



Hendrick Health Heart Attack and Stroke Program Information

AMI Program Goals / Quality Measures

- **Door to ECG \leq 10 Minutes**
- **Activation to patient arrival in Cath Lab \leq 30-45 minutes**
- **EMS First Medical Contact (FMC) to PCI \leq 90 minutes**
 - Door to PCI Goal \leq 60 min (EMS Arrivals)
 - If transport time $>$ 45 min, Door to PCI must be $<$ 30 min with FMC to PCI \leq 120 min
- **Transfers:**
 - **Arrival at first hospital to PCI at Hendrick \leq 120 minutes (Door to Door to PCI)**
- **Risk stratification Tool- HEART Score**
 - Use for suspected acute coronary syndrome patients to determine risk for MACE
- **High Sensitivity Troponin I**
 - Trend to identify a rise and/or fall
 - 0, 2 hour strategy
- **ECG stat on arrival.**
 - Consider serial ECGs every 15-30 minutes for the first hour if initial ECG does not meet STEMI criteria and there is a high suspicion for ACS

Medications:

- Aspirin on arrival
- Nitroglycerin
- Consider initiating high intensity statin therapy- i.e. rosuvastatin \geq 20 mg (moderate intensity is reasonable if $>$ 75 years of age)
- Heparin or Lovenox (ACS dosage)
- P2Y12 inhibitor

ECG criteria for STEMI: $>$ 1 mm ST elevation at the J-point in 2 contiguous leads, with the exception of leads V2-V3 which require $>$ 2 mm ST elevation in men $>$ 40 years; $>$ 2.5 mm in men $<$ 40 years; 1.5 mm in women regardless of age.

STEMI Equivalents: True posterior MI, multi-lead ST depression with coexistent ST elevation in lead aVR, characteristic diagnostic criteria in the setting of new LBBB.



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In-Hospital STEMI Patients with signs and symptoms consistent with ACS AND meeting STEMI criteria.

The Rapid Response Team & House Supervisor

- Assist with patient complaints of ACS signs & symptoms
- ECG
 - If meets STEMI criteria, house supervisor will facilitate a call between you and the Interventional Cardiologist on-call for STEMI
 - If primary PCI is indicated, the **House Supervisor** or RRT member will activate an **“In-House STEMI code”** to activate the correct team.

Discharge Medication/Referral Requirements for Cardiac Patients

Discharge Medication requirements for cardiac patients

Best Practice Guidelines and Registry Requirements for Cardiac Patients							
RX at DC	Aspirin	P2Y12 (Clopidogrel, Prasugrel, Ticagrelor)	Statin	Beta Blocker	ACE/ARB	SGLT2i	Aldosterone Antagonist
AMI (STEMI/NSTEMI)	✓	✓ Even if medically managed	✓	✓	✓ for LVS, EF < 40%		
PCI (Includes balloon &/or Stent)	✓	✓ Only for Stent	✓				
ICD				✓ Only if EF < 40% or has prior MI	✓		
Heart Failure				✓ Bisoprolol, Carvedilol, Metoprolol, Succinate, CR/XL	✓ Reduced EF-ACE/ARB or ARNi	✓ Farxiga, Jardiance	✓
CABG (If PCI same visit, also include PCI Meds)	Antiplatelet (includes ASA &/or P2Y12)		✓	✓			
Vascular (Exclude arterial)	Antiplatelet (includes ASA &/or P2Y12)		✓				

Contraindications/intolerances must be explicitly documented within the medical record.

A contraindication to one medication within a class of medications is not sufficient to code a contraindication for the whole class.



CARDIAC REHAB referral is required for all AMI (STEMI/NSTEMI) patients with or without PCI or CABG.

Even medically managed AMI patients must have cardiac rehab and DAPT addressed.

Guideline Directed Medication must be prescribed or a physician documented reason to omit MUST be found in the chart.

Contraindications/intolerances must be explicitly documented within the medical record.

Documentation should clarify if final diagnosis is NSTEMI type 2 or other non-cardiac troponin elevation.

See page 4 for Stroke Program Information



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Annual Stroke Education Requirements for Physicians/APPs involved in the care of stroke patients (Emergency, Hospitalists, Intensivists, admitting/attending primary care providers, neurologists and neurosurgeons)

- **3 hours annually or 6 hours every 2 years (credentialing period)**
 - Review UpToDate Stroke Articles (30 min each) or other stroke CME
 - Submit “Stroke Education Attestation” (bottom of webpage)
 - [Verification & Completion | Hendrick Health](#)
 - Or provide CME certificates to mtebow@hendrickhealth.org

Stroke Quality Measures

- NIHSS on arrival or onset of symptoms
- Yale Dysphagia Screen by RN (prior to ANY oral intake, including medications)
 - If fails,
 - Patient MUST remain NPO
 - Speech Therapy consult initiated for swallow evaluation
- Smoking/tobacco cessation must be addressed if current use or use within one year (counseling/pharmaceutical cessation/resources to quit)

Stroke Core Measures *

- Thrombolytic therapy for acute ischemic stroke arriving within 4.5 hours of onset. Administered within 60 minutes or documentation of reason for delay (goal <30-45minutes)
 - Hendrick Health utilizes **tecteplase FDA approved weight range dosing**
 - Max dose 25 mg IVP over 5 seconds.
- Antithrombotic therapy by end of hospital day 2 (Ischemic CVA or TIA)
- VTE prophylaxis Mechanical and/or Chemical by end of day 2
- Lipid Panel within 48 hours of arrival or 30 days prior (Ischemic CVA or TIA)
- Statin therapy (Ischemic CVA or TIA) Refer to intensities listed below
- Discharge (Ischemic CVA or TIA)
 - Antithrombotic
 - Anticoagulant for A-fib/flutter (history or current)
 - Intensive statin therapy (patients ≤ 75 years of age) **OR**
 - Moderate intensive statin (patients > 75 years of age)



