

# CARES Survival Report

Incident State: MI | Date of Arrest: 01/01/13 - 12/31/22 | Non-Traumatic Etiology

	OVERALL N = 65627				
	Total N (%)	Sustained ROSC (%)	Survival to hospital admission (%)	Survival to hospital discharge (%)	Survival to discharge with CPC 1 or 2 <sup>†</sup> (%)
<b>Total</b>	65627	18367 (28.0)	16365 (24.9)	5371 (8.2)	4399 (6.7)
<b>Location of Arrest</b>					
Home/Residence	46886 (71.4)	12711 (27.1)	11350 (24.2)	3300 (7.0)	2673 (5.7)
Nursing Home	9370 (14.3)	2150 (22.9)	1433 (15.3)	313 (3.3)	158 (1.7)
Public Setting	9371 (14.3)	3506 (37.4)	3582 (38.2)	1758 (18.8)	1568 (16.7)
<b>Arrest Witnessed Status</b>					
Unwitnessed	34631 (52.8)	6587 (19.0)	5550 (16.0)	1302 (3.8)	984 (2.8)
Bystander witnessed	23974 (36.5)	9193 (38.3)	8145 (34.0)	3057 (12.8)	2563 (10.7)
911 Responder witnessed	7020 (10.7)	2586 (36.8)	2669 (38.0)	1011 (14.4)	852 (12.1)
<b>Bystander CPR*</b>					
Bystander CPR	26414 (45.1)	7715 (29.2)	6539 (24.8)	2429 (9.2)	2010 (7.6)
No Bystander CPR	32190 (54.9)	8065 (25.1)	7156 (22.2)	1930 (6.0)	1537 (4.8)
Bystander CPR (excludes nursing home/healthcare facility events)	17281 (36.1)	5415 (31.3)	4915 (28.4)	1970 (11.4)	1709 (9.9)
No Bystander CPR (excludes nursing home/healthcare facility events)	30577 (63.9)	7644 (25.0)	6854 (22.4)	1852 (6.1)	1487 (4.9)
<b>Initial Arrest Rhythm</b>					
Shockable	10971 (16.7)	4907 (44.7)	4804 (43.8)	2703 (24.6)	2414 (22.0)
Non-shockable	54655 (83.3)	13460 (24.6)	11561 (21.2)	2668 (4.9)	1985 (3.6)
<b>AED Use</b>					
Bystander AED use*	5686 (9.7)	1668 (29.3)	1299 (22.8)	565 (9.9)	462 (8.1)
Bystander AED use* (excludes nursing home/healthcare facility events)	877 (1.8)	416 (47.4)	404 (46.1)	269 (30.7)	259 (29.5)
Trained provider (First Responder) AED use	16892 (25.7)	4924 (29.1)	4220 (25.0)	1475 (8.7)	1271 (7.5)
<b>Utstein</b>					
Witnessed and shockable	7610 (11.6)	3786 (49.8)	3716 (48.8)	2220 (29.2)	2011 (26.4)
Bystander witnessed and shockable	6404 (9.8)	3139 (49.0)	3093 (48.3)	1791 (28.0)	1612 (25.2)
<b>Hypothermia</b>					
Field hypothermia	463 (0.7)	271 (58.5)	209 (45.1)	66 (14.3)	54 (11.7)
In-hospital hypothermia/TTM (among admitted patients)	7583 (46.3)	--	--	2179 (28.7)	1613 (21.3)

**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.

NOTE: Analysis excludes patients with missing hospital outcome (N=15).

\*Bystander CPR and bystander AED use calculations exclude 911 Responder witnessed events.

<sup>†</sup>CPC missing for 0 patients.

# CARES Survival Report

Incident State: MI | Date of Arrest: 01/01/13 - 12/31/22 | Non-Traumatic Etiology

