

STEMI (OR NOT) – HERE I COME!



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EMS Director
Public Health Authority



EAGLES 2018

AHA ACC UPDATE TO

Circulation

Hello, Guest!

MY ALERTS

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2015 AMERICAN HEART ASSOCIATION GUIDELINES UPDATE FOR CARDIOPULMONARY RESUSCITATION AND EMERGENCY CARDIOVASCULAR CARE

Part 8: Post–Cardiac Arrest Care

2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

Clifton W. Callaway, Michael W. Donnino, Ericka L. Fink, Romergryko G. Geocadin, Eyal Golan, Karl B. Kern, Marion Leary, William J. Meurer, Mary Ann Peberdy, Trevonne M. Thompson, Janice L. Zimmerman

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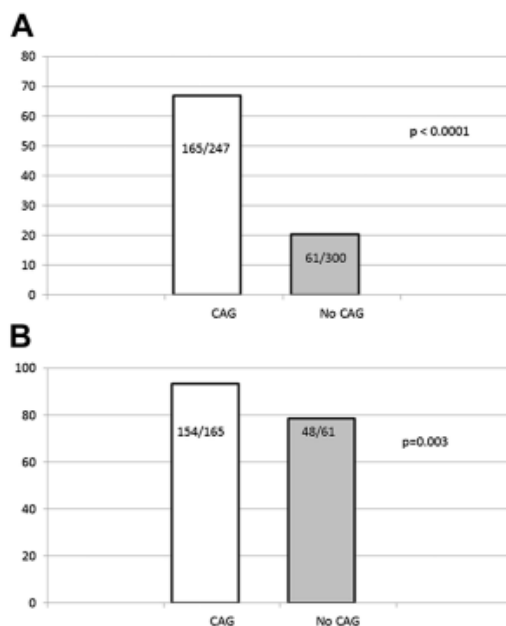
Clifton W. Callaway, Chair; Michael W. Donnino; Ericka L. Fink; Romergryko G. Geocadin;
Eyal Golan; Karl B. Kern; Marion Leary; William J. Meurer; Mary Ann Peberdy;
Trevonne M. Thompson; Janice L. Zimmerman

2015 RECOMMENDATIONS—UPDATED

- Coronary angiography should be performed **emergently** (rather than later in the hospital stay or not at all) for OHCA patients with suspected cardiac etiology of arrest and ST elevation on ECG (Class I, LOE B-NR).
- Emergency coronary angiography is reasonable for select (eg, electrically or hemodynamically unstable) adult patients who are comatose after OHCA of suspected cardiac origin but without ST elevation on ECG (Class IIa, LOE B-NR).
- Coronary angiography is reasonable in post–cardiac arrest patients for whom coronary angiography is indicated regardless of whether the patient is comatose or awake (Class IIa, LOE C-LD).

- ▶ A culprit vessel was more frequently identified in those with STEMI, but also in one-third of patients without STEMI (80.2% vs. 33.2%; $p = 0.001$).
- ▶ The majority of culprit vessels were occluded (STEMI, 92.7%; no STEMI, 69.2%; $p < 0.0001$).
- ▶ Among cardiac arrest survivors discharged from the hospital who had presented without STEMI, coronary angiography was associated with better functional outcome (93.3% vs. 78.7%; $p < 0.003$).

FIGURE 2: SURVIVAL TO DISCHARGE AND FAVORABLE NEUROLOGICAL OUTCOME IN THOSE WITHOUT ST ELEVATION



Karl B. Kern et al. JGIN 2015;8:1031-1040

American College of Cardiology Foundation



Coronary angiography is associated with improved survival to hospital discharge among patients without ST-segment elevation myocardial infarction **(A)** and with good neurological function (cerebral performance category 1 or 2) among survivors without ST-segment elevation myocardial infarction **(B)**. CAG = coronary angiography.

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NEURO-PROGNOSTICATION

2015 Recommendations—New and Updated

- The earliest time for prognostication using clinical examination in patients treated with TTM, where sedation or paralysis could be a confounder, may be 72 hours after return to normo-thermia (Class IIb, LOE C-EO).
- We recommend the earliest time to prognosticate a poor neurologic outcome using clinical examination in patients not treated with TTM is 72 hours after cardiac arrest (Class I, LOE B-NR).

NONE OF THESE SHOULD BE CONSIDERED ABSOLUTES.

Patients with multiple unfavorable resuscitation features

- | | |
|--------------------------|--|
| • Unwitnessed arrest | • pH <7.2 |
| • Initial rhythm: Non-VF | • Lactate >7 |
| • No bystander CPR | • Age >85 |
| • >30 min to ROSC | • End stage renal disease |
| • Ongoing CPR | • Noncardiac causes (e.g., traumatic arrest) |

- Unwitnessed – could have been seconds
- No bystander CPR – accuracy? And time?
- Age? What's the pre-arrest health status?
- ESRD – so VF arrest with single shock and ROSC?
- PH or Lactate – would you take a awake STEMI with lactate of 7.1 to lab?
- >30 min to ROSC – what if all other parameters are favorable?

CONCERNS: PUBLIC REPORTING



LETTER FROM DR. FRANK MASOUDI CHAIR NCDR MANAGEMENT BOARD



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The mission of the American College of Cardiology and the American College of Cardiology Foundation is to transform cardiovascular care and improve heart health.

