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Chest Pain: Outpatient or Inpatient

Instructor Information

Patient Name: John Madsen

Simulation Developer(s): Patricia Amaro, John Gordon, Debra A. Mosley, and Sharon Narducci

Scenario Purpose:

- Provide a safe-learning opportunity for the new nurse employee to utilize professional skills and facility specific protocol to provide the first five minutes of care for the inpatient or outpatient experiencing acute chest pain leading to cardiac arrest requiring use of an AED/defibrillator

Learner(s):

- **Registered Nurses (RN), Licensed Practical Nurses (LPN), Unlicensed Assistive Personnel (UAP)**
- **Others as desired, depending on facility protocols**
- **Recommend no more than 6 learners (3 of which can be observers)**

Time Requirements:

- **Setup:** 5 minutes
- **Scenario:** 25 minutes
- **Debrief:** 25 minutes
- **Reset/Breakdown:** 5 minutes

Confederate(s):

- **X-Ray tech**
- **Assistance (Rapid Response Team (RRT), Code Team, etc.)**
- **Family member (if outpatient)**
- **Start with standardized patient and switch to high fidelity manikin (HFM) when the x-ray tech asks the learners to exit the room while they perform a portable chest x-ray**

Scenario Prologue:

- **Outpatient: (learners are in "nurses' station, patient arrives ambulatory with spouse from entrance door)** Sixty-five (65) year-old male presents to the outpatient clinic complaining of chest pressure and left arm pain for four hours unrelieved with rest after cutting the grass accompanied by spouse
- **Inpatient: (Pt is in medical bed)** Sixty-five (65) year-old male admitted with complaints of chest pressure and left arm pain unrelieved with rest
- **The simulation begins when the learners enter the room**

Patient information:

- **General:** Diaphoretic, anxious
- **Weight/Height:** 113.6kg (250lbs) 172.7cm (68in)
- **Vital Signs:** BP 88/56; Temp 98.7; HR 120; RR 24; O2 Sat 93%
- **Pain:** 7/10 in chest and left arm
- **Neurological:** Alert, oriented, and anxious
- **Respiratory:** Clear; tachypneic
- **Cardiac:** Sinus tachycardia with ST elevation
- **Gastrointestinal:** Unremarkable
- **Genitourinary:** Unremarkable
- **Musculoskeletal:** Unremarkable
- **Skin:** Warm, dry, and intact
- **Past Medical History:** Type 2 diabetes
- **Past Surgical History:** Cholecystectomy

Medications:

- 500 mg Metformin three times daily with meals

Allergies:

- No known drug allergies (NKDA)

Confederate

Change in Physiology

Disclaimer: All names used in scenario are fictious and used for examples only.

Learning Objectives

Patient Name: John Madsen
Simulation Developer(s): Patricia Amaro, John Gordon, Debra A. Mosley, and Sharon Narducci

Scenario Purpose

- Provide a safe-learning opportunity for the new nurse employee to utilize professional skills and facility specific protocol to provide the first five minutes of care for the inpatient or outpatient experiencing acute chest pain leading to cardiac arrest requiring use of an AED/defibrillator

Pre-Session Activities:

- Complete pertinent training on management of the patient experiencing acute chest pain
- Review facility policies and protocols on management of the patient experiencing acute chest pain
- Review Basic Life Support (BLS)/Resuscitation Education Initiative (REdI)/American Heart Association (AHA) standards for acute chest pain and cardiac arrest

Potential Systems Explored:

- How would the care for the patient experiencing acute chest pain differ in the outpatient versus inpatient setting?
- What components of a focused cardiac assessment are essential for the patient experiencing acute chest pain?
- Which labs/diagnostics are appropriate for the patient experiencing acute chest pain?
- What equipment should be available when caring for the patient experiencing acute chest pain?
- What are the roles of the first responder in cardiac arrest?
- What facility specific protocols exist for the patient experiencing acute chest pain?
- What facility specific documentation is required when caring for the patient experiencing acute chest pain?

