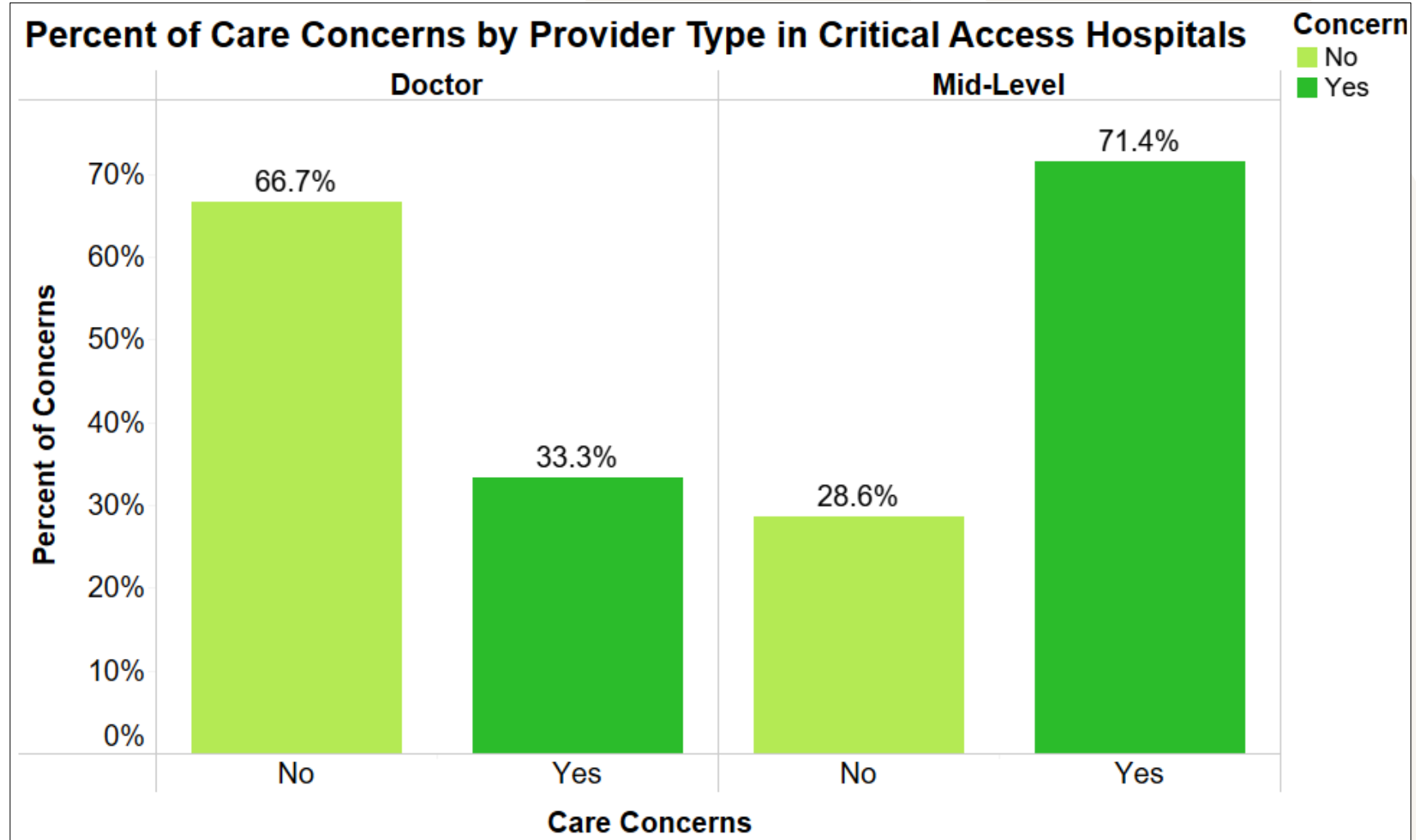
ECG Administration Among Patients with Care Concerns in Critical Access Hospitals (n=14)



Key Finding: Provider Type (All Hospitals)



Key Finding: Provider Type (CAHs)



American Heart Association



Bystander CPR

- Increase lay rescuer CPR rates to greater than 50%
- In 2024, 41.7% received bystander CPR
- Improve public awareness and EMS response speed



Early Defibrillation

- Ensure AED use before EMS arrival is common and accessible
- 12.6% with applied AED in 2024
- Expand CPR and AED training
- Make AEDs more available, affordable, and easy to use