	Age = <1 years N = 888				
	Total N (%)	Sustained ROSC (%)	Survival to hospital admission (%)	Survival to hospital discharge (%)	Survival to discharge with CPC 1 or 2 <sup>†</sup> (%)
<b>Total</b>	888	85 (9.6)	135 (15.2)	39 (4.4)	31 (3.5)
<b>Location of Arrest</b>					
Home/Residence	844 (95.0)	78 (9.2)	128 (15.2)	37 (4.4)	29 (3.4)
Nursing Home	4 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Public Setting	40 (4.5)	7 (17.5)	7 (17.5)	2 (5.0)	2 (5.0)
<b>Arrest Witnessed Status</b>					
Unwitnessed	718 (80.9)	41 (5.7)	82 (11.4)	17 (2.4)	12 (1.7)
Bystander witnessed	145 (16.3)	38 (26.2)	45 (31.0)	18 (12.4)	16 (11.0)
911 Responder witnessed	25 (2.8)	6 (24.0)	8 (32.0)	4 (16.0)	3 (12.0)
<b>Bystander CPR*</b>					
Bystander CPR	364 (42.2)	42 (11.5)	60 (16.5)	23 (6.3)	18 (4.9)
No Bystander CPR	499 (57.8)	37 (7.4)	67 (13.4)	12 (2.4)	10 (2.0)
Bystander CPR (excludes nursing home/healthcare facility events)	356 (41.8)	41 (11.5)	59 (16.6)	22 (6.2)	17 (4.8)
No Bystander CPR (excludes nursing home/healthcare facility events)	495 (58.2)	37 (7.5)	66 (13.3)	12 (2.4)	10 (2.0)
<b>Initial Arrest Rhythm</b>					
Shockable	27 (3.0)	2 (7.4)	2 (7.4)	0 (0.0)	0 (0.0)
Non-shockable	861 (97.0)	83 (9.6)	133 (15.4)	39 (4.5)	31 (3.6)
<b>AED Use</b>					
Bystander AED use*	4 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Bystander AED use* (excludes nursing home/healthcare facility events)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Trained provider (First Responder) AED use	161 (18.1)	11 (6.8)	19 (11.8)	1 (0.6)	0 (0.0)
<b>Utstein</b>					
Witnessed and shockable	13 (1.5)	2 (15.4)	2 (15.4)	0 (0.0)	0 (0.0)
Bystander witnessed and shockable	11 (1.2)	2 (18.2)	2 (18.2)	0 (0.0)	0 (0.0)
<b>Hypothermia</b>					
Field hypothermia	3 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
In-hospital hypothermia/TTM (among admitted patients)	15 (11.1)	--	--	8 (53.3)	7 (46.7)

**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.

NOTE: Analysis excludes patients with missing hospital outcome (N=1).

\*Bystander CPR and bystander AED use calculations exclude 911 Responder witnessed events.

<sup>†</sup>CPC missing for 0 patients.

# CARES Survival Report

Incident State: MI | Date of Arrest: 01/01/13 - 12/31/22 | Non-Traumatic Etiology

	Age = 1 - 12 years N = 484				
	Total N (%)	Sustained ROSC (%)	Survival to hospital admission (%)	Survival to hospital discharge (%)	Survival to discharge with CPC 1 or 2 <sup>†</sup> (%)
<b>Total</b>	484	111 (22.9)	145 (30.0)	59 (12.2)	52 (10.7)
<b>Location of Arrest</b>					
Home/Residence	417 (86.2)	85 (20.4)	114 (27.3)	40 (9.6)	33 (7.9)
Nursing Home	0 (0.0)	0 (NaN)	0 (NaN)	0 (NaN)	0 (NaN)
Public Setting	67 (13.8)	26 (38.8)	31 (46.3)	19 (28.4)	19 (28.4)
<b>Arrest Witnessed Status</b>					
Unwitnessed	321 (66.3)	52 (16.2)	81 (25.2)	26 (8.1)	21 (6.5)
Bystander witnessed	136 (28.1)	53 (39.0)	52 (38.2)	27 (19.9)	26 (19.1)
911 Responder witnessed	27 (5.6)	6 (22.2)	12 (44.4)	6 (22.2)	5 (18.5)
<b>Bystander CPR*</b>					
Bystander CPR	216 (47.3)	64 (29.6)	77 (35.6)	38 (17.6)	36 (16.7)
No Bystander CPR	241 (52.7)	41 (17.0)	56 (23.2)	15 (6.2)	11 (4.6)
Bystander CPR (excludes nursing home/healthcare facility events)	211 (46.9)	64 (30.3)	77 (36.5)	38 (18.0)	36 (17.1)
No Bystander CPR (excludes nursing home/healthcare facility events)	239 (53.1)	40 (16.7)	55 (23.0)	15 (6.3)	11 (4.6)
<b>Initial Arrest Rhythm</b>					
Shockable	33 (6.8)	16 (48.5)	13 (39.4)	10 (30.3)	10 (30.3)
Non-shockable	451 (93.2)	95 (21.1)	132 (29.3)	49 (10.9)	42 (9.3)
<b>AED Use</b>					
Bystander AED use*	10 (2.2)	5 (50.0)	6 (60.0)	4 (40.0)	4 (40.0)
Bystander AED use* (excludes nursing home/healthcare facility events)	7 (1.6)	5 (71.4)	6 (85.7)	4 (57.1)	4 (57.1)
Trained provider (First Responder) AED use	129 (26.7)	32 (24.8)	33 (25.6)	11 (8.5)	9 (7.0)
<b>Utstein</b>					
Witnessed and shockable	23 (4.8)	16 (69.6)	12 (52.2)	9 (39.1)	9 (39.1)
Bystander witnessed and shockable	21 (4.3)	16 (76.2)	10 (47.6)	8 (38.1)	8 (38.1)
<b>Hypothermia</b>					
Field hypothermia	5 (1.0)	3 (60.0)	4 (80.0)	2 (40.0)	2 (40.0)
In-hospital hypothermia/TTM (among admitted patients)	24 (16.6)	--	--	7 (29.2)	6 (25.0)