Scenario Specific Learning Objectives (Knowledge, Skills, and Attitudes = K/S/A):

**The learner(s) will demonstrate ICARE principles throughout the scenario.

Learning Objective 1: Perform a focused assessment for the patient experiencing acute chest pain

a. **K**- *Recognize signs and symptoms of acute chest pain*
S- *Perform a focused assessment/LPN collects data*
A- *Elicit a sense of urgency while maintaining a composed demeanor throughout the scenario*
b. **S**- *Obtain a targeted history regarding the acute chest pain*
c. **K**- *Recognize deterioration of the patient's status*
d. **K-** *Recognize improvement in the patient's status*

Learning Objective 2: Implement facility specific chest pain protocol

a. **K-** *Demonstrate knowledge of resources available for the patient experiencing acute chest pain*
S- *Initiate Rapid Response Team request*
b. **S**- *Initiate facility specific chest pain protocol*
c. ***S***- *Apply oxygen if indicated for 93% SpO2 per protocol*
d. ***S***- *Obtain/order a 12 lead ECG*
e. ***S***- *Establish intravenous (IV) access*
f. **S**- *Obtain a fingerstick blood sugar*
g. **S-** *Obtain/order labs/diagnostics per chest pain protocol*
h. **S-** *Consider nitroglycerin (NTG) if indicated after ruling out contraindications per protocol*
i. **S-** *Check for allergies and administer aspirin advising patient to chew the tablet*

Learning Objective 3: Demonstrate the appropriate responses to the "first 5 minutes" of cardiac arrest

a. ***K***- *Display knowledge of BLS/ AHA standards*
S- *Establish patient unresponsiveness*
b. ***S***- *Call for help requesting AED/defibrillator per policy*

c. ***S***- *Check for a pulse*
d. ***S***- *Perform effective chest compressions/bag valve mask ventilations*
   A- *Elicit confidence in skills and abilities*
e. ***K***- *Identify general use and safety principles of AED/defibrillator per policy*
f. ***S***- *Turns on AED/defibrillator and applies pads per policy*
g. ***K***- *Recognizes the need to deliver a shock*
   S- *Performs "safety check" and delivers a shock*

Learning Objective 4: Facilitate effective communication during the scenario

a. ***K***- *Demonstrate knowledge of roles and responsibilities in a cardiac arrest when initiating Rapid Response Team assistance*
   S- *Delegate roles to team members per facility policy*
   A- *Promote teamwork, communication, and collaboration*
b. ***K-*** *Verbalize knowledge of facility specific handoff communication process*
   S- *Perform ISBAR/handoff communication*
   A- *Communicate in a clear, concise manner*
c. ***S***- *Complete facility specific documentation*

Debriefing Overview:

- Ask the learner(s) how they feel after the scenario
- Have the learner(s) provide a summary of the scenario from a healthcare provider/clinical reasoning point of view
- Discuss the scenario and ask the learners what the main issues were from their perspective
- Ask what was managed well and why.
- Ask what they would want to change and why.
- For areas requiring direct feedback, provide relevant knowledge by stating "I noticed you *[behavior]…"* Suggest the behavior they might want to portray next time and provide a rationale. "Can you share with us?"
- Indicate closing of the debriefing but provide learners with an opportunity to voice one or two take-aways that will help them in future practice
- Lastly, ask for any outstanding issues before closing the debrief

Critical Actions/Debriefing Points:

1. Activate Rapid Response/Chest Pain protocol
2. Assess/collect data regarding chest pain
3. Assess for responsiveness
4. Follow Chest Pain protocol
5. Establish unresponsiveness and initiate effective CPR
6. Request AED/defibrillator per policy
7. Recognize that shock is needed
8. Demonstrate proper use of AED/defibrillator with a "safety check"
9. Recognize improvement in the patient's status
10. Perform ISBAR/handoff communication
11. Complete facility specific documentation

Simulation Set-Up

Patient Name: John Madsen **(Standardized Patient to High Fidelity Mannequin)**
Simulation Developer(s): Patricia Amaro, John Gordon, Debra A. Mosley, and Sharon Narducci
Room Set-up:

- (Outpatient) Wheelchair in hallway leading to outpatient/ED room (area where patient will arrive with spouse)
- (Inpatient) Set up like an outpatient exam room or hospital room with the patient in the stretcher/bed

Patient Preparation:

- Street clothes (Outpatient) or hospital gown (Inpatient)
- Saline lock in the right antecubital space (inpatient)
- Monitoring device (3 Wave form):
  - ECG (Sinus Tachycardia with ST elevation), O2 Sat 93%, BP 88/56, Temperature 98.7, HR 120, RR 24
- **Start with standardized patient and switch to high fidelity manikin (HFM) when x-ray tech asks the team to exit the room for chest x-ray following aspirin administration**

**Note: A high fidelity mannequin may be used for the entire scenario if needed but may take away from the fidelity of the scenario.

