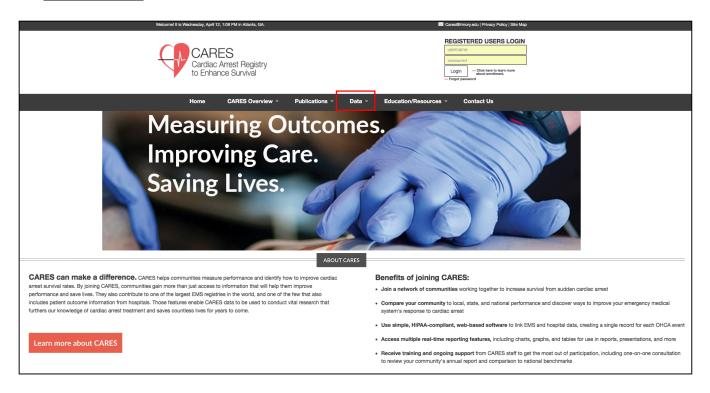


CARES Reports User Guide

INDEX

CARES Website 3
EMS REPORTS
Utstein Report2
Summary Report 7
Survival Report 10
Demographics 15
Call Times14
EMS CAD Times/First Responder CAD Times 15
HOSPITAL REPORTS
Hospital Benchmarking Report 16
Hospital Survival Report

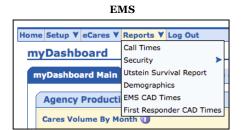
CARES WEBSITE:



The publically accessible CARES website hosts legacy reports from previous years under the Data→ Reports menu.

USER ACCESS:

EMS and hospital users have 24/7 access to a number of site-specific reports, which can be found under the **Reports** drop down menu upon log-in with their unique username and password.







CARES CASE DEFINITION:

A CARES case is a non-traumatic out-of-hospital cardiac arrest event where resuscitation is attempted by a 911 responder (CPR and/or defibrillation). This includes patients that received an AED shock by a bystander prior to the arrival of 911 responders. When selecting a Service Date range of interest, please note: CARES collected only arrests of presumed cardiac etiology from 2005-2012. In 2013, CARES expanded to include all non-traumatic arrests.

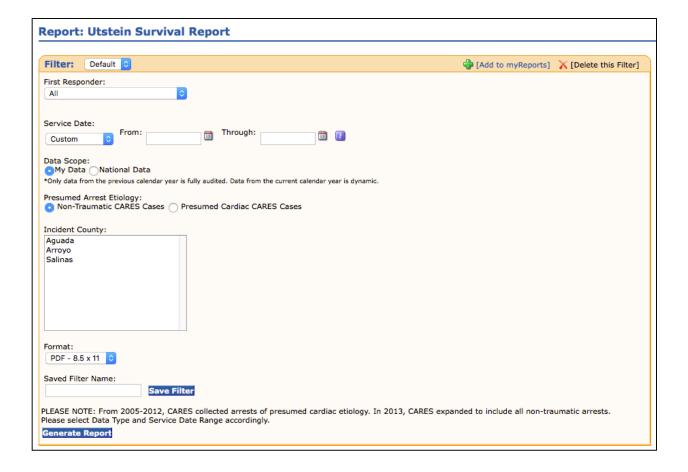
This User Guide includes a number of data definitions. For additional examples, please refer to the CARES Data Dictionary, available at https://mycares.net/sitepages/uploads/2017/Data%20Dictionary%20(2017).pdf

UTSTEIN REPORT:

The **Utstein Survival Report** is the most commonly used report. Utstein is an internationally agreed upon cardiac arrest metric that considers all bystander-witnessed arrests that present in a shockable rhythm.¹ To generate this report:

- Enter the Service Date range of interest. Reports using recent data are not completely audited and therefore may be incomplete. Data by calendar year is not finalized until mid-April of the following year. For example, reports including data from 2017 would not be considered final until mid-April 2018.
- 2. Select the **Data Scope** of interest. "My Data" will generate a report using your EMS Agency's data, while "National Data" will generate a benchmarking report using the national dataset.
- 3. Select the **etiology** of interest, Presumed Cardiac or Non-Traumatic.
- 4. Click "Generate Report".

The Utstein Report can also be filtered by local First Responders or Incident Counties using the corresponding pull-down menu or selection box.



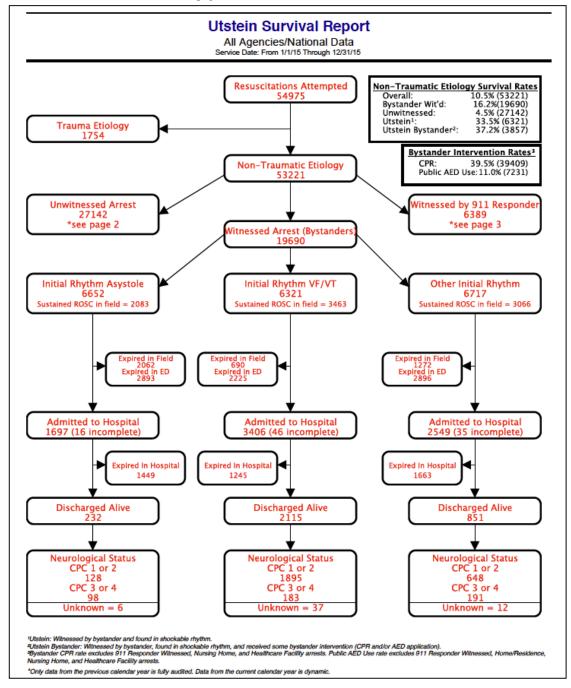
¹ Resuscitation. 2015 Nov;96:328-40.

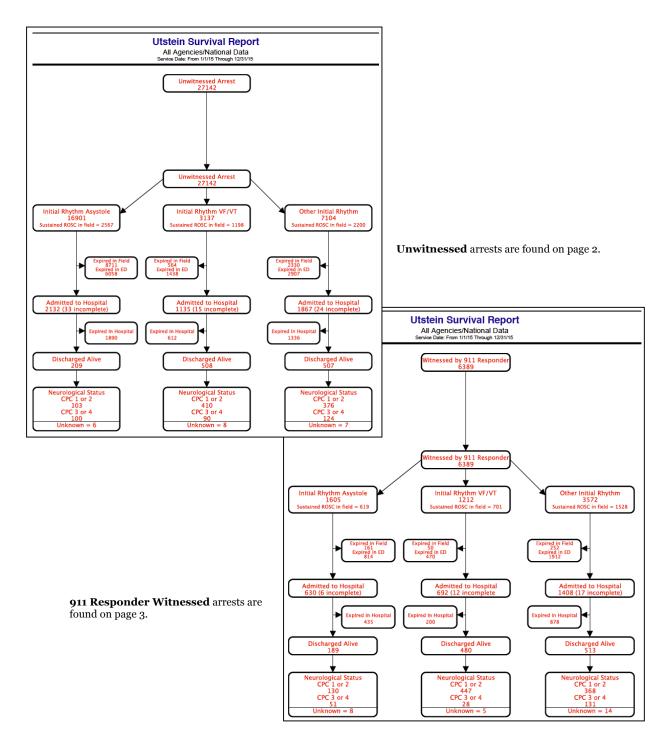
In the upper right-hand corner of the Utstein Report, you will see a box listing a number of survival rates.

