

UF HEALTH SHANDS CORE POLICY AND PROCEDURE

POLICY NUMBER: CP02.034
CATEGORY: Patient Care

TITLE: STEMI Alert Process

POLICY A consistent process will be used for notification and activation of the ST-Elevation Myocardial Infarction (STEMI) team in a timely manner by implementation of a standardized approach to patient management for patients who meet STEMI criteria.

PURPOSE: Patients who present with or develop the diagnostic signs of STEMI (ST Elevation on ECG) will be identified as STEMI Alert patients and acknowledged as those that have a greater potential for significant injury and may benefit from early STEMI team intervention. The goal is to improve patient outcomes and the quality of service delivered by implementing a standardized approach for treatment of patients who meet STEMI criteria.

APPROVED:

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CORE PROCEDURE:

I. STEMI Criteria

The following signs are recognized by the American Heart Association (AHA) and the American College of Cardiology (ACC) in Guidelines as diagnostic signs of a STEMI and therefore meet STEMI Alert criteria. If a patient is having symptoms concerning for ACS and meets one or more of the following criteria, the STEMI Alert process should be initiated:

ST Elevation is measured using the J-point measurement in two contiguous leads

A. Men

- In males \geq 40 years old 2 mm in V2-V3 and 1 mm in all other leads
- In males < 40 years old 2.5 mm in V2-V3 and 1 mm in all other leads

B. Women

- \geq 1.5 mm in V2-V3 and 1 mm (0.1mV) in all other leads

C. Left Bundle Branch Block (LBBB)

- New LBBB alone is no longer diagnostic as meeting STEMI criteria
- Sick patients (signs and symptoms of ACS) with new LBBB should be discussed with a cardiologist
- Patients meeting Sgarbossa Criteria in LBBB may be treated as a STEMI

II. External STEMI Alert Activation process:

- A. Upon notification by the pre-hospital care provider that a "STEMI Alert" patient is to be transported to the UF Health-Shands Emergency Department, the ShandsCair Communication Center will notify the STEMI Team by activating a "STEMI Alert."
- B. If a patient presents to the UF Health-Shands Emergency Department by means other than a pre-hospital care provider (e.g. private vehicle or "walk-in") and the patient meets the "STEMI Alert" criteria, the Emergency Department will activate a "STEMI Alert" by calling ShandsCair Communication Center.
- C. To initiate a "STEMI Alert" the Emergency Department personnel will call the ShandsCair Communication Center and give the required information. The ShandsCair Communication Center will use the web-based paging system via the computer. The following personnel will be group paged on the web-based "STEMI Alert" activation system and will immediately respond to the assigned resuscitation room in the Emergency Department; if estimated time of arrival (ETA) less than or equal to 10 minutes, patient is in the ED, or text includes "Respond now."

1. On call Cardiology Junior Fellow

2. On call Cardiology Senior Fellow
 3. STAT RN
- D. The following members of the STEMI Team are in the ED and will immediately respond to the appropriate area, without delay, when “STEMI Alert” patient arrives.
1. Emergency Medicine Physician
 2. Emergency Department Nurse
 3. Critical Care Tech
 4. Radiology
 5. Respiratory
- E. The following members of the STEMI Team are put on notice of the impending arrival of a “STEMI Alert” patient by the “STEMI Alert” activation system.
1. On call Cardiac Cath Lab staff
 2. On call Interventional Cardiology Attending
 3. On call Cardiology Fellows
 4. STEMI Coordinator
 5. CICU/CCU Charge Nurse
 6. Nursing Coordinator
 7. CV Director
 8. Security
- F. The following personnel may be notified and are available as needed:
1. Social Services
 2. Pastoral Services
- III. Procedure For ShandsCair Communication Center for External STEMI alert Activation:
- A. Upon notification to ShandsCair Communication Center of a “STEMI Alert” patient in transfer, Communication Specialist will immediately notify the Emergency Department (ED) Physician in Charge and ED Charge Nurse via paged out alert and phone call (if time permits).
 - B. The Communication Center will page out at a minimum:

1. "STEMI Alert"
2. ETA or patient location
3. Onset of symptoms
4. ECG interpretation
5. Age
6. Gender

Message Example:

"STEMI Alert" 65 y/o male
Onset CP 1 hr ago
ST elevations in leads II, III and aVF
N/V, SOB
ETA 10 minutes.

C. Group Paging Activation SPOK Procedure:

1. The message above will be sent as a text message from the web-based group messaging system SPOK
1. The Shands Intranet Web page will be accessed
2. Select Communications – SPOK on the main menu
3. Then Text Messaging/Alpha Paging Gateway
4. Place the following information in:
 - a. FROM: ED
 - b. Pin Number:

D. Hospital Operator

1. Hospital operator pages the Cardiac Cath Lab Team via group pager number 352-413-2639.
2. Cardiac Cath Lab Team members call back to hospital operator to confirm receipt of page.
3. Hospital operator follows on call procedure if a team member does not respond within 30 minutes of initial page.
4. Hospital operator will call Cardiac Cath Lab Supervisor for any issues.

E. Downtime Procedure - In situations when the group paging system is down:

1. Dial #66 to notify hospital operator that we are activating the code blue system for “STEMI Alert” and to overhead page “STEMI Alert,” respond to the Emergency Department.”
 2. Call the Cardiology Fellow On-Call and notify of STEMI Alert” in the Emergency Department.
 3. Follow this procedure until Dispatch is notified that the paging system is operational.
- F. External STEMI alert timeline and designated team member responsibilities are referenced in [Appendix A](#) (UF Health Shands Chest Pain Process External).