**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.

NOTE: Analysis excludes patients with missing hospital outcome (N=0).

\*Bystander CPR and bystander AED use calculations exclude 911 Responder witnessed events.

<sup>†</sup>CPC missing for 0 patients.

# CARES Survival Report

Incident State: MI | Date of Arrest: 01/01/13 - 12/31/22 | Non-Traumatic Etiology

	Age = 13 - 18 years N = 320				
	Total N (%)	Sustained ROSC (%)	Survival to hospital admission (%)	Survival to hospital discharge (%)	Survival to discharge with CPC 1 or 2 <sup>†</sup> (%)
<b>Total</b>	320	100 (31.2)	123 (38.4)	49 (15.3)	40 (12.5)
<b>Location of Arrest</b>					
Home/Residence	248 (77.5)	72 (29.0)	78 (31.5)	24 (9.7)	18 (7.3)
Nursing Home	1 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Public Setting	71 (22.2)	28 (39.4)	45 (63.4)	25 (35.2)	22 (31.0)
<b>Arrest Witnessed Status</b>					
Unwitnessed	189 (59.1)	39 (20.6)	46 (24.3)	13 (6.9)	9 (4.8)
Bystander witnessed	113 (35.3)	56 (49.6)	68 (60.2)	32 (28.3)	29 (25.7)
911 Responder witnessed	18 (5.6)	5 (27.8)	9 (50.0)	4 (22.2)	2 (11.1)
<b>Bystander CPR*</b>					
Bystander CPR	135 (44.7)	56 (41.5)	64 (47.4)	32 (23.7)	30 (22.2)
No Bystander CPR	167 (55.3)	39 (23.4)	50 (29.9)	13 (7.8)	8 (4.8)
Bystander CPR (excludes nursing home/healthcare facility events)	131 (44.0)	55 (42.0)	62 (47.3)	32 (24.4)	30 (22.9)
No Bystander CPR (excludes nursing home/healthcare facility events)	167 (56.0)	39 (23.4)	50 (29.9)	13 (7.8)	8 (4.8)
<b>Initial Arrest Rhythm</b>					
Shockable	51 (15.9)	26 (51.0)	36 (70.6)	28 (54.9)	25 (49.0)
Non-shockable	269 (84.1)	74 (27.5)	87 (32.3)	21 (7.8)	15 (5.6)
<b>AED Use</b>					
Bystander AED use*	17 (5.6)	10 (58.8)	14 (82.4)	8 (47.1)	8 (47.1)
Bystander AED use* (excludes nursing home/healthcare facility events)	14 (4.7)	9 (64.3)	12 (85.7)	8 (57.1)	8 (57.1)
Trained provider (First Responder) AED use	97 (30.3)	31 (32.0)	34 (35.1)	11 (11.3)	10 (10.3)
<b>Utstein</b>					
Witnessed and shockable	39 (12.2)	20 (51.3)	28 (71.8)	22 (56.4)	20 (51.3)
Bystander witnessed and shockable	34 (10.6)	20 (58.8)	26 (76.5)	21 (61.8)	20 (58.8)
<b>Hypothermia</b>					
Field hypothermia	4 (1.3)	2 (50.0)	2 (50.0)	1 (25.0)	1 (25.0)
In-hospital hypothermia/TTM (among admitted patients)	32 (26.0)	--	--	16 (50.0)	12 (37.5)

**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.

NOTE: Analysis excludes patients with missing hospital outcome (N=0).