- Overall: Includes all CARES cases.
- **Bystander Wit'd:** Includes all bystander witnessed arrests (those found on page 1 of the report).
- Unwitnessed: Includes all unwitnessed arrests (those found on page 2 of the report).
- Utstein: Witnessed by bystander and found in shockable rhythm.
- **Utstein Bystander**: Witnessed by bystander, found in shockable rhythm, and received some bystander intervention (CPR and/or AED application).

Below, you'll find a box that provides rates of critical **Bystander Interventions**, including CPR and public AED use. The bystander CPR rate <u>excludes</u> 911 Responder Witnessed and Nursing Home/Healthcare Facility arrests. The bystander public AED use rate <u>excludes</u> 911 Responder Witnessed arrests as well as those that occurred in a Home/Residence, Nursing Home, or Healthcare Facility.

The Utstein Report follows a flow diagram format, categorizing arrests by witness status, initial rhythm, and patient outcome. **Bystander Witnessed** arrests are found on page 1.





Page 4 lists any records that have an outstanding hospital outcome.

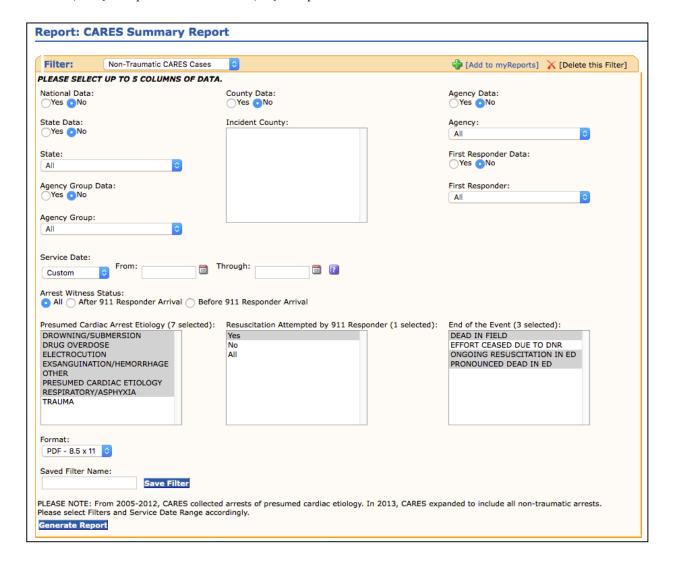
Incomplete Data						
Incident #	Service Date	Dest. Hospital	Transfer Hospital	ER Outcome	Hosp Outcome	Neuro Outcome
20144587 12358er	2014-12-17 2014-02-03	0100 - Test 1 0100 - Test 1	Left Blank Left Blank	Left Blank Admitted to	Left Blank Not vet determined	Left Blank
1233061	2014-02-03	0100 - 1651 1	Leit Didlik	hospital	Not yet determined	Leit Dialik

SUMMARY REPORT:

The **CARES Summary Report** provides descriptive statistics on a number of pre-hospital characteristics. Please see page 9 of this User Guide for a sample CARES Summary Report.

*Please note: given the dynamic nature of CARES data, only CARES staff and state coordinators have access to this report, and can run them upon request.

This report can include up to 5 columns of data for benchmarking purposes, including National, State, Agency Group, County, EMS Agency, and First Responder. The report can also be filtered by Presumed Cardiac CARES Cases and Non-Traumatic CARES Cases, using the pull-down menu in the upper left-hand corner. Finally, users can view the data based on arrest witness status, looking at All arrests, non-911 Responder witnessed arrests, or 911 Responder witnessed arrests.



Data Definitions:

- Location of Arrest type of location where the patient arrested.
 - o **Home/Residence** includes Home/Residence and Residence/Institution
 - o Nursing Home includes Nursing Home
 - Public Setting includes Industrial Place; Mine/Quarry; Physician Office/Clinic, Hospital, or Healthcare Facility; Recreation/Sport or Place of Recreation; Public Building; Farm; Educational Institution; Jail; Street/Highway; Airport or Transport Center; and Other
- Arrest witnessed A witnessed arrest is one that is seen or heard by another person.
- **Bystander** A lay person, lay person family member, or lay person medical provider.
- **First Responder** Personnel who respond to the medical emergency in an official capacity as part of an organized medical response team but are not the designated transporter of the patient to the hospital.
- Emergency Medical Services (EMS) Personnel who respond to the medical emergency in an official capacity (i.e. respond to the 911 call) as part of an organized medical response team AND are the designated transporter of the patient to the hospital.
- Was an AED applied prior to EMS arrival? This denotes AED application by a bystander or First Responder prior to EMS arrival, regardless of whether defibrillation occurred.
- Who first applied AED? Identifies the individual who initially applied/used the AED during resuscitation. Please note, the number of patients who had an AED applied (N) is the denominator for this metric.
- Who first defibrillated the patient? Used to determine the frequency of defibrillatory shocks among bystanders and responders.
- · First Arrest Rhythm First cardiac rhythm present when a monitor/defibrillator or AED is attached to a patient.
- Sustained ROSC Return of Spontaneous Circulation (ROSC) is defined as the restoration of a palpable pulse or a measurable blood pressure. Sustained ROSC is deemed to have occurred when chest compressions are not required for 20 consecutive minutes and signs of circulation persist.
- Hypothermia care Measures were taken in the field to reduce the patient's body temperature by means of external cold
 pack application to armpits/groin or administration of cold intravenous saline bolus, with or without sedation or other
 medications.
- Survived to hospital admission Includes patients for whom ER Outcome = Admitted to ICU/CCU, Admitted to floor, or Admitted to hospital.
- Survived to hospital discharge Includes patients for whom Hospital Outcome = Discharged Alive or Patient Made DNR = Discharged Alive.
- Good Cerebral Performance CPC 1; Patient is conscious, alert, able to work and lead a normal life.
- Moderate Cerebral Performance CPC 2; Patients is conscious and able to function independently (dress, travel, prepare food), but may have hemiplegia, seizures, or permanent memory or mental changes.
- Utstein Survival Survival among patients whose cardiac arrest was witnessed by a bystander and were found in a shockable rhythm.
- **Utstein Bystander Survival** Survival among patients whose cardiac arrest was witnessed by a bystander, were in a shockable rhythm, and received some bystander intervention (CPR and/or AED application).

