



## CARES/PAROS UPDATE

November 7th, 2015



CARES Overview

1

## Software Updates

- New Multi-Hospital Account (PAROS)
- Agency/Hospital Info exports
- Reports User Guide; Reports Webinars
- Addition of “Date Created” and “Date Last Saved” to exports

# Report Updates

- **Utstein Report**
  - Added Bystander Intervention Rates
- **Summary Report**
  - Filter by Before/After EMS arrival
- **Hospital Report**
  - Filter by Direct from EMS or Transferred
- **CAD Times Reports**
  - Added National benchmarking group
- **Filter all reports by First Responder**
- **Survival Report**

<b>CARES Survival Report</b>					
All Agencies/National Data					
Service Date: From 1/1/13 Through 12/31/13 Non-Traumatic Etiology					
	<b>OVERALL N = 3524</b>				
	Total N (%)	Sustained ROSC (%)	Survival to hospital admission (%)	Survival to hospital discharge (%)	Survival to discharge with CPC 1 or 2* (%)
<b>Total</b>	3524	1532 (43.5%)	1876 (53.3%)	2022 (57.4%)	2511 (71.3%)
<b>Location of Arrest</b>					
Home/Private	2402 (68.2%)	108 (4.5%)	620 (25.8%)	187 (7.7%)	126 (5.2%)
Neighborhood	436 (12.4%)	124 (28.4%)	166 (37.9%)	15 (3.4%)	8 (1.8%)
Public Setting	685 (19.4%)	370 (54.0%)	262 (38.3%)	120 (17.5%)	107 (15.6%)
<b>Arrest Witnessed Status</b>					
Unwitnessed	1798 (51.1%)	309 (17.2%)	332 (18.5%)	70 (3.9%)	42 (2.3%)
Bystander witnessed	1271 (36.1%)	518 (40.8%)	386 (30.4%)	168 (13.2%)	128 (10.1%)
911 Responder witnessed	454 (12.8%)	205 (45.2%)	178 (39.2%)	82 (18.1%)	61 (13.4%)
<b>Bystander CPR*</b>					
By/Arrest CPR	1342 (38.1%)	436 (32.5%)	368 (27.4%)	123 (9.2%)	90 (6.7%)
No Bystander CPR	1726 (49.1%)	463 (26.8%)	428 (24.8%)	195 (11.3%)	75 (4.3%)
Trained provider (First Responder) AED use	884 (25.1%)	258 (29.2%)	273 (30.9%)	95 (10.7%)	73 (8.3%)
No Bystander CPR (includes nursing home/healthcare facility events)	1012 (28.7%)	402 (39.7%)	390 (38.6%)	112 (11.0%)	72 (7.1%)
<b>Initial Arrest Rhythm</b>					
Shockable	563 (15.4%)	304 (53.8%)	391 (69.3%)	162 (28.8%)	138 (24.5%)
Non-shockable	2963 (84.6%)	318 (10.8%)	685 (23.1%)	363 (12.3%)	113 (3.8%)
<b>AED Use</b>					
Bystander AED use*	155 (4.4%)	59 (38.1%)	50 (32.3%)	29 (18.7%)	24 (15.5%)
Bystander AED use* (includes nursing home/healthcare facility events)	32 (0.9%)	25 (78.1%)	20 (62.5%)	18 (56.3%)	16 (50.0%)
Trained provider (First Responder) AED use	340 (9.7%)	218 (64.1%)	182 (53.5%)	61 (17.9%)	36 (10.6%)
<b>Utstein</b>					
Witnessed and shockable	482 (13.7%)	225 (46.7%)	220 (45.7%)	127 (26.3%)	113 (23.4%)
Bystander witnessed and shockable	360 (10.2%)	125 (34.4%)	125 (34.4%)	87 (23.9%)	74 (20.5%)
<b>Hypothermia</b>					
Fast hypothermia	474 (13.5%)	343 (72.4%)	280 (59.1%)	83 (17.5%)	50 (10.5%)
In-hospital hypothermia (during admitted patient)	322 (9.1%)			145 (45.0%)	80 (24.8%)


# Software Development

- DA-CPR Module updates
  - Report
  - Grey out module if arrest was witnessed by 911 Responder
  - Updates to data dictionary and user guide
- TTM Module
  - Ability to export data as App Admin
  - Addition of “Date and time of ED arrival”
- Supplemental Hospital Elements
  - “Why was hypothermia not initiated/continued in the hospital?”
  - Medical Record Number
- Dashboard Report

