



Randomized **C**luster **E**valuation of **C**ardiac **A**Rrest **S**ystems **RACE-CARS**

Acronyms Page

1. ACLS	advanced cardiac life support
2. ACS	acute coronary syndrome
3. AED	automated external defibrillator
4. AHA	American Heart Association
5. ALS	advanced life support
6. AMI	acute myocardial infarction
7. BLS	basic life support
8. CAC	cardiac arrest center
9. CARES	Cardiac Arrest Registry to Enhance Survival
10. CCC	clinical coordinating center
11. CO2	carbon monoxide
12. CPC	cerebral performance category
13. CPR	cardiopulmonary resuscitation
14. CQI	continuous quality improvement
15. DAPCR	dispatch assisted cardiopulmonary resuscitation
16. DCC	data coordinating center
17. DCRI	Duke Clinical Research Institute
18. DNR	do not resuscitate
19. DSD	double sequence defibrillation
20. DSMB	data safety monitoring board
21. ECC	emergency cardiovascular care
22. ECG	electrocardiogram
23. ED	emergency department
24. EMD	emergency medical dispatch
25. EMS	emergency medical service
26. EMT	emergency medical technician
27. ERC	European Resuscitation Council
28. HP CPR	high performance cardiopulmonary resuscitation
29. i.o.	intraosseous
30. i.v.	intravenous
31. ICCA	incident command for cardiac arrest

32. ILCOR	International Liaison Committee on Resuscitation
33. IOM	Institute of Medicine
34. NC	North Carolina
35. NHLBI	National Heart, Lung and Blood Institute
36. NIH	National Institute of Health
37. OHCA	out of hospital cardiac arrest
38. PAD	public access defibrillation
39. PEA	pulseless electrical activity
40. PPCI	primary percutaneous coronary intervention
41. PSAP	public safety answering point
42. QI	quality improvement
43. QOL	quality of life
44. RACE-CARS	RANdomized Cluster Evaluation of Cardiac ARrest Systems
45. RCT	randomized clinical trial
46. RE-AIM	reach, effectiveness, adoption, implementation, maintainance
47. ROSC	return of spontaneous circulation
48. SCA	sudden cardiac arrest
49. SCD	sudden cardiac death
50. SF-36	short form health survey
51. SOC	system of care
52. STEMI	ST-elevating myocardial infarction
53. T-CPR	telephone assisted cardiopulmonary resuscitation
54. TFCPR	team focused cardiopulmonary resuscitation
55. VF	ventricular fibrillation
56. VT	ventricular tachycardia
57. YMCA	Young Men's Christian Association

Definitions

1. **Advanced cardiac life support (ACLS):** a set of clinical algorithms for the urgent management of cardiac arrest. Compared to basic life support (BLS) which can be undertaken by basically everybody, ACLS includes more “advanced” techniques such as ECG interpretation, drug treatment, intubation, and more and is mostly intended to be used by health care professionals.
2. **Asystole:** cardiac standstill manifested by a “flat line” ECG rhythm and absence of a pulse. It represents, together with pulseless electrical activity (PEA), one of the “non-shockable rhythms”.
3. **Automated External Defibrillator (AED):** a device designed for use by untrained or briefly trained laypersons for automatic analysis of heart rhythm and defibrillation of a person in cardiac arrest.
4. **Bystander CPR:** Resuscitation attempts by any person, untrained or briefly trained, witnessing a cardiac arrest.
5. **Cardiac Arrest:** The sudden loss of blood flow resulting from failure of the heart to pump effectively. If untreated, it will result in the death of the person.
6. **Cardiac arrest center:** Dedicated hospitals for the admission of cardiac arrest survivors or patients undergoing CPR attempts that offer a certain procedures / diagnostics 24/7.
7. **Cardiac Arrest Registry to Enhance Survival (CARES) Registry:** a national registry of cardiac arrest care and outcome supported by the Centers for Disease Control and Prevention and maintained at Emory University. <http://www.cdc.gov/dhosp/cares.htm>
8. **Cardiopulmonary Resuscitation (CPR):** an emergency procedure involving manual chest compressions (sometimes) with ventilation with the aim to preserve organ and brain perfusion and function.
9. **Cerebral performance category score (CPC-score):** The most commonly used tool to assess neurologic function in patients after cardiac arrest. Most studies define a good outcome as a CPC score of 1 or 2, and a poor outcome (severe neurological disability, persistent vegetative state or death) as CPC scores 3, 4, or 5.
10. **Chain of survival:** Refers to a series of actions that, properly executed, increase the chance of survival in cardiac arrest. Like any chain, the chain of survival is only as strong as its weakest link. The six interdependent links in the chain of survival as defined in the newest 2020 guidelines of the American Heart Association are 1) activation of emergency response 2) high-quality CPR 3) defibrillation 4) advanced resuscitation 5) post cardiac arrest care and 6) recovery.