CARES Summary Report

Demographic and Survival Characteristics of OHCA

End of the Event: Dead in Field, Pronounced Dead in ED, Ongoing Resuscitation in ED | Arrest Witness Status: All | Resuscitation Attempted by 911 Responder: Yes | Presumed Cardiac Arrest Etiology: Presumed Cardiac Etiology, Respiratory/Asphyxia, Drowning/Submersion, Electrocution, Other, Drug Overdose, Exsanguination/Hemorrhage | Service Date: From 1/1/15 Through 1/31/15

Data Control C	EMS Agency N=42	State N=510	National N=4993
Age	N=42	N=510	N=4991
Mean	57.8	67.3	63.8
Median	61.5	69.0	65.0
Dec. 10. (0/)	N 40	N. 540	N. 4000
Gender (%)	N=42	N=510	N=4993
Female Male	10 (23.8) 32 (76.2)	180 (35.3) 330 (64.7)	2008 (40.2) 2985 (59.8)
iviale	32 (70.2)	330 (04.7)	2903 (39.0)
Race (%)	N=42	N=510	N=4993
American-Indian/Alaskan	0 (0.0)	2 (0.4)	23 (0.5)
Asian	2 (4.8)	27 (5.3)	121 (2.4)
Black/African-American	30 (71.4)	24 (4.7)	1065 (21.3)
Hispanic/Latino Native Hawaiian/Pacific Islander	0 (0.0) 0 (0.0)	50 (9.8) 3 (0.6)	299 (6.0) 40 (0.8)
White	8 (19.0)	180 (35.3)	2294 (45.9)
Unknown	2 (4.8)	224 (43.9)	1151 (23.1)
	, ,		,
Location of Arrest (%)	N=42	N=510	N=4993
Home/Residence	27 (64.3)	377 (73.9)	3533 (70.8)
Nursing Home	0 (0.0) 15 (35.7)	37 (7.3)	563(11.3) 807 (18.0)
Public Setting	15 (35.7)	96 (18.8)	897 (18.0)
Arrest witnessed (%)	N=42	N=510	N=4993
Bystander Witnessed	9 (21.4)	185 (36.3)	1829 (36.6)
Witnessed by 911 Responder	5 (11.9)	65 (12.7)	579 (11.6)
Unwitnessed	28 (66.7)	260 (51.0)	2585 (51.8)
Who Initiated CPR? (%)	N=42	N=510	N=4993
Not Applicable	0 (0.0)	0 (0.0)	6 (0.1)
Bystander	15 (35.7)	193 (37.8)	2027 (40.6)
First Responder	10 (23.8)	146 (28.6)	1416 (28.4)
Emergency Medical Services (EMS)	17 (40.5)	171 (33.5)	1544 (30.9)
Man on AED amplied prior to EMS arrival? (0/)	N=42	N 540	N=4993
Was an AED applied prior to EMS arrival? (%) Yes	10 (23.8)	N=510 75 (14.7)	N=4993 1469 (29.4)
No	32 (76.2)	435 (85.3)	3524 (70.6)
	, ,		, ,
Who first applied automated external defibrillator? (%)	N=10	N=87	N=1481
Bystander	2 (20.0)	14 (16.1)	268 (18.1)
First Responder	8 (80.0)	62 (71.3)	1202 (81.2)
Who first defibrillated the patient?* (%)	N=38	N=510	N=4772
Not Applicable	24 (63.2)	352 (69.0)	3261 (68.3)
Bystander	0 (0.0)	6 (1.2)	82 (1.7)
First Responder	6 (15.8)	26 (5.1)	281 (5.9)
Responding EMS Personnel	8 (21.1)	126 (24.7)	1148 (24.1)
First Arrest Rhythm (%)	N=42	N=510	N=4992
Vfib/Vtach/Unknown Shockable Rhythm	11 (26.2)	95 (18.6)	912 (18.3)
Asystole	26 (61.9)	259 (50.8)	2457 (49.2)
Idioventricular/PEA	4 (9.5)	135 (26.5)	1049 (21.0)
Unknown Unshockable Rhythm	1 (2.4)	21 (4.1)	574 (11.5)
Sustained ROSC (%)	N=42	N=510	N=4993
Yes	13 (31.0)	150 (29.4)	1592 (31.9)
No	29 (69.0)	360 (70.6)	3401 (68.1)
	,	, ,	, ,
Was hypothermia care provided in the field? (%)	N=42	N=507	N=4987
Yes	2 (4.8)	19 (3.7)	504 (10.1)
No	40 (95.2)	488 (96.3)	4483 (89.9)
Pre-hospital Outcome (%)	N=42	N=510	N=4993
Pronounced in the Field	5 (11.9)	207 (40.6)	1492 (29.9)
Pronounced in ED	10 (23.8)	51 (10.0)	876 (17.5)
Ongoing Resuscitation in ED	27 (64.3)	252 (49.4)	2625 (52.6)
Overall Survival (%)	N-42	N-510	N=1003
Overall Survival (%) Overall Survival to Hospital Admission	N=42	N=510 128 (25.1)	N=4993 1359 (27.2)
Overall Survival to Hospital Admission	14 (33.3)	128 (25.1)	1359 (27.2)
Overall Survival to Hospital Admission Overall Survival to Hospital Discharge	14 (33.3) 7 (16.7)	128 (25.1) 54 (10.6)	1359 (27.2) 508 (10.2)
Overall Survival to Hospital Admission	14 (33.3)	128 (25.1)	1359 (27.2)
Overall Survival to Hospital Admission Overall Survival to Hospital Discharge With Good or Moderate Cerebral Performance Missing hospital outcome	14 (33.3) 7 (16.7) 5 (11.9) 1	128 (25.1) 54 (10.6) 45 (8.8) 2	1359 (27.2) 508 (10.2) 399 (8.0) 16
Overall Survival to Hospital Admission Overall Survival to Hospital Discharge With Good or Moderate Cerebral Performance	14 (33.3) 7 (16.7) 5 (11.9) 1	128 (25.1) 54 (10.6) 45 (8.8) 2 N=53	1359 (27.2) 508 (10.2) 399 (8.0) 16 N=544
Overall Survival to Hospital Admission Overall Survival to Hospital Discharge With Good or Moderate Cerebral Performance Missing hospital outcome	14 (33.3) 7 (16.7) 5 (11.9) 1	128 (25.1) 54 (10.6) 45 (8.8) 2	1359 (27.2) 508 (10.2) 399 (8.0) 16
Overall Survival to Hospital Admission Overall Survival to Hospital Discharge With Good or Moderate Cerebral Performance Missing hospital outcome	14 (33.3) 7 (16.7) 5 (11.9) 1	128 (25.1) 54 (10.6) 45 (8.8) 2 N=53	1359 (27.2) 508 (10.2) 399 (8.0) 16 N=544