Have the following equipment/supplies available:

- Telephone
- Gloves
- Alcohol sanitizer
- Oxygen source with nasal cannula, non-rebreather mask, and bag mask
- Intravenous (IV) start kit
- IV cannula
- IV dressing
- IV securing device
- Saline lock
- Normal Saline with primary IV tubing on IV pole
- Stethoscope
- AED with pads (outpatient)/Defibrillator with pads (inpatient) compatible with manikin hook up
- Crash cart with backboard
- Glucometer
- Alcohol pads
- Lancet
- Glucometer strip
- Sharps container
- Blood pressure cuff
- 2 of the same type of wig (one for the standardized patient and one for the mannequin)
- Label of “Portable XRay machine” & bedsheet to cover piece of equipment to use as prop.
- EKG machine or label of “EKG machine” to use as prop for 12 lead
- Bedside table

Medications: **Calibration will be required if using radiofrequency identification (RFID)

- Aspirin 325 mg tablet (not enteric coated)
- Nitroglycerin 0.4mg sublingual tablets - (at least 3 tablets) or spray
- Morphine Sulfate IV (at least 2mg in a labeled syringe)

Note: 5.8 Simpad software update is required to load scenarios. Below is the link to the upgrade:
http://cdn.laerdal.com/downloads/f4343/simpad-upgrade.vs2

Scenarios may be used with Laerdal or LLEAP software.

Scenario Supplements:

- Confederate scripts
- Facility chest pain protocol Orders (laminated)
- Phone list with phone number of cardiology and cath lab written in
- Confederate and learner name tags
- Patient identification band
- Nurses Notes
- Finger stick blood sugar result (FSBS) (laminated)
- Documentation (facility specific)
- ZZ test patient/Demo patient in CPRS (if desired)
- ISBAR tool template to use for handoff

Chest Pain: Outpatient or Inpatient

Flowchart

Initial State:
- Sp02: 93%
- BP: 88/56
- HR: 120
- RR: 24
- ECG: Sinus Tachycardia with ST elevation
- Pain level: 7/10
- Eyes: Open

65 year-old male in outpatient clinic exam room/inpatient room complaining of chest pain unrelieved with rest

- ***RN Performs targeted assessment and obtains history/LPN collects data***
- ***Delegates appropriate tasks***
- ***Activates Rapid Response***
- ***Initiates Chest Pain protocol***

- ***Patient places a hand on his chest and states "My chest really hurts! It's a 10! Ugh!"***
- ***Applies oxygen if indicated for 93% O2 Sat per protocol***
- ***Obtains/orders 12 lead ECG***
- ***Ensures IV access is established, fingerstick blood sugar (FSBS) is complete (result is 99 mg/dL) and, CP labs are obtained/ordered per CP protocol***
- ***Considers NTG sublingual or spray if indicated per CP protocol after ruling out contraindications***
- ***Checks for allergies and gives Aspirin (advises patient to chew tablet) per protocol***
- ***X-Ray tech arrives to do a portable chest x-ray and asks learners to wait outside the room***

***** Status Change*****
- Mental status: **Unresponsive**
- Sp02: **0%**
- BP: **0**
- HR: **Unable to determine**
- RR: **0**
- ECG: **Ventricular Fibrillation**
- Eyes: **Closed**

- ***Establishes patient unresponsiveness***
- ***Calls for assistance, requests AED/Defibrillator and initiates code per facility protocol***
- ***Checks for pulse and begins compressions/bag mask ventilations***

- ***Turns on AED/Defibrillator and applies pads***
- ***Defibrillator: Identifies rhythm and delivers shocks after "safety check"/AED: Performs "safety check" and initiates shock***

****Used AED/Defibrillator improperly****
- Sp02: **0%**
- BP: **0**
- HR: **Unable to determine**
- RR: **0**
- ECG: **Ventricular Fibrillation**

- ***Performs compressions and bag mask ventilations***

**** Defibrillator / AED used properly****
- Sp02: **98%**
- BP: **110/70**
- HR: **80**
- RR: 20
- ECG: **Sinus Rhythm**
- Pain level: **0/10**