Neurologically intact survival

- Improve survival with preserved brain function
- In 2024, 10% survival

American Heart Association (Continued)



In-Hospital Programs

- Implement champions for debriefing and review of arrest events
- Combines adult, pediatric, in-hospital, and out-of-hospital care into a single six-link system for better coordination



Data and Reporting

- Mandate standardized cardiac arrest outcome reporting nationwide



Post Cardiac Arrest Care

- Advances in targeted temperature management, neurological monitoring, and rehabilitation

Study Recommendations



Monitor the utilization of standardized ED Readiness and Cardiac Care Protocols



Strengthen provider training, oversight, and workforce capacity



Improve diagnostic efficiency and documentation accuracy

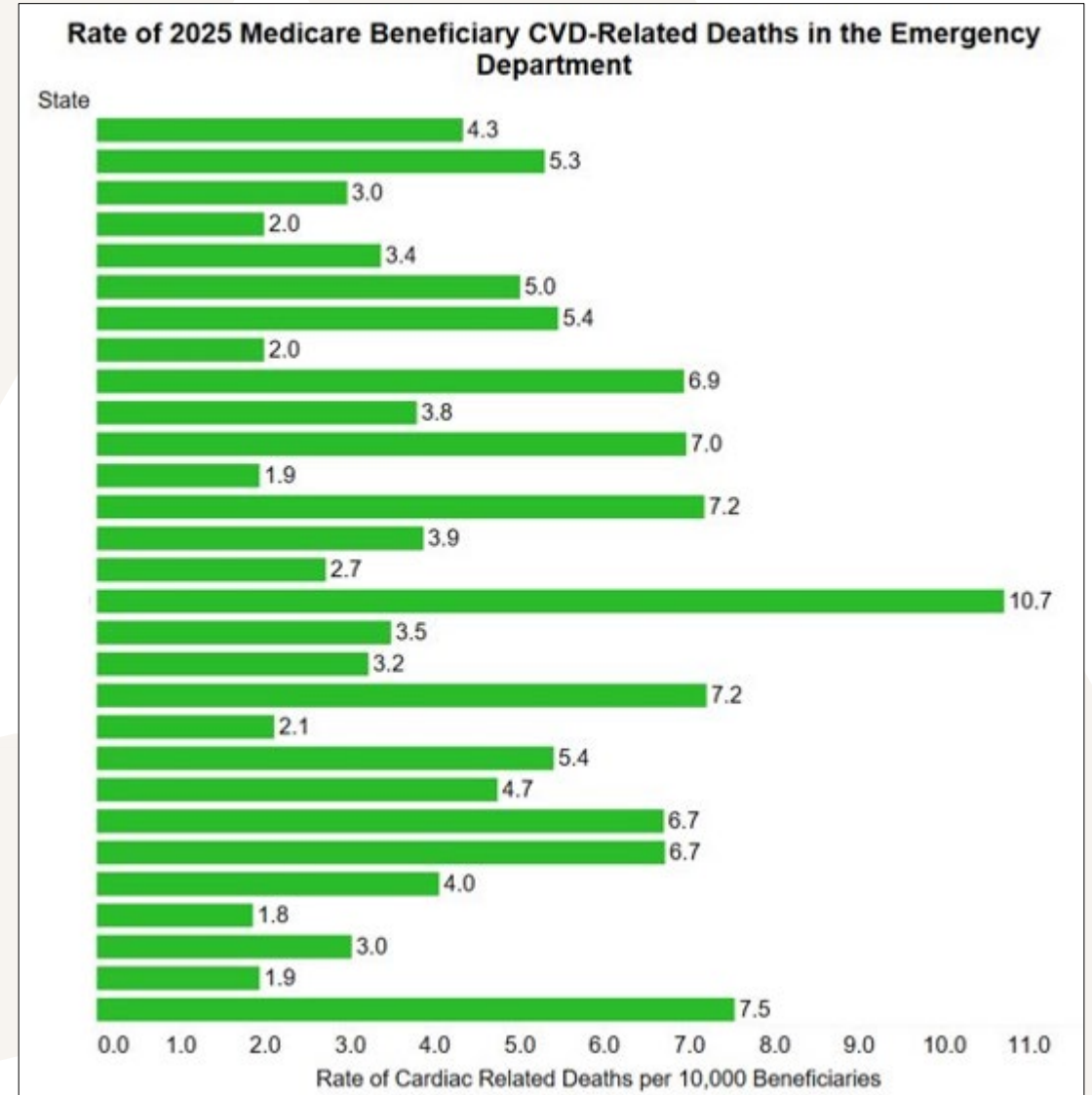
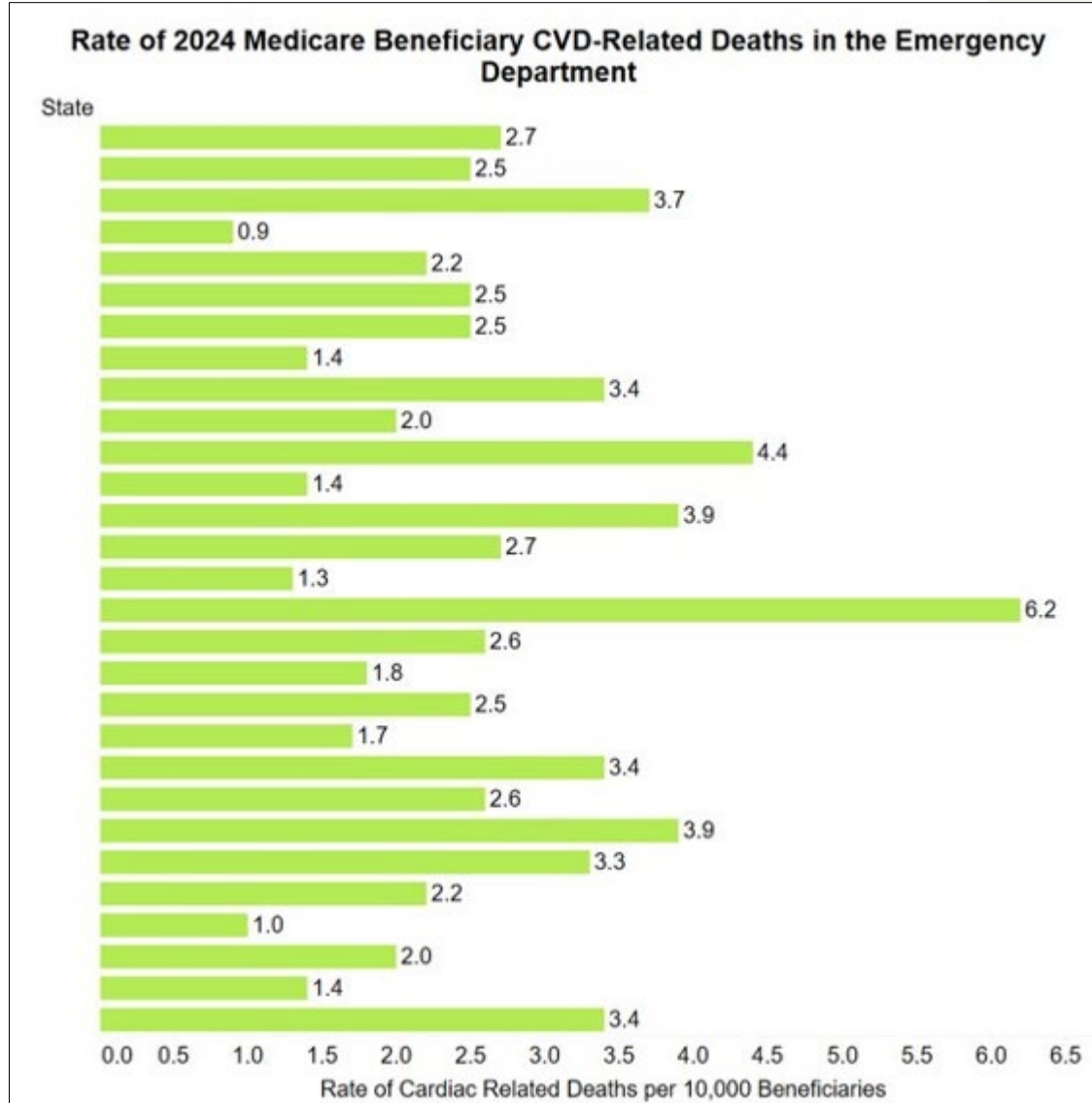