11. **Clinical coordinating center (CCC):** Responsible for overall data management, monitoring and communication among all sites, and general oversight of the conduct of a human subjects research project.
12. **Cluster randomized trial:** A scientific study in which groups of subjects, in the case of RACE-CARS whole counties, are randomized to a certain treatment in an order to test the effects of this treatment.
13. **Compression-only CPR:** Also called “hands-only CPR” are CPR attempts involving only chest compressions without artificial ventilation. This method is recommended as the method of choice for the untrained rescuer or those who are not proficient as it is easier to perform and instructions are easier to give over the phone.
14. **Coronary angiography:** X-ray pictures of the vessels that supply blood to the heart. Blockage of such vessels often causes cardiac arrest.
15. **Data coordinating center (DCC):** a site that is responsible for the collection, verification and storage of data collected from all sites involved in a multi-site trial.
16. **Defibrillation:** Treatment of life-threatening cardiac rhythm disorders, specifically pulseless ventricular tachycardia and ventricular fibrillation using electric current.
17. **Dispatch Assisted Cardiopulmonary Resuscitation:** CPR attempts that are being instructed by the dispatch center to an untrained layperson.
18. **Electrocardiogram (ECG):** a recorded tracing of the electrical activity of the heart.
19. **Emergency Medical Service (EMS):** a system of health care professionals, facilities and equipment providing pre-hospital emergency care.
20. **Emergency Medical Technician (EMT):** an emergency responder trained to provide pre-hospital emergency medical services (EMS) to the critically ill and injured. There are multiple levels of training ranging from basic to intermediate to paramedic.
21. **EQ-5D:** is a standardized instrument for measuring generic health status. It has been widely used in population health surveys, clinical studies, economic evaluation and in routine outcome measurement in the delivery of operational healthcare.
22. **First Responder:** first medically trained responder to arrive on scene including police, fire, EMS or trained laypeople.
23. **Gasping:** Gasping or any non-normal breathing is a sign of a cardiac arrest and immediate chest compressions should be started. Gasping has been described as agonal or labored breathing, snoring, gurgling, moaning or snorting. It represents a medical emergency depending on laypeople resuscitation attempts.

24. **Good Samaritan laws:** offer legal protection to people giving reasonable assistance to people in a medical emergency in an order to reduce bystanders' hesitation to assist for fear of being sued or prosecuted.
25. **High performance CPR:** A set of techniques to optimize CPR efforts including optimization of chest compressions (minimal breaks, chest recoil, adequate compression depth and rate), ventilation, workflow, team member assignments and more.
26. **Lay rescuer CPR** – see bystander CPR
27. **Myocardial infarction (MI):** the sudden loss of blood flow to the heart due to blockage of a heart artery.
28. **OHCA:** The sudden loss of blood flow resulting from failure of the heart to pump effectively occurring outside of the hospital setting.
29. **Public access defibrillation:** A (systematic) placement of AEDs in frequented public places for the use of laypeople or trained people attending a cardiac arrest before arrival of EMS.
30. **Percutaneous Coronary Intervention:** The use of balloon tipped catheter to treat a narrowed or blocked coronary artery.
31. **Pragmatic trial:** a clinical trial (study) undertaken in a real-world health system practice
32. **Public Safety Answering Point (PSAP):** is a call center responsible for answering calls to an emergency telephone number for police, fire, and ambulance.
33. **Pulseless Electrical Activity (PEA):** Any heart rhythm observed on ECG that should be producing a pulse with the absence of a pulse.
34. **RACE-CARS trial:** RACE-CARS is a pragmatic cluster-randomized trial designed to compare a multifaceted community intervention to usual care in an order to improve outcomes of cardiac arrest.
35. **Return of Spontaneous Circulation (ROSC):** the return of a pulse following resuscitation.
36. **SF-36** The short form health survey is a 36-item, patient-reported survey of patient health used for measuring an individuals quality of life.
37. **ST-Elevation Myocardial Infarction (STEMI):** a myocardial infarction for which the ECG shows ST-segment elevation, usually associated with a recently closed coronary artery. Patients suffering this type of myocardial infarction are more likely to survive if their coronary artery is opened within 12 hours of onset.
38. **Telephone-assisted CPR (T-CPR):** see DA-CPR
39. **Ventricular Fibrillation (VF):** pulseless, chaotic activity of the heart muscle manifested by a disorganized and erratic ECG rhythm. Represents one of the two “shockable rhythms” of cardiac arrest which may be stopped using a defibrillator
40. **Ventricular Tachycardia (VT):** Represents one of the two “shockable rhythms” of cardiac

arrest which may be stopped using a defibrillator that arises from improper electrical activity.