\*Bystander CPR and bystander AED use calculations exclude 911 Responder witnessed events.

<sup>†</sup>CPC missing for 0 patients.

# CARES Survival Report

Incident State: MI | Date of Arrest: 01/01/13 - 12/31/22 | Non-Traumatic Etiology

	Age = >18 years N = 63868				
	Total N (%)	Sustained ROSC (%)	Survival to hospital admission (%)	Survival to hospital discharge (%)	Survival to discharge with CPC 1 or 2 <sup>†</sup> (%)
<b>Total</b>	63868	18056 (28.3)	15946 (25.0)	5220 (8.2)	4273 (6.7)
<b>Location of Arrest</b>					
Home/Residence	45324 (71.0)	12463 (27.5)	11016 (24.3)	3197 (7.1)	2592 (5.7)
Nursing Home	9362 (14.7)	2150 (23.0)	1433 (15.3)	313 (3.3)	158 (1.7)
Public Setting	9182 (14.4)	3443 (37.5)	3497 (38.1)	1710 (18.6)	1523 (16.6)
<b>Arrest Witnessed Status</b>					
Unwitnessed	33375 (52.3)	6449 (19.3)	5335 (16.0)	1245 (3.7)	941 (2.8)
Bystander witnessed	23554 (36.9)	9040 (38.4)	7974 (33.9)	2978 (12.6)	2491 (10.6)
911 Responder witnessed	6937 (10.9)	2566 (37.0)	2636 (38.0)	996 (14.4)	841 (12.1)
<b>Bystander CPR*</b>					
Bystander CPR	25682 (45.1)	7550 (29.4)	6334 (24.7)	2334 (9.1)	1924 (7.5)
No Bystander CPR	31246 (54.9)	7939 (25.4)	6975 (22.3)	1889 (6.0)	1508 (4.8)
Bystander CPR (excludes nursing home/healthcare facility events)	16570 (35.9)	5253 (31.7)	4714 (28.4)	1877 (11.3)	1625 (9.8)
No Bystander CPR (excludes nursing home/healthcare facility events)	29639 (64.1)	7519 (25.4)	6675 (22.5)	1811 (6.1)	1458 (4.9)
<b>Initial Arrest Rhythm</b>					
Shockable	10856 (17.0)	4862 (44.8)	4752 (43.8)	2664 (24.5)	2379 (21.9)
Non-shockable	53011 (83.0)	13194 (24.9)	11194 (21.1)	2556 (4.8)	1894 (3.6)
<b>AED Use</b>					
Bystander AED use*	5641 (9.9)	1653 (29.3)	1279 (22.7)	553 (9.8)	450 (8.0)
Bystander AED use* (excludes nursing home/healthcare facility events)	855 (1.9)	402 (47.0)	386 (45.1)	257 (30.1)	247 (28.9)
Trained provider (First Responder) AED use	16503 (25.8)	4850 (29.4)	4134 (25.0)	1452 (8.8)	1252 (7.6)
<b>Utstein</b>					
Witnessed and shockable	7532 (11.8)	3747 (49.7)	3673 (48.8)	2188 (29.0)	1982 (26.3)
Bystander witnessed and shockable	6335 (9.9)	3100 (48.9)	3054 (48.2)	1761 (27.8)	1584 (25.0)
<b>Hypothermia</b>					
Field hypothermia	451 (0.7)	266 (59.0)	203 (45.0)	63 (14.0)	51 (11.3)
In-hospital hypothermia/TTM (among admitted patients)	7507 (47.1)	--	--	2146 (28.6)	1587 (21.1)

**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.

NOTE: Analysis excludes patients with missing hospital outcome (N=13).

\*Bystander CPR and bystander AED use calculations exclude 911 Responder witnessed events.

<sup>†</sup>CPC missing for 0 patients.