

NATIONAL UTSTEIN CARDIAC ARREST SURVIVAL

Desired Outcome	As many patients as possible who are treated for cardiac arrest by EMS are discharged alive from the hospital.
Standard	No standard has been defined for this measure.
Acceptable Quality Level	No acceptable quality level has been defined for this measure.
Monitoring Method	Run Chart updated by 10th business day each quarter.

MEASURE DESCRIPTION

Indicator Description	The percentage of cardiac arrest patients presenting in ventricular fibrillation or ventricular tachycardia who are discharged alive from a receiving hospital following treatment by ATCEMS personnel for their arrest.
Question Indicator Answers	How many patients treated by ATCEMS for cardiac arrest presenting in ventricular fibrillation or ventricular tachycardia are discharged alive from the hospital?
Patient / Customer Need	Patients who have a return of pulse prior to their arrival at a hospital have an increased chance of survival from their cardiac event.
Type of Measure	Outcome
Objective	As many patients as possible who are treated for cardiac arrest from cardiac etiology by EMS are discharged alive from the hospital.
Data Provided By	CARES data registry
Reporting Values	Percentage of patients presenting in cardiac arrest from a presumed cardiac cause (etiology) presenting in ventricular fibrillation or ventricular tachycardia who are discharged alive from the receiving hospital.
Limitations	<p>This data is based on system reporting to the national Cardiac Arrest Registry to Enhance Survival (CARES). It may not reflect all cardiac arrest resuscitations attempted by ATCEMS.</p> <p>Receiving facilities enter patient outcome data directly into the CARES registry. Delays in providing this data will result in reporting delays.</p>
Notes	Utstein Survival: The proportion of patients who had a witnessed cardiac arrest (excludes EMS witnessed) and who had ventricular fibrillation or ventricular

tachycardia as the first identified cardiac rhythm.

The subset of patients that presents with an initial rhythm of ventricular fibrillation or ventricular tachycardia is most amenable to successful resuscitation.

Cardiac arrest is a fatal event unless medical care is provided quickly. The CARES registry allows us to compare our performance against other systems. This data is important in understanding cardiac arrest due to ventricular fibrillation and looking at ways to improve how we care for patients with cardiac arrest.

Measure Calculation

Formula Description	The count of patients meeting CARES inclusion criteria that are discharged alive from the receiving hospital is divided by the count of all patients meeting CARES inclusion criteria. The resulting value is reported as a percentage.
Indicator Formula	$Percentage = \frac{count([Patients\ discharged\ alive])}{count([All\ Patients])}$
Data Filters	Patients in cardiac arrest, meeting inclusion criteria according to CARES. Patient presents with an initial rhythm of ventricular fibrillation or ventricular tachycardia. Patient arrest was witnessed by others.
Interval Calculation	Not applicable.
Numerator	<i>Population</i> Patients in cardiac arrest discharged alive from the receiving hospital. <i>Inclusion</i> Presumed cardiac etiology Meet other CARES inclusion criteria Patient presents with an initial rhythm of ventricular fibrillation or ventricular tachycardia. <i>Exclusion</i> Meet CARES exclusion criteria Patient presents with an initial rhythm that is not ventricular fibrillation or ventricular tachycardia.

Patient arrest was unwitnessed, or was witnessed by EMS personnel.

Data Source CARES Data Registry report

Denominator *Population* All patients in cardiac arrest

Inclusion Presumed cardiac etiology

Meet other CARES inclusion criteria

Patient presents with an initial rhythm of ventricular fibrillation or ventricular tachycardia.

Exclusion Meet CARES exclusion criteria

Patient presents with an initial rhythm that is not ventricular fibrillation or ventricular tachycardia.

Patient arrest was unwitnessed, or was witnessed by EMS personnel.

Data Source CARES Data Registry report

Aggregation Aggregate patients based on date/time of phone pickup in Communications Center for incident.

Stratification None

Minimum Sample Size None

Data Lineage Cardiac arrest patients are identified from ATCEMS ePCR data. Records are retrieved and audited for inclusion in system CARES reporting by ATCEMS System OMD personnel. Once data is uploaded to the CARES registry, receiving hospital personnel enter patient outcome data into the system.

Reporting

ATCEMS Scorecard

Medium: Web site chart

Orientation: External

Format: Run chart containing quarterly data values for most recent 9 quarter period.

Update Frequency: Quarterly

Data Source: Data retrieved from CARES registry by ATCEMS BAR team personnel.

Metadata

Pillar / Strategic Objective Links	<p>S1: To be an organization that strives to improve the lives of people in our community.</p> <p>S2: To have a service delivery model that best serves the needs of our community.</p> <p>S3: To be an organization that puts service before self.</p> <p>F2: To be an organization that provides value to the community.</p> <p>F3: To provide quality cost efficient service to the community.</p>
Development Status	Actively reporting.
References	<p>Cummins RO, Chamberlain DA, et al. "Recommended guidelines for uniform reporting of data from out-of-hospital cardiac arrest: the Utstein Style. A statement for health professionals from a task force of the American Heart Association, the European Resuscitation Council, the Heart and Stroke Foundation of Canada, and the Australian Resuscitation Council." <i>Circulation</i>, 1991; 84:960-975. Available on-line at http://circ.ahajournals.org/content/84/2/960.full.pdf</p> <p>Perberdy MA, et al, "2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science; Part 9: Post–Cardiac Arrest Care." <i>Circulation</i>, 2010; 122: S768-S786. Available on-line at https://circ.ahajournals.org/content/122/18_suppl_3/S768.full</p> <p>Eftestøl T, et al, "Effects of Cardiopulmonary Resuscitation on Predictors of Ventricular Fibrillation Defibrillation Success During Out-of-Hospital Cardiac Arrest." <i>Circulation</i>, 2004; 110: 10-15. Available on-line at http://circ.ahajournals.org/content/110/1/10.long.</p>
Best Practices	None referenced
Definition Version Info	Version A; 2015-03-01