Inclusion criteria: An out-of-hospital cardiac arrest where resuscitation is attempted by a 911 responder (CPR and/or defibrillation). This would also include patients that received an AED shock by a

bystander prior to the arrival of 911 responders.
*This is a new question that was introduced on the 2011 form.
'Witnessed by bystander and found in a shockable rhythm

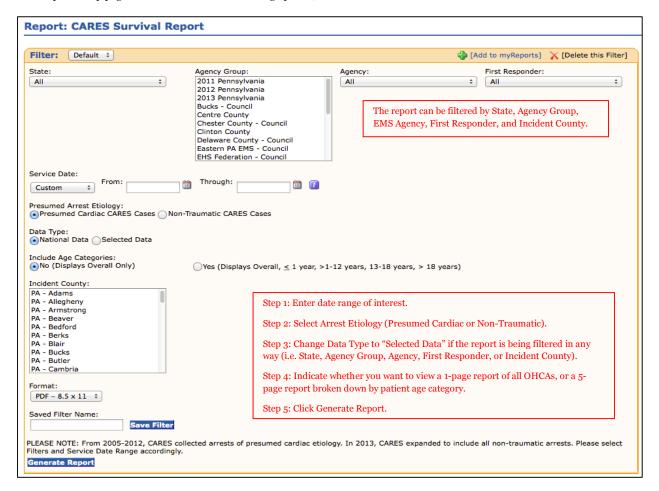
²Witnessed by bystander, found in shockable rhythm, and received some bystander intervention (CPR by bystander and/or AED applied by bystander)

SURVIVAL REPORT:

The **CARES Survival Report** is designed to allow EMS agencies to track patient outcomes by a variety of pre-hospital characteristics, including arrest location and witness status, bystander CPR and AED usage, and initial rhythm. Please see page 12 of this User Guide for a sample CARES Survival Report.

*Please note: given the dynamic nature of CARES data, only CARES staff and state coordinators have access to this report, and can run them upon request.

The Report Setup page allows for a number of filtering options, which are outlined in the screenshot below.



Inclusion criteria are listed at the bottom of the report. The report <u>excludes</u> patients with a missing hospital outcome; this number is noted at the bottom of the report in the footnotes.

If age categories are selected, a 5-page report will be generated. Page 1 will include all patients, whereas pages 2-5 will be filtered by age category (≤1, >1-12, 13-18, and >18 years). The age category will be listed in the header of each report page.

The Survival Report summarizes the number and percentage of patients who achieved sustained ROSC, survived to hospital admission, and survived to hospital discharge (with a good/moderate CPC score), for each pre-hospital characteristic.

- "Sustained ROSC" includes patients for whom Sustained ROSC = Yes; Yes, pulse at end of EMS care (or ED arrival); and Yes, but pulseless at end of EMS care (or ED arrival).
- "Survival to hospital admission" includes patients for whom ER Outcome = Admitted to ICU/CCU, Admitted to floor, or Admitted to hospital.
- "Survival to hospital discharge" includes patients for whom Hospital Outcome = Discharged Alive or Patient Made DNR = Discharged Alive.
- "Survival to discharge with CPC 1 or 2" includes patients for whom Neurological Outcome = Good Cerebral Performance (CPC 1) or Moderate Cerebral Disability (CPC 2). The number of patients with a missing CPC score is listed in the footnotes.

The denominator for these four rates is the N in the left-most column (Total) of the row.

		Survival to	Survival to	Survival to
	Sustained	hospital	hospital	discharge with
Total N (%)	ROSC (%)	admission (%)	discharge (%)	CPC 1 or 2 [†] (%)

Patient Outcome Definitions:

- **Sustained ROSC** Return of Spontaneous Circulation (ROSC) is defined as the restoration of a palpable pulse or a measurable blood pressure. Sustained ROSC is deemed to have occurred when chest compressions are not required for 20 consecutive minutes and signs of circulation persist.
- CPC 1 Good cerebral performance. Patient is conscious, alert, able to work and lead a normal life.
- **CPC 2** Moderate cerebral disability. Patients is conscious and able to function independently (dress, travel, prepare food), but may have hemiplegia, seizures, or permanent memory or mental changes.

Arrest Characteristic Definitions:

- Arrest Witnessed Status A witnessed arrest is one that is seen or heard by another person.
- Bystander CPR Cardiopulmonary resuscitation initiated by a lay person, lay person family member, or lay person medical provider.
 - *Please note: Both "Bystander CPR" rates exclude 911 Responder witnessed events. The second bystander CPR rate also excludes arrests that occurred in a nursing home or healthcare facility.
- Initial Arrest Rhythm First cardiac rhythm present when a monitor/defibrillator or AED is attached to a patient.
 - o Shockable: includes Ventricular Fibrillation, Ventricular Tachycardia, and Unknown Shockable rhythms
 - Unshockable: includes Asystole, Idioventricular/PEA, and Unknown Unshockable rhythms
- AED Use This denotes AED application by a bystander or First Responder prior to EMS arrival, regardless of whether
 defibrillation occurred.
 - *Please note: Both "Bystander AED use" rates exclude 911 Responder witnessed events. The second bystander AED use rate also excludes arrests that occurred in a nursing home or healthcare facility.
- **Field hypothermia** Measures were taken in the field to reduce the patient's body temperature by means of external cold pack application to armpits/groin or administration of cold intravenous saline bolus, with or without sedation or other medications.
- In-hospital hypothermia: Measures were taken in the hospital to reduce the patient's body temperature by either non-invasive means (administration of cold intravenous saline, external cold pack application to armpits and groin, use of a cooling blanket, torso vest or leg wrap devices) or by invasive means (use of a cooling catheter inserted in the femoral vein)
 - *Please note: In-hospital hypothermia rate is limited to patients who were admitted to the hospital.