- ***Rapid Response Team arrives***
- ***The patient states "I feel so much better"***
- ***Performs ISBAR/handoff communication***
- ***Completes facility specific documentation***

****No AED/Defibrillator ****
- Sp02: **0%**
- BP: **0**
- HR: **Unable to determine**
- RR: **0**
- ECG: **Ventricular Fibrillation**

- ***Performs compressions and bag mask ventilations***

Critical Actions/Debriefing Points:
1. Perform targeted assessment and obtains history
2. Delegate appropriate tasks
3. Activate Rapid Response
4. Initiate Chest Pain protocol
5. Establish unresponsiveness
6. Request assistance and AED/Defibrillator
7. Check for pulse and begin chest compressions and bag mask ventilations
8. Power on AED/Defibrillator and apply pads
9. Recognize shock is indicated
10. Initiate shock after safety check per policy
11. Recognize changes in patient status
12. Perform ISBAR/handoff communication
13. Complete facility specific documentation

Green Text Confederate

Red Text Physiology Change

Red Border Incorrect Action

Supplements

Confederate Scripts

Confederate Name Tags

Patient Identification Band

Nurses Notes

Orders

Fingerstick Blood Sugar Result

Confederate Scripts

X-Ray Tech

- X-Ray tech will arrive after aspirin administration and ask the learners to leave the room to do a portable chest x-ray
- The patient will switch to high fidelity mannequin

John Madsen (Standardized Patient to High-Fidelity Mannequin)

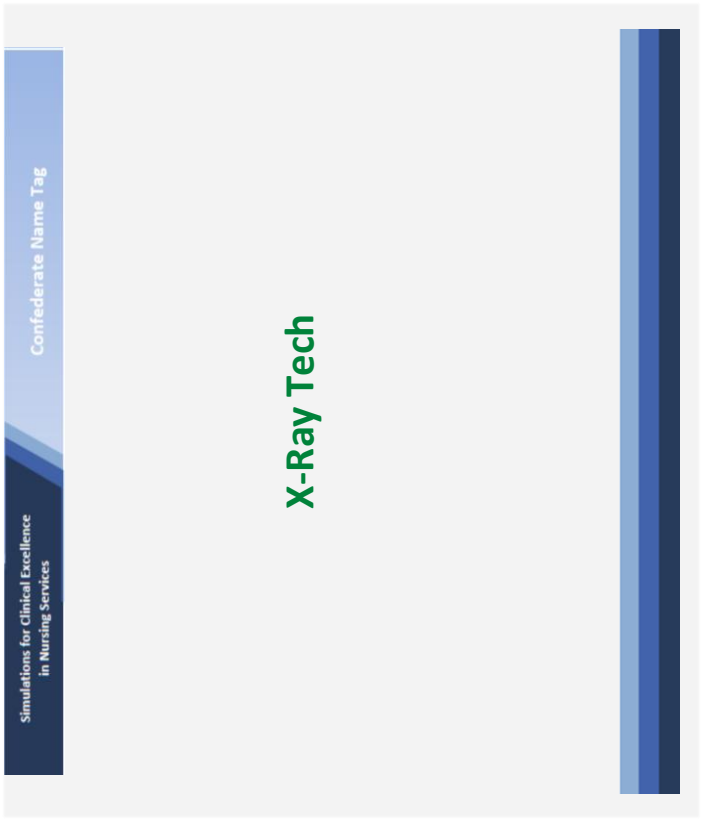
- Medical/Surgical History: Type 2 Diabetes and cholecystectomy
- Meds: Metformin 500mg 3 times daily with meals
- Allergies: No known drug allergies

