

Cardiac Emergencies - Triage/Transfer Process

Disclaimer: *This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.*

Note: For emergencies occurring on MD Anderson campus locations not supported by the Code Blue Team, contact 911 ([Code Blue Team vs. 911 Response Map](#))

TABLE OF CONTENTS

Chest Pain/Suspected ST-elevation Myocardial Infarction (STEMI)

Emergency Center/Inpatient.....[Page 2](#)

Outpatient/MD Anderson public spaces.....[Page 3](#)

Suspected Acute Coronary Syndrome (ACS).....[Page 4](#)

Emergency Transfer Administrative Process.....[Page 5](#)

APPENDIX A: TIMI (Thrombolysis in Myocardial Infarction) Score.....[Page 6](#)

APPENDIX B: Texas Medical Center (TMC) Hospital Contact Information.....[Page 7](#)

Suggested Readings.....[Page 8