CARES Survival Report

All Agencies/National Data

Service Date: From 1/1/15 Through 1/31/15 | Non-Traumatic Etiology

			OVERALL		
			N = 4977		
	Total N (%)	Sustained ROSC (%)	Survival to hospital admission (%)	Survival to hospital discharge (%)	Survival to discharge with CPC 1 or 2 [†] (%)
Total	4977	1583 (31.8)	1358 (27.3)	508 (10.2)	399 (8.0)
Location of Arrest					
Home/Residence	3523 (70.8)	1055 (29.9)	899 (25.5)	292 (8.3)	229 (6.5)
Nursing Home	563 (11.3)	145 (25.8)	101 (17.9)	28 (5.0)	5 (0.9)
Public Setting	891 (17.9)	383 (43.0)	358 (40.2)	188 (21.1)	165 (18.5)
	, ,	. ,	. ,	. ,	. ,
Arrest Witnessed Status Unwitnessed	2570 (54.0)	E40 (04.4)	400 (40 0)	407 (4.0)	70 (2.0)
	2578 (51.8)	543 (21.1)	428 (16.6)	107 (4.2)	78 (3.0)
Bystander witnessed	1823 (36.6)	786 (43.1)	686 (37.6)	290 (15.9)	242 (13.3)
911 Responder witnessed	576 (11.6)	254 (44.1)	244 (42.4)	111 (19.3)	79 (13.7)
Bystander CPR*					
Bystander CPR	2021 (45.9)	689 (34.1)	561 (27.8)	238 (11.8)	190 (9.4)
No Bystander CPR	2380 (54.1)	640 (26.9)	553 (23.2)	159 (6.7)	130 (5.5)
Bystander CPR (excludes nursing home/healthcare facility events)	1428 (38.9)	515 (36.1)	431 (30.2)	200 (14.0)	169 (11.8)
No Bystander CPR (excludes nursing home/healthcare facility events)	2245 (61.1)	614 (27.3)	534 (23.8)	153 (6.8)	127 (5.7)
Initial Arrest Rhythm	005 (40.0)	404 (50.0)	440 (40 0)	070 (00 0)	040 (00 5)
Shockable	905 (18.2)	461 (50.9)	442 (48.8)	270 (29.8)	240 (26.5)
Non-shockable	4071 (81.8)	1121 (27.5)	916 (22.5)	238 (5.8)	159 (3.9)
AED Use					
Bystander AED use*	267 (6.1)	105 (39.3)	90 (33.7)	55 (20.6)	44 (16.5)
Bystander AED use* (excludes nursing home/healthcare facility events)	99 (2.7)	53 (53.5)	51 (51.5)	38 (38.4)	33 (33.3)
Trained provider (First Responder) AED use	1202 (24.2)	351 (29.2)	300 (25.0)	112 (9.3)	89 (7.4)
Utstein Witnessed and shockable	627 (42.0)	366 (57.5)	2E0 (EC 4)	226 (27.0)	244 (22.6)
	637 (12.8)		359 (56.4)	236 (37.0)	214 (33.6)
Bystander witnessed and shockable	540 (10.9)	311 (57.6)	309 (57.2)	200 (37.0)	179 (33.1)
Hypothermia					
Field hypothermia	500 (10.1)	325 (65.0)	261 (52.2)	78 (15.6)	63 (12.6)
In-hospital hypothermia (among admitted patients)	570 (42.0)			200 (35.1)	156 (27.4)

Inclusion Criteria: An out-of-hospital cardiac arrest where resuscitation is attempted by a 911 responder (CPR and/or defibrillation). This would also include patients that received an AED shock by a bystander prior to the arrival of 911

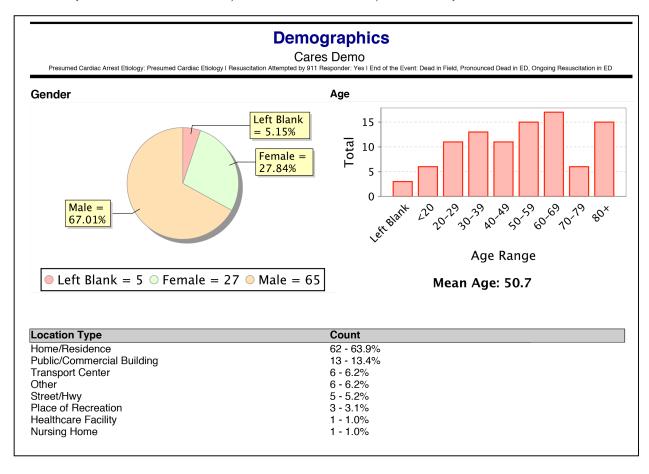
NOTE: Analysis excludes patients with missing hospital outcome (N=16).

^{*}Bystander CPR and bystander AED use calculations exclude 911 Responder witnessed events.

**CPC missing for 4 patients.

DEMOGRAPHICS REPORT:

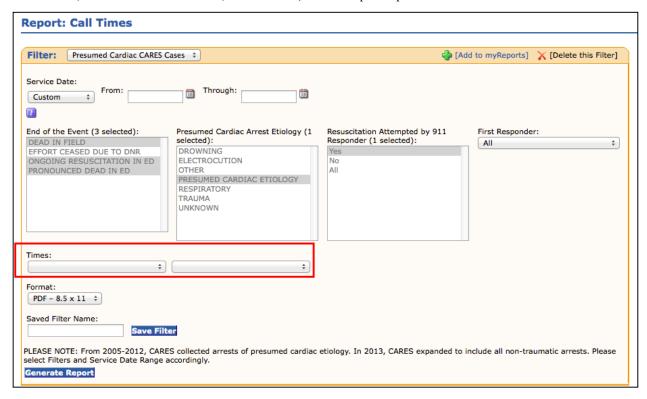
The **Demographics Report** generates the same information as the Demographics Dashboard tab, but allows you to select a Service Date range of interest. A number of filters can be applied to this report, using the Filter pull-down menu in the upper left-hand corner (Presumed Cardiac CARES Cases, Non-Traumatic CARES Cases, Utstein Arrests).



CALL TIMES REPORT:

The CARES **Call Times Report** shows the number of runs in a given 30 second response time interval, if your agency enters this supplemental information into CARES. Enter the Service Date range of interest and select the two times you wish to analyze from the Times pull-down menus. Click "Generate Report".