IV. Triage of Multiple STEMI Arrivals

- A. UF Health- Shands Emergency Department will always accept patients experiencing signs and symptoms of Acute Coronary Syndrome (ACS).
- B. Presentation of two (2) or more STEMI patients simultaneously.
1. When there is any anticipated delay to performing primary PCI within 90 minutes of First Medical Contact (FMC, as defined by AHA/ACC), the Class I recommendations per AHA/ACC are:
 - a. In the absence of contraindications, fibrinolytic therapy should be given to patients with STEMI and onset of ischemic symptoms within the previous 12 hours when it is anticipated that primary PCI cannot be performed within 90 minutes of FMC.
 - b. Any redirection of an inbound STEMI patient via EMS to another facility should be approved by Cath Lab Medical Director
 2. Cardiology will complete assessment of each patient as soon as possible (ASAP), make timely and appropriate triage decisions based on clinical evidence of patient presentation, and proceed with reperfusion recommendations as follows:
 - a. Proceed with Primary PCI consecutively (one right after the other) based on physician triage decision.
 - b. Initiate fibrinolytic therapy within 30 minutes on the second patient if no contraindications and PCI cannot be performed within 90 minutes of arrival.
 - c. Consider transfer of the second patient to the closest PCI facility if PCI is not available and the patient is not a candidate for fibrinolytic therapy.
- C. Unanticipated Cardiac Catheterization Lab unavailability

If it is determined that the Cardiac Catheterization lab is unavailable at UF Health due to mechanical failure, unexpected unavailability of an Interventional Cardiologist, or other unavoidable circumstances:

The ED will be informed immediately and collaborative measures will be discussed with Emergency Physicians, Cardiology and EMS to:

1. Initiate fibrinolytic therapy upon patients' arrival, if not contraindicated.
2. Consider transfer of the patient to the closest PCI capable facility if the patient is not a candidate for thrombolytic therapy.

V. Criteria for Internal STEMI Alert Activation

- A. Inpatients who have an onset of chest pain should be immediately assessed by an RN. See [Appendix B](#) (UF Health Shands Chest Pain Process Internal) for algorithm.
- B. RN should assess patient for:
 1. Chest pain intensity, characteristics, location, radiation, duration of pain.
 2. Presence of angina equivalents (shortness of breath, nausea, vomiting, diaphoresis, arm or jaw pain).
 3. Previous cardiac history.
 4. Changes in vital signs, changes in heart rhythm, changes in O₂ saturation.
 5. Need for STAT ECG.
- C. RN determines need for a SWAT (Saving with Assessment Teams) or Code Blue per CP02.007 – Clinical Emergency Response Plan and notifies patient's on call physician.
- D. On Call Physician:
 1. Goes to patient location to evaluate patient or assists Code Blue Team as needed.
 2. If patient has not had a cardiac arrest (no Code Blue initiated), orders STAT ECG and cardiac biomarkers as appropriate.
 3. Is notified by RN of completion of STAT ECG.
 4. Identifies need for a Cardiology consult and makes the consult if appropriate.
 5. Determines if STEMI alert is needed and delegates STEMI Alert initiation to Nursing.
- E. Initiation of STEMI Alert Procedure (if on call physician decides patient meets STEMI criteria).
 1. Unit Charge Nurse notifies STAT RN Nursing Coordinator. Unit Charge Nurse, STAT RN, or Nursing Coordinator initiates STEMI Alert by calling ShandsCair Dispatch Center at 352-265-0222.
 2. STAT RN facilitates patient care and STEMI Alert process.

VI. Procedure For ShandsCair Communication Center for Internal STEMI alert Activation:

- A. STEMI alert
- B. EKG interpretation (e.g. as ST elevations in II, III, aVF)
- C. Chest pain severity (e.g. pain 9 out of 10)
- D. Patient room number and hospital/tower location
- E. Phone number to reach RN or initiator of STEMI alert

VII. Hospital Operator

- A. Hospital operator pages the Cardiac Cath Lab Team via group pager number 352-413-2639.
- B. Cardiac Cath Lab Team members call back to hospital operator to confirm receipt of page.
- C. Hospital operator follows on call procedure if a team member does not respond within 30 minutes of initial page.
- D. Hospital operator will call Cardiac Cath Lab Supervisor for any issues.

VIII. Cardiac Cath Lab

- A. The STAT RNs and Nursing Coordinator will provide oversight of the patient movement from the current patient area to the Cardiac Cath Lab.
- B. Patient must be transferred with a physician to the Cardiac Cath Lab.
- C. When the on call nurse is 20 minutes away from hospital and the on call technologist is in the Cardiac Cath Lab:
 - 1. Cardiac Cath Lab staff will contact ShandsCair to send follow-up STEMI text page stating, "Cath Lab ready, send patient."
 - 2. Patient will move from ED or inpatient unit to the Cardiac Cath Lab.
- D. Nursing Unit Charge Nurse or STAT RN will confirm back to Cardiac Cath Lab (phone # in specific procedure room) that patient is en route.
- E. STAT RN assists with patient transfer and set up for cardiac catheterization until Cardiac Cath Lab nurse arrives.

IX. Multiple Internal STEMI Alerts (Refer to Section IV for triage criteria).

ASSOCIATED POLICIES:

CP02.007 – Clinical Emergency Response Plan