# Dashboard Report

CARES OHCA Agency Dashboard Report											
3814											
Agency Name: XXXX											
	Patient Outcome Indicators									Activity Indicators	
	ALL CASES			WITNESSED CASES			WITNESSED W/VV CASES			WITNESSED INTERFERERS*	
	Sustained ROSC	Survived to Hospital Discharge	Survived to Discharge with CPC.1 or 2	Sustained ROSC	Survived to Hospital Discharge	Survived to Discharge with CPC.1 or 2	Sustained ROSC	Survived to Hospital Discharge	Survived to Discharge with CPC.1 or 2	CPR	ARJ
My Agency (N)											
My Agency Cases (N)											
Report Cases (N)											
Report 200% Percentile											
Report Median (50% Percentile)											
Report 80% Percentile											

Inclusion Criteria: An case of hospital cardiac arrest whose resuscitation is attempted by a 911 responder (CPR and/or defibrillation). This would also include patients that received an ARJ shock by a bystander prior to the arrival of 911 responders. **Exclusion Criteria:** Please note, this report includes REC Responder witnessed arrests. **NOTE:** Analysis includes patients with missing hospital outcomes (Agency N = 4; Report N = 4). \* Excludes CPR and ARJ that occur outside of hospital/ambulance facility arrests.





## CARES CPR METRICS:

PERFORMANCE MEASURES FOR  
CARDIO-PULMONARY  
RESUSCITATION

### OPERATIONAL FLOW



Device



Code Review



ePCR

# Quality CPR Metrics Module

**CPR Metrics Detail:**

Metric Name	Value	Status
Goal #	8777777777	
Date of Arrest	06/22/2014	
Average CPR Rate/Min	250	
Percentage of CPR Compressions Within 100-130 Compressions per Minute	5	
Average Chest Compression Depth	5.0	
Percentage of Good Compressions With a Minimum of 2 Inches of Depth	99	
CPR Compression Fraction	37	
Average Pre-Shock Time	44	
Longest Pre-Shock Pause	66	
Average Ventilation Rate	391	
Percentage of Ventilations less than 12 per minute	0	
Maximum Cardiac Arrest ETOD2	20	
ETOD2 Used	No	
External Mechanical CPR Device Used	Pneum-Control Loop Device Used	
Pre-Selected Mechanical CPR Device Pause	32	
Start Time of Manual CPR by EMS	06/22/2014 08:00:39	
Start Time of Manual CPR by EMS	06/22/2014 08:09:12	
Start Time of Mechanical CPR by EMS	06/22/2014 13:44:00	
Time of First Defibrillation by EMS	06/22/2014 13:40:22	
Rate/Time of Return of Spontaneous Circulation	06/22/2014 13:46:00	
Rate/Time at End of CPR Event	06/22/2014 13:46:00	

**CARES**  
Cardiac Arrest Registry  
to Enhance Survival

CARES Overview 9

# CPR Quality Metrics Module

- Developed XML file to accept device data on additional metrics that measure quality of CPR during an event
- Supplemental module
- Beta testing phase with XML exchange process of data from ePCR platform to CARES
- Will also allow for direct data entry online.

## Recent CARES Publications

- Vyas A, Chan PS, Cram P, Nallamothu BK, McNally B, Girotra S. Early Coronary Angiography and Survival After Out-of-Hospital Cardiac Arrest. *Circulation: Cardiovascular Intervention*. 8(10):1-7 (2015).
- Jayaram N, McNally B, Tang F, Chan P. Survival After Out-of-Hospital Cardiac Arrest in Children. *Journal of the American Heart Association*. 4:1-8 (2015).
- Malta Hansen C, Kragholm K, Pearson DA, Tyson C, Monk L, Myers B, Nelson D, Dupre ME, Fosbøl EL, Jollis JG, Strauss B, Anderson ML, McNally B, Granger CB. Association of Bystander and First-Responder Intervention With Survival After Out-of-Hospital Cardiac Arrest in North Carolina, 2010-2013. *JAMA*. 314(3):255-64 (2015).
- Andersen LW, Bivens MJ, Giberson T, Giberson B, Mottley JL, Gautam S, Saliccioli JD, Cocchi MN, McNally B, Donnino MW. The relationship between age and outcome in out-of-hospital cardiac arrest patients. *Resuscitation*. S0300-9572(15)00218-X (2015).
- Girotra S, van Diepen S, Nallamothu BK, Carrel M, Vellano KM, Anderson ML, McNally B, Abella B, Sasson C, Chan PS. Regional Variation in Out-Of-Hospital Cardiac Arrest Survival in the United States. *Under Review*

## Annual Meeting Registry Discussion

- CARES/PAROS –NAEMSP
- PAROS-ASEM
- EuReCA-ERC