June 23, 2016

Mark Creager, MD
President, American Heart Association

Clifton Callaway, MD
Chair, AHA Emergency Cardiovascular Care (ECC) Committee

James McCarthy, MD
Chair, AHA Mission:Lifeline – Resuscitation Subcommittee

Harper Stone, MD
Chair, AHA Mission:Lifeline – ACS Subcommittee

Peter Fromm, RN
Chair, AHA ECC Systems of Care Subcommittee

Michael Kurz, MD
Vice Chair, AHA ECC Systems of Care Subcommittee

Dear Dr. Creager, Dr. Callaway, Dr. McCarthy, Dr. Stone, Mr. Fromm, and Dr. Kurz:

I am writing in response to the letter dated March 28, 2016, from the American Heart Association expressing concerns about potential unintended negative consequences in publicly reporting the NQF 30-Day PCI mortality measure for STEMI patients [NQF #536: 30-day all-cause risk-standardized mortality rate following Percutaneous Coronary Intervention (PCI) for patients with ST segment elevation myocardial infarction (STEMI) or cardiogenic shock] without modifications.

ACC is aware of the 2013 AHA Scientific Statement on Impact of PCI Performance Reporting on Cardiac Resuscitation Centers and agree that patients with out-of-hospital cardiac arrest (OHCA) who undergo PCI procedures are at particularly high risk for death. The current clinical variables in the CathPCI Registry do not permit the identification of this cohort of patients, thus precluding the capacity to consider this population differently in measures. A version update that is planned for release in 2017 will help address but not completely solve the challenges associated with identifying and fairly accounting for these high-risk patients.

Currently, the NCDR plans to provide feedback with national benchmarks on the current PCI mortality measures to hospitals only for the purposes of internal quality improvement. Hospital reporting of NQF measure #536: 30-day all-cause risk-standardized mortality rate following Percutaneous Coronary Intervention (PCI) for patients with ST segment elevation myocardial infarction (STEMI) or cardiogenic shock and the companion NQF measures #0535: 30-day all-cause risk-standardized mortality rate following percutaneous coronary intervention (PCI) for patients without ST segment

elevation myocardial infarction (STEMI) and without cardiogenic shock are planned for release later this year based on current CathPCI Registry version (4.5). As the AHA scientific statement notes, there is value in reporting on outcomes to hospitals. In addition, reporting allows ACC the opportunity to learn from hospitals about aspects of the measure construct that might benefit from refinement. When we begin providing information on these measures to hospitals, we will make it clear to both hospitals and the broader NCDR community that this information is intended only for the purposes of facilitating quality improvement and not for accountability including use in value-based purchasing programs.

With the release of the new version of the CathPCI data specifications (v. 5), the NCDR plans to update all three of its measures for risk adjusted mortality after PCI, at which time we will consider ways to update our approach to patients with pre-procedural cardiac arrest. The NCDR will follow its standard processes for transparency in measure development by including an open comment period on proposed updates to the measures.

Although the ACC has also initiated a national voluntary public reporting program, and although the intent of this program is ultimately to include outcomes measures such as risk-adjusted mortality after PCI, there is no intent to include the measures as currently specified in this program. This will be considered after version 5 of the CathPCI Registry has been implemented for at least one year and the measures are updated.

I trust the update in this letter provides the assurance you seek that ACC does not intend to publicly report the PCI 30-day mortality measures at this time.

In closing, I also want to note that neither Dr. Rumsfeld, Ms. Slattery nor myself received your letter of November X, 2014 that was forwarded with your more recent communication. We would have responded to the earlier letter had we received it.

Regards,

Fred Masoudi, MD, MSPH
Chair, NCDR Management Board
Chief Science Officer, NCDR
Trustee, ACC Board of Trustees

CC: John Rumsfeld, MD, PhD
Bill Oetgen, MD, MBA
Rose Marie Robertson, MD
Lara Slattery
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HFD REPORTING FORM

PATIENT OUTCOME REQUEST FORM

| To: | | Fax Number: | | | Hospital: | | | As Of: | | |
|--|-----------------------|----------------------|------------|------|--------------------|-----|-----------------|--|---|---|
| From: | | Phone Number: | | | Fax Number: | | | | | |
| HFD-EMS follow-up on all Code III (Trauma/Medical/Cardiac Arrest) patients when we provide ALS in the field. Would you please help us by checking your records for the following patient(s) and provide us the OUTCOME & DATE . Thank You | | | | | | | | | | |
| CODE iii (TRAUMA/MEDICAL/CARDIAC ARREST) PATIENT OUTCOME (S) NEEDED | | | | | | | | | | |
| Date Transferred To EC | Medical Record Number | Last Name | First Name | Race | Gender | DOB | Date of Outcome | SPECIFY OUTCOME BY CHECKING APPROPRIATE BOXES | REASON FOR NO CARDIAC CATH: | PATIENT DISCHARGED ALIVE TO: |
| | | | | | | | | <input type="checkbox"/> Deceased In EC: <input type="checkbox"/> Deceased After Hosp. Admission <input type="checkbox"/> D/C'd Hospital Alive <input type="checkbox"/> ICU <input type="checkbox"/> General Care Alive <input type="checkbox"/> Still in Hospital <input type="checkbox"/> Admitted to CATH Lab <input type="checkbox"/> Yes <input type="checkbox"/> No Date: _____ Time: _____ | NON-CARDIAC PATHOLOGY: _____ CONTRAINDICATION FOR CATH: _____ _____ | Home Hospice Facility Long Term Care Fac. Rehabilitation Center Hospital Transfer |