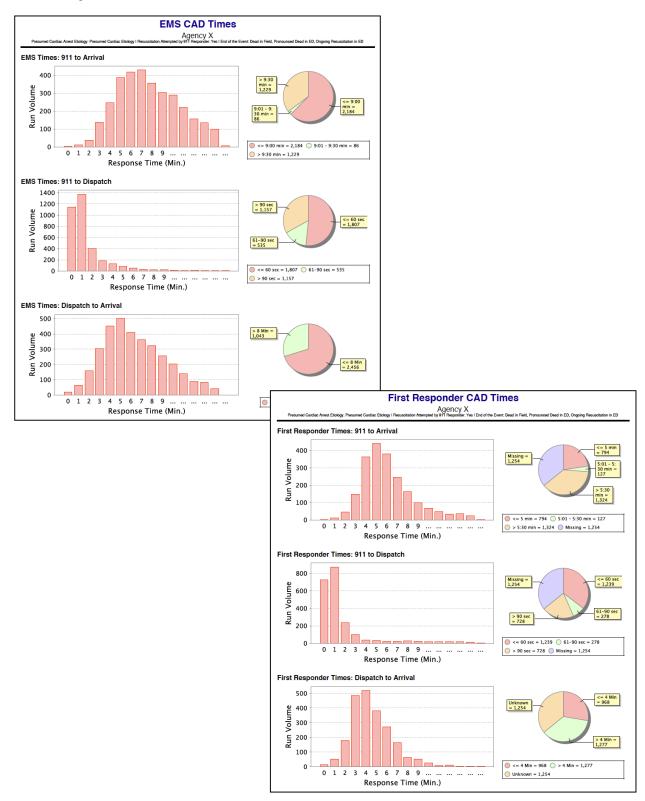
A number of filters can be applied to this report, using the Filter pull-down menu in the upper left-hand corner (Presumed Cardiac CARES Cases, Non-Traumatic CARES Cases, Utstein Arrests) or First Responder pull-down menu.



Call Times - Call Received At Dispatch Center: Ambulance On Scene Cares Demo Presumed Cardiac Arrest Etiology: Presumed Cardiac Etiology I Resuscitation Attempted by 911 Responder: Yes I End of the Event: Dead in Field, Pronounced Dead in ED, Ongoing Resuscitation in ED # of Runs % of Runs **Elapsed Time** # of Runs % of Runs Cumulative Cumulative Minutes 4 4% - 0.5 Minutes 0% 4 4% 4% 0.5 - 1 Minute 0% - 1.5 Minutes 0 0% 4 4% 1.5 - 2 Minutes 2 2% 6 6% - 2.5 Minutes 0% 6 6% 2.5 - 3 Minutes 0% 6% 6 3 - 3.5 Minutes 0 0% 6% 0% 3.5 - 4 Minutes

EMS AND FIRST RESPONDER CAD TIMES REPORTS:

The **EMS and First Responder CAD Times Reports** show CAD time intervals in bar graph and pie chart format, if your agency enters this supplemental information into CARES. Enter the Service Date range of interest and click "Generate Report". Both report setup pages include the Filter pull-down menu in the upper left-hand corner, allowing you to filter the report by Presumed Cardiac CARES Cases, Non-Traumatic CARES Case, or Utstein Arrests. The First Responder CAD Times Report can also be filtered by your local First Responders.



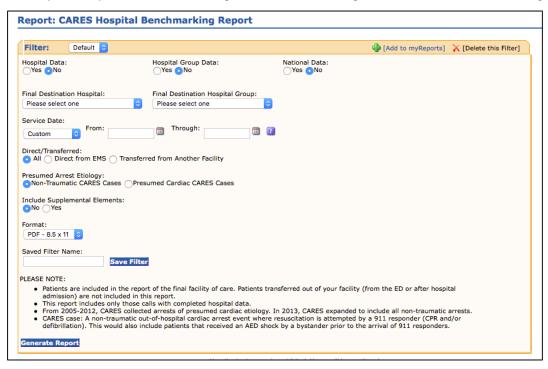
HOSPITAL BENCHMARKING REPORT:

The **CARES Hospital Benchmarking Report** includes both pre-hospital and in-hospital characteristics of a hospital's respective OHCA patient population. The report allows hospital users to track their internal performance and compare against state, hospital group, and national data, where applicable. State data will be provided upon request through your CARES State Coordinator.

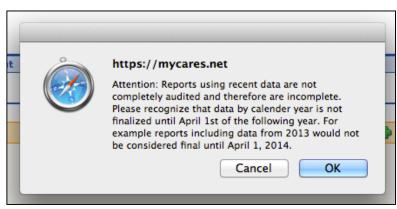
To generate this report, access the "**Reports**" tab in your CARES account and click on "**Hospital Benchmarking Report**" in the drop-down menu. To customize your report:

- Select "Hospital Data" = Yes to view your hospital-specific data. Multi-Hospital Users have the option to select "Hospital Group Data" to run system-level reports for multiple facilities. Select "National Data" = Yes to add a national benchmarking column to the report.
- Enter the Service Date range of interest. Reports using recent data are not completely audited and therefore may be
 incomplete. Data by calendar year is not finalized until mid-April of the following year. For example, reports including
 data from 2017 would not be considered final until mid-April 2018.
- 3. Select origin of patient (Direct from EMS, Transferred from Another Facility, or All).
- 4. Select Data Type (Non-Traumatic CARES Cases OR Presumed Cardiac CARES Cases).
- 5. Indicate whether you want an optional 2nd page included in the report, with a section for Supplemental Hospital Elements (# 47b-55).

Inclusion criteria are listed at the top of the report. Patients are included in the report of the *final* facility of care. Patients transferred out of your facility (from the ED or after hospital admission) and incomplete records are *not included* in this report.



After clicking "Generate Report", the pop-up box below will appear. This box reminds you that recent data may not be completely audited; data by calendar year is not finalized until mid-April of the following year. Click OK to acknowledge your understanding of this message.



The top of the Hospital Benchmarking Report lists the total number of CARES patients received by your hospital during the date range of interest. The total is broken down by the number who were transported directly by EMS and those who were transferred from another facility. Please note: the Hospital Benchmarking Report can be filtered by these criteria on the report setup page.

Total # of CARES Patients - Hospital	40
Direct from EMS	29
Transferred from another facility	11

The Hospital Benchmarking Report summarizes the number and percentage of patients who survived to hospital admission and discharge, for each pre-hospital characteristic. "Survived to Admission" includes patients for whom ER Outcome = admitted to ICU/CCU, admitted to floor, or admitted to hospital. "Survived to Discharge" includes patients for whom Hospital Outcome = discharged alive or patient made DNR → discharged alive. The denominator for both survival rates is the N in the left-most column (Total).

CAR	CARES Medical Center						
Total (%)	Survived to Admission (%)	Survived to Discharge (%)					
40	27 (67.5)	25 (62.5)					

Pre-Hospital Characteristic Definitions:

Initial Rhythm – First cardiac rhythm present when a manual monitor/defibrillator or AED is attached to a patient. Shockable: includes Ventricular Fibrillation, Ventricular Tachycardia, and Unknown Shockable rhythms Unshockable: includes Asystole, Idioventricular/PEA, and Unknown Unshockable rhythms

Witnessed Status - A witnessed arrest is one that is seen or heard by another person.

Sustained ROSC in field – Return of Spontaneous Circulation (ROSC) is defined as the restoration of a palpable pulse or a measureable blood pressure. Sustained ROSC is deemed to have occurred when chest compressions are not required for 20 consecutive minutes and signs of circulation persist.