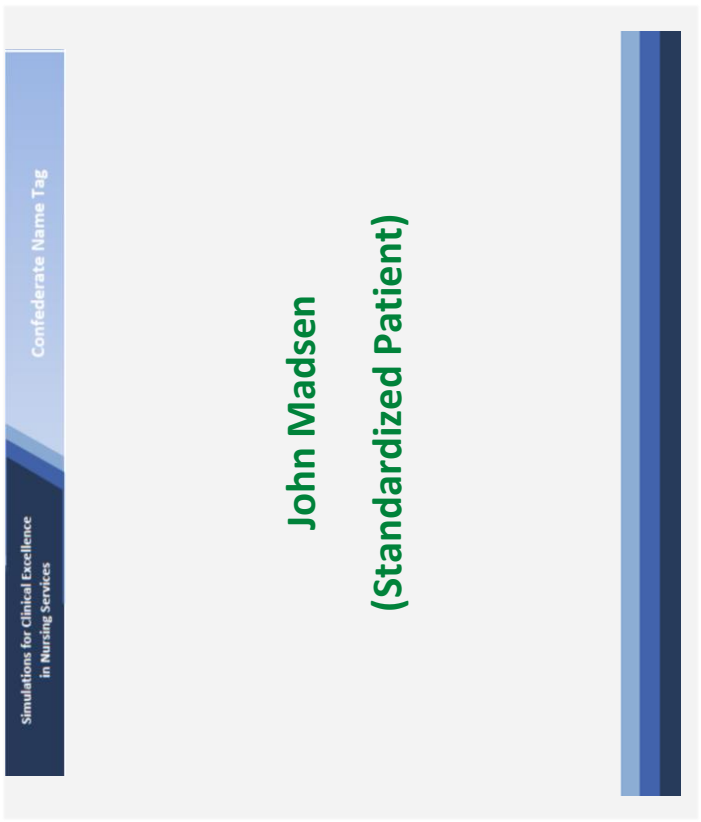
- The learners will initiate chest pain protocol
- The patient states "My pain is getting worse! It is a 10/10! Ugh!"
- **The patient will switch to high fidelity mannequin when the x-ray tech arrives after aspirin administration and asks the learners to wait outside the room while he/she performs a portable chest x-ray on the patient**
- The learners will initiate the shock.
- If the AED/Defibrillator is used properly. The patient's rhythm will convert to sinus rhythm
- The patient will state "I fell so much better"

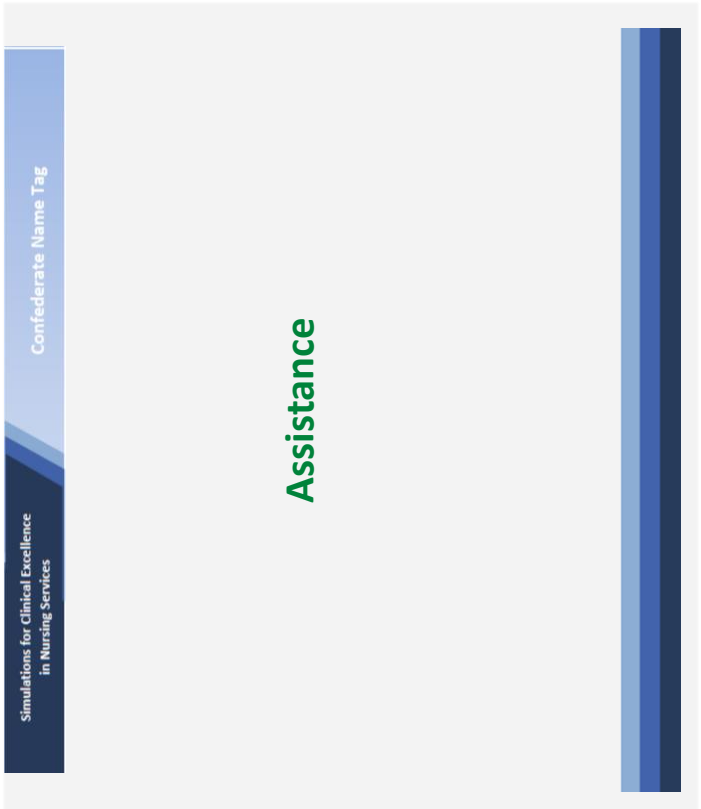
Assistance (Rapid Response)