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- Stroke Education (including smoking cessation, diabetes management and secondary prevention)
 - Diabetic educator consult if Hgb A1c >7
 - Consider medication adjustment or endocrinology referral for uncontrolled diabetes mellitus
- Assessed for Rehab (Physical, Occupational and Speech)

***A patient-centered reason for NOT ordering/prescribing is required to be documented**

Anti-thrombotic

All possible stroke or TIA patients MUST have an anti-thrombotic by end of hospital day 2

Medications include: *Even if ruling out a patient for stroke or TIA, it is a MUST for them to be placed on at least one of these medications.*

- Aspirin (per rectum if NPO or failed dysphagia screen)
- Heparin Drip
- enoxaparin 1 mg/kg twice daily
- apixaban/dabigatran etexilate/rivaroxaban
- warfarin
- clopidogrel/tricagrelor

*For secondary prevention after ischemic stroke or TIA, short term use of DAPT (**aspirin and clopidogrel**) should be considered.

Viz.ai Artificial intelligence program utilized by Hendrick Health to alert the team to suspected large vessel occlusions (LVO) or intracerebral hemorrhages (ICH)

- Only alerts for suspected anterior circulation LVO
- Mobile phone Viz.ai app (ED providers/Intensivist/Neurosurgeons/Interventional Radiology)
- Hendrick Hub under “applications” – scroll down to the bottom for “Viz.ai” link

Desktop link:

<https://login.viz.ai/login>

Contact Martee Tebow mtebow@hendrickhealth.org for user access



Hendrick Health Heart Attack and Stroke Program Information Cont.

In-House Stroke Code

Rapid Response Team & House Supervisor respond if your patient exhibits signs and symptoms of possible stroke

Enter orders titled: "Stat CT head without contrast per Stroke Protocol" and "CT Angio Head and Neck per Stroke Protocol"- This alerts the radiologist to read first!

Consider CT Perfusion stat (6-24 hour window)- Available at Hendrick North Only

Teleneurology available 24/7 for acute stroke codes.

Emergency Department Stroke Code

Time goals (ED):

- Door to ED Physician- 10 minutes
- Point of Care Glucose- 10 minutes
- Door to CT Scan per stroke protocol- 15 minutes
- Door to CT Scan resulted – 20 minutes
- STAT CTA of head and neck per stroke protocol
- Tele-Neurology call to screen – 15 minutes (Consult entered at time of Stroke Code/Alert)
- Door to lab work, ECG, CXR (if ordered)- 25 minutes
- Door to thrombolytic
 - Benchmark: 50% <30 min; 75% <45 min; 100% <60 min. Please document a **patient centered reason** for not administering in <30, <45, <60 min.
- STAT BUN / CR (done on I-stat machine)
- **Consider thrombolytic up to 4 ½ hours from Last Known Normal (LKN) or Thrombectomy for Large Vessel Occlusion (LVO) up to 24 hours from LKN**
 - **Documentation must address the following:**
 - Contraindication/reason for not administering a thrombolytic agent
 - Patient centered reason for delay in thrombolytic/thrombectomy if applicable
 - Presence or absence of large vessel occlusion on CTA head and neck
 - **Hendrick Medical Center North has 24/7 thrombectomy coverage for LVO. All other Hendrick locations will coordinate transfer to North through the Transfer Center.**
 - If Dr. Eddleman or Dr. Rittimann determine a transfer is needed to a comprehensive stroke center, consider transfer to UT Southwestern (current transfer agreement in place). This will be an uncommon occurrence and for patient specific reasons.



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Intracerebral hemorrhage (ICH) Patients diagnosed with an ICH should be treated to achieve a **systolic blood pressure of ≤ 140 mm/hg (maintain between 130-150 mm/hg)**. Please include patient specific blood pressure parameters in EMR and prn medication to achieve goal.

Consider reversal agent if patient is on DOAC or warfarin with INR >1.4 . Goal <60 min

Admit to Designated Stroke Units

HMC North:

P5 or CCU (if requiring higher level of care) **OR**

IMCU is available for post thrombolytic patients

(Note: Post endovascular thrombectomy patients should be admitted to CCU)

Hendrick Medical Center South:

PCU or ICU (*if requiring higher level care or post thrombolytic*)

Order Sets - Help ensure clinical practice guidelines are followed

Clinical Practice Guidelines

- AMI & Stroke Program's Clinical practice guidelines can be found on the Hendrick website www.hendrickhealth.org
- Enter "For Physicians" at bottom of page
- Tab-Quick Links
 - "ACS (STEMI/NSTEMI) Clinical Practice Guidelines"
 - "Stroke clinical Practice Guidelines"

PHYSICIAN PROMPT via an Artifact Query

You may be asked to document a patient centered reason for not prescribing a guideline directed medication for a patient diagnosed with a Stroke or AMI. This document is a discharge summary addendum and must be signed within 30 days of discharge.

Certifications/Designations

Hendrick Medical Center

Joint Commission Primary Heart Attack Center

DNV Primary Plus Stroke Center/DSHS level 2 Designation (Thrombectomy Capable)

Hendrick Medical Center South

Joint Commission Primary Heart Attack Center

DNV Primary Stroke Center/DSHS level 3 Designation

Hendrick Medical Center Brownwood- Pending Primary Stroke Center/ Level 3 Designation



Hendrick Health Heart Attack and Stroke Program Information Cont.

Program Contacts

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