Hypothermia care initiated in the field - Hypothermia care is provided in the field if measures were taken to reduce the patient's body temperature by means of external cold pack application to armpits and groin or administration of cold intravenous saline bolus, with or without sedation or other medications.

Utstein arrest - Cardiac arrest was witnessed by a bystander and patient was found in a shockable rhythm.

In-Hospital Characteristic Definitions:

Hypothermia care initiated/continued in hospital - Hypothermia care is provided in the hospital if measures were taken to reduce the patient's body temperature by either non-invasive means (administration of cold intravenous saline, external cold pack application to armpits and groin, use of a cooling blanket, torso vest or leg wrap devices) or by invasive means (use of a cooling catheter inserted in the femoral vein).

Good Cerebral Performance – Conscious, alert, able to work and lead a normal life.

Moderate Cerebral Disability – Conscious and able to function independently (dress, travel, prepare food), but may have hemiplegia, seizures, or permanent memory or mental changes.

Supplemental Hospital Elements – These data elements are OPTIONAL and found on a supplemental 2nd page if this is selected upon report setup. The denominator for these metrics is the number of cases for whom these questions were answered. Blank fields and "unknown" responses are not included in the analysis.

CARES Hospital Benchmarking Report (Non-Traumatic Etiology)

Inclusion Criteria: Etiology=Non-Traumatic Arrest; Resuscitation Attempted by 911 Responder; End of Event = Pronounced in ED or Ongoing Resuscitation in ED Final Destination Hospital: CARES Medical Center | Direct/Transferred: All Direct/Transferred | State: XY | Service Date: From 1/1/16 Through 12/31/16

Total # of CARES Patients - Hospital	44	Total # of CARES Patients - State	2827	Total # of CARES Patients - National	44015
Direct from EMS	40	Direct from EMS	2759	Direct from EMS	42055
Transferred from another facility	4	Transferred from another facility	68	Transferred from another facility	1960

	CARES Me	edical Center	Stat	e: XY	National		
n-Hospital Characteristics	Total (%)	Survived to Discharge (%)	Total (%)	Survived to Discharge (%)	Total (%)	Survived to Discharge (%)	
Died in ED	23 (52.3)		2112 (74.7)		25260 (57.4)		
Admitted to hospital	21 (47.7)	11 (52.4)	715 (25.3)	240 (33.6)	18755 (42.6)	7034 (37.5)	
In-hospital hypothermia*	8 (38.1)	4 (50.0)	260 (36.4)	80 (30.8)	8441 (45.0)	2815 (33.3)	
Patient made DNR*	1 (4.8)	0 (0.0)	138 (19.3)	15 (10.9)	4343 (23.2)	245 (5.6)	
In-hospital mortality*	10 (47.6)		475 (66.4)		11784 (62.8)		
Discharged alive	11 (25.0)		240 (8.5)		7034 (16.0)		
Discharged with good/moderate CPC	8 (18.2)	-	154 (5.4)		5791 (13.2)		

	CARI	CARES Medical Center			State: XY			National		
	Total (%)	Survived to Admission (%)	Survived to Discharge (%)	Total (%)	Survived to Admission (%)	Survived to Discharge (%)	Total (%)	Survived to Admission (%)	Survived to Discharge (%)	
Pre-Hospital Characteristics	44	21 (47.7)	11 (25.0)	2827	715 (25.3)	240 (8.5)	44015	18755 (42.6)	7034 (16.0)	
Gender										
Male	20 (45.5)	8 (40.0)	4 (20.0)	1607 (56.8)	401 (25.0)	147 (9.1)	27112 (61.6)	11470 (42.3)	4621 (17.0)	
Female	24 (54.5)	13 (54.2)	7 (29.2)	1220 (43.2)	314 (25.7)	93 (7.6)	16900 (38.4)	7283 (43.1)	2413 (14.3)	
Mean Age	67.2			62.1			61.1			
Initial Rhythm										
Shockable	13 (29.5)	8 (61.5)	5 (38.5)	568 (20.1)	225 (39.6)	124 (21.8)	11083 (25.2)	6312 (57.0)	3765 (34.0)	
Unshockable	31 (70.5)	13 (41.9)	6 (19.4)	2259 (79.9)	490 (21.7)	116 (5.1)	32926 (74.8)	12437 (37.8)	3263 (9.9)	
Witnessed Status										
Unwitnessed	16 (36.4)	7 (43.8)	4 (25.0)	1331 (47.1)	211 (15.9)	48 (3.6)	17880 (40.6)	6120 (34.2)	1545 (8.6)	
Bystander Witnessed	20 (45.5)	10 (50.0)	4 (20.0)	1129 (39.9)	368 (32.6)	139 (12.3)	18795 (42.7)	9336 (49.7)	4057 (21.6)	
Witnessed by 911 Responder	8 (18.2)	4 (50.0)	3 (37.5)	367 (13.0)	136 (37.1)	53 (14.4)	7339 (16.7)	3299 (45.0)	1432 (19.5)	
Sustained ROSC in field	20 (45.5)	18 (90.0)	10 (50.0)	748 (26.5)	512 (68.4)	215 (28.7)	20908 (47.5)	15682 (75.0)	6533 (31.2)	
Hypothermia care initiated in the field	0 (0.0)	0 (NaN)	0 (NaN)	28 (1.0)	19 (67.9)	7 (25.0)	3064 (7.0)	2030 (66.3)	720 (23.5)	
Utstein† Arrest	7 (15.9)	5 (71.4)	2 (28.6)	318 (11.2)	145 (45.6)	83 (26.1)	6691 (15.2)	4120 (61.6)	2552 (38.1)	

Patients are included in the report of the final facility of care. Patients transferred out of your facility (from the ED or after hospital admission) are not included in this report. This report includes only those calls with completed hospital data. CARES case: An out-of-hospital cardiac arrest where resuscitation is attempted by a 911 responder (CPR and/or defibrillation). This would also include patients that received an AED shock by a bystander prior to the arrival of 911 responders. *Among admitted patients.

[†]Utstein patient: witnessed by bystander and found in a shockable rhythm.