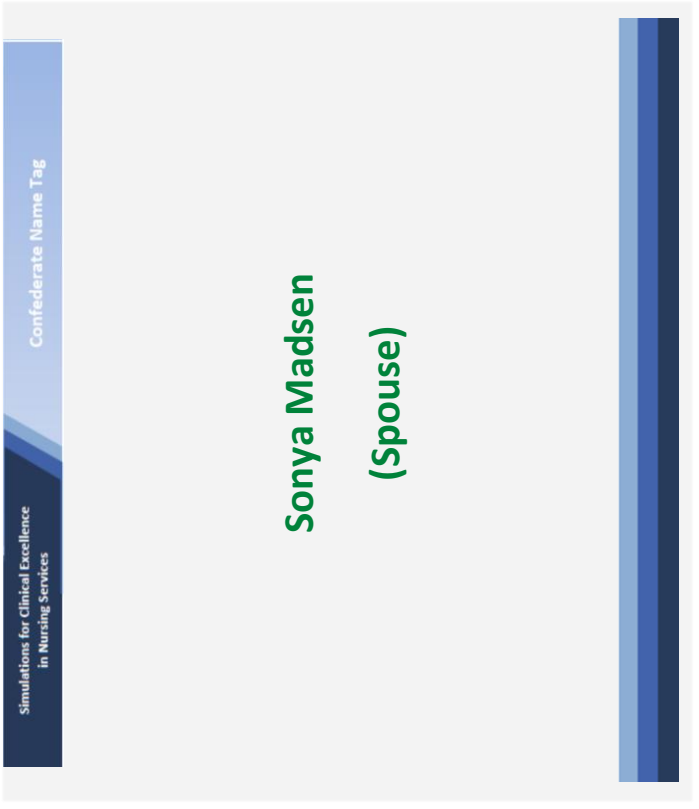
- Assistance will arrive after the shock has been delivered and the patient's rhythm returns to sinus rhythm
- ISBAR will be provided
- The scenario will end

Confederate Name Tags

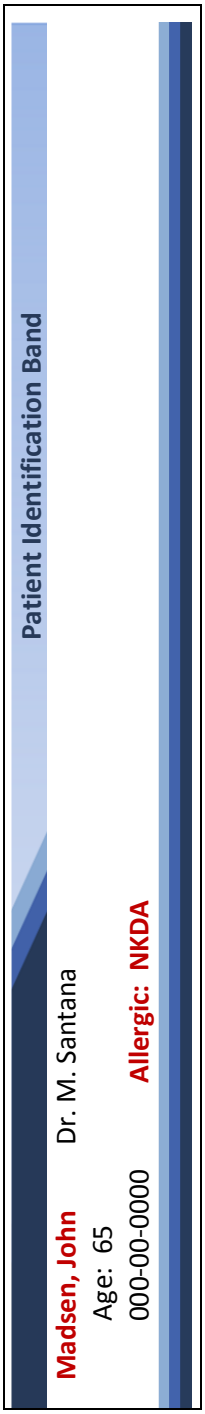








Patient Identification Band



Orders

Patient Information

Madsen, John
Dr. M. Santana
Age: 65
Social Security #: 000-00-0000
Allergies: NKDA
Weight: 113.6kg (250lbs)
Height: 172.7cm (68in); BMI 38.1

Diagnosis	Chest pain
IV Therapy	Saline Lock
Medications (routine)	Metformin 500mg po three times daily with meals
Medications (prn)	Nitroglycerin 0.4mg or spray sublingual for chest pain
Code Status	Full code
Respiratory Therapy Orders	Apply oxygen at 2 liters nasal cannula for saturation less than 94% Call healthcare provider if no improvement
Miscellaneous Orders	Chest Pain Protocol

DO NOT WRITE IN THIS SPACE

Fingerstick Blood Sugar

Fingerstick Blood Sugar	
Date: Today	John Madsen
99 mg/dL	

References

American Heart Association. (2016) *Advanced cardiovascular life support: Provider manual. Dallas, TX.*

Department of Veterans Affairs Veterans Health Administration. (2014). *Cardiopulmonary Resuscitation, Basic Life Support, and Advanced Cardiac Life Support training for staff* (VHA Directive 1177). Washington, DC: VHA Publications.

The Joint Commission. (2016). *2016 Hospital national patient safety goals*. Retrieved from http://jointcommission.org

O'Connor, R. E., Al Ali, A. S., Brady, W. J., Ghaemmaghami, C. A., Menon, V., Welsford, M., & Shuster, M. (2015). Part 9: Acute coronary syndromes: 2015 American Heart Association guidelines update for cardiopulmonary resuscitation and emergency cardiovascular care. *Circulation, 132*(suppl 2), S483-S500. doi:10.1161/CIR.0000000000000263