Enhance EMS - hospital coordination and communication

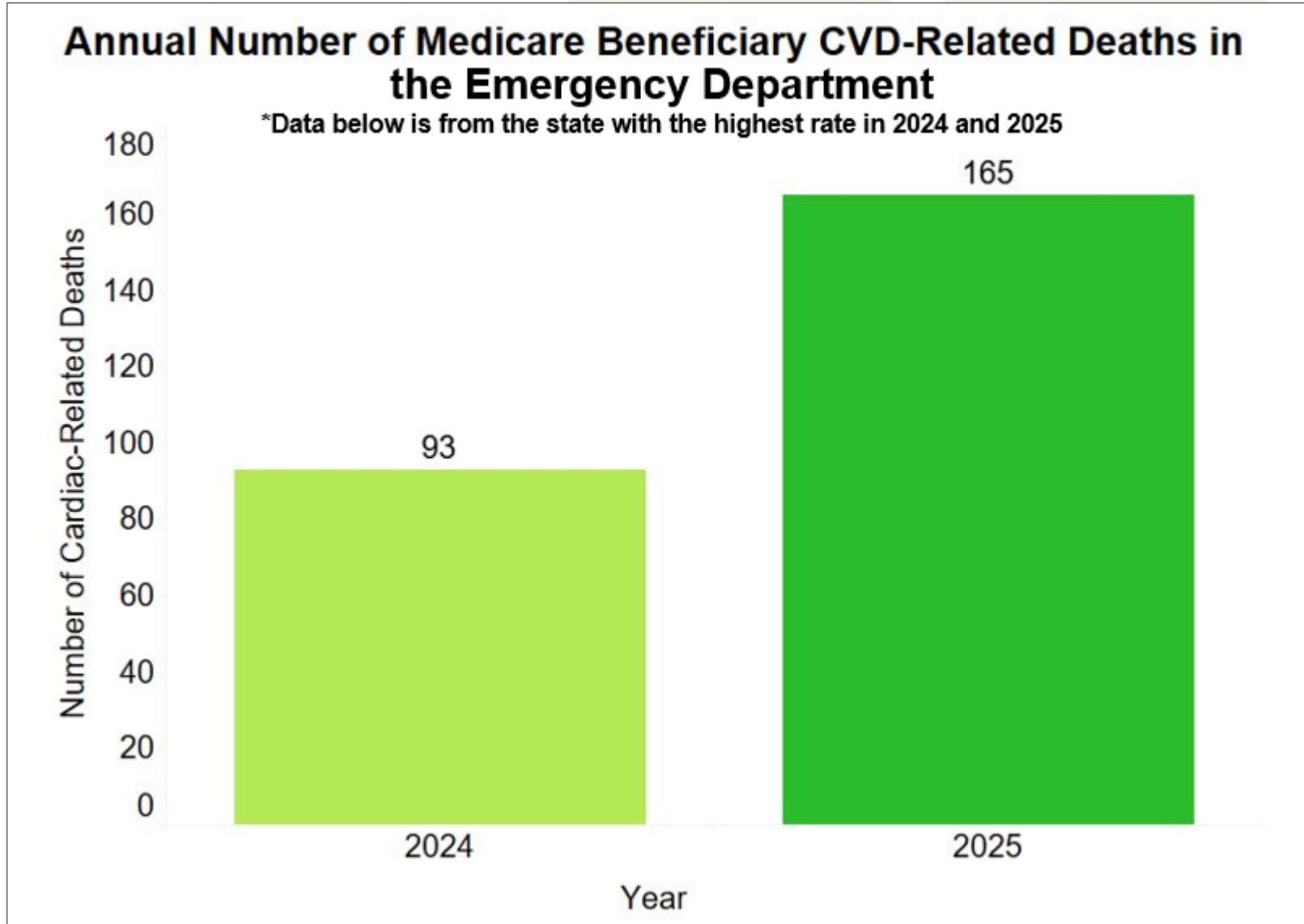


Expand research and data analysis capabilities

Ongoing Trends: State Rates



Ongoing Trends: Annual CVD-Related Deaths



Summary

- Improving outcomes in emergency cardiovascular care requires a coordinated, equity-centered approach.
- Key strategies include expanding community CPR training, increasing timely access to AEDs, delivering high-quality resuscitation across all care settings, and leveraging data to drive continuous quality improvement.
- Focus on improving emergency and cardiac care through consistent use of standardized ED readiness and cardiac care protocols, enhanced provider training and oversight, and strengthened workforce capacity.



Summary (Continued)

- Prioritize more efficient diagnostics and accurate clinical documentation while improving coordination and communication between EMS and hospital teams.
- Support these efforts by expanding research, data analytics, and performance monitoring capabilities to drive continuous quality improvement and better patient outcomes.





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