CARES Hospital Benchmarking Report (Non-Traumatic Etiology)

Inclusion Criteria: Etiology=Non-Traumatic Arrest; Resuscitation Attempted by 911 Responder; End of Event = Pronounced in ED or Ongoing Resuscitation in ED Final Destination Hospital: CARES Medical Center | Direct/Transferred: All Direct/Transferred | State: XY | Service Date: From 1/1/16 Through 12/31/16

Supplemental Hospital elements (analysis limited to questions with Yes or No response only)

	CARES Medical Center		State	e: XY	National		
	Total (%)	Survived to Discharge (%)	Total (%)	Survived to Discharge (%)	Total (%)	Survived to Discharge (%)	
Supplemental Characteristics							
Why was hypothermia care not initiated or continued in the h	iospital?						
Awake/Following commands	5 (50.0)	5 (100.0)	16 (15.8)	15 (93.8)	843 (27.0)	801 (95.0)	
DNR/Family request	1 (10.0)	0 (0.0)	19 (18.8)	1 (5.3)	369 (11.8)	26 (7.0)	
Unwitnessed Cardiac Arrest	1 (10.0)	0 (0.0)	12 (11.9)	1 (8.3)	254 (8.1)	44 (17.3)	
Unshockable Rhythm	3 (30.0)	1 (33.3)	17 (16.8)	3 (17.6)	255 (8.2)	56 (22.0)	
No TH program in place	0 (0.0)	0 (NaN)	1 (1.0)	0 (0.0)	52 (1.7)	20 (38.5)	
Other	0 (0.0)	0 (NaN)	36 (35.6)	11 (30.6)	1350 (43.2)	463 (34.3)	
Myocardial infarction diagnosis	15 (75.0)	7 (46.7)	133 (9.3)	57 (42.9)	4052 (19.5)	1840 (45.4)	
Coronary angiography performed	7 (33.3)	4 (57.1)	118 (7.9)	77 (65.3)	4312 (18.4)	2862 (66.4)	
Cardiac stent placed	1 (4.8)	1 (100.0)	52 (3.6)	33 (63.5)	2083 (8.9)	1420 (68.2)	
CABG performed	1 (4.8)	1 (100.0)	10 (0.7)	9 (90.0)	275 (1.2)	248 (90.2)	
ICD placed/scheduled	1 (4.8)	1 (100.0)	37 (2.5)	36 (97.3)	1304 (5.6)	1256 (96.3)	

Patients are included in the report of the final facility of care. Patients transferred out of your facility (from the ED or after hospital admission) are not included in this report. This report includes only those calls with completed hospital data. CARES case: An out-of-hospital cardiac arrest where resuscitation is attempted by a 911 responder (CPR and/or defibrillation). This would also include patients that received an AED shock by a bystander prior to the arrival of 911 responders. *Among admitted patients.

†Utstein patient: witnessed by bystander and found in a shockable rhythm.

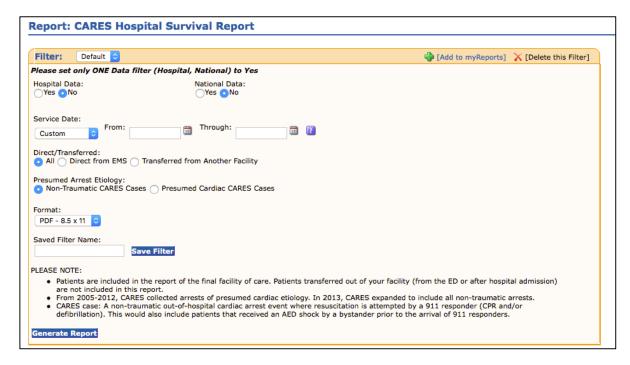
HOSPITAL SURVIVAL REPORT:

The **CARES Hospital Survival Report** follows a flow diagram format, categorizing arrests by sustained ROSC in the field, initial rhythm, and patient outcome. Please see page 22 of this User Guide for a sample Hospital Survival Report.

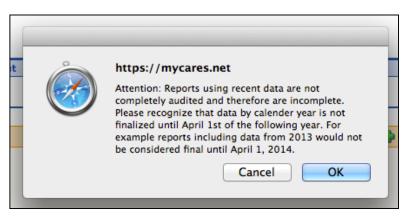
To generate this report, access the "**Reports**" tab in your CARES account and click on "**Hospital Survival Report**" in the drop-down menu. To customize your report:

- 1. Select "Hospital Data" = Yes to view your hospital-specific data. Multi-Hospital Users have the option to select "Hospital Group Data" to run system-level reports for multiple facilities. Select "National Data" = Yes to view aggregate, National data for benchmarking purposes. Please note, only one Data filter may be selected at a time.
- 2. Enter the Service Date range of interest. Reports using recent data are not completely audited and therefore may be incomplete. Data by calendar year is not finalized until mid-April of the following year. For example, reports including data from 2017 would not be considered final until mid-April 2018.
- 3. Select origin of patient (Direct from EMS, Transferred from Another Facility, or All).
- 4. Select Data Type (Non-Traumatic CARES Cases OR Presumed Cardiac CARES Cases).
- 5. Click "Generate Report".

Inclusion criteria are listed at the top of the report. Patients are included in the report of the *final* facility of care. Patients transferred out of your facility (from the ED or after hospital admission) and are *not included* in this report.



After clicking "Generate Report", the pop-up box below will appear. This box reminds you that recent data may not be completely audited; data by calendar year is not finalized until mid-April of the following year. Click OK to acknowledge your understanding of this message.



In the upper right-hand corner of the Hospital Survival Report, you will see a box listing a number of survival rates.

- Survival to Admission: Patients who survived to hospital admission (ER Outcome is Admitted to ICU/CCU, floor, or hospital).
- **Survival to Discharge**: Patients who survived to hospital discharge (Hospital Outcome or Patient made DNR Outcome is Discharged Alive).
- Sustained ROSC Survival: Survival to hospital discharge among the subset of patients who achieved sustained ROSC
 in the field.
- Shockable/Cooled Survival: Survival to hospital discharge among the subset of patients who presented in a shockable rhythm and received hypothermia care at the hospital.
- Nonshockable/Cooled Survival: Survival to hospital discharge among the subset of patients who presented in a nonshockable rhythm and received hypothermia care at the hospital.

Arrest Characteristic & Treatment Definitions:

Sustained ROSC in field – Return of Spontaneous Circulation (ROSC) is defined as the restoration of a palpable pulse or a measureable blood pressure. Sustained ROSC is deemed to have occurred when chest compressions are not required for 20 consecutive minutes and signs of circulation persist.

Initial Rhythm – First cardiac rhythm present when a manual monitor/defibrillator or AED is attached to a patient. Shockable: includes Ventricular Fibrillation, Ventricular Tachycardia, and Unknown Shockable rhythms Unshockable: includes Asystole, Idioventricular/PEA, and Unknown Unshockable rhythms

In-hospital hypothermia: Measures were taken in the hospital to reduce the patient's body temperature by either non-invasive means (administration of cold intravenous saline, external cold pack application to armpits and groin, use of a cooling blanket, torso vest or leg wrap devices) or by invasive means (use of a cooling catheter inserted in the femoral vein).

*Please note: In-hospital hypothermia rate is limited to patients who were admitted to the hospital.

Patients with Sustained ROSC in the field are found on page 1. Patients without sustained ROSC in the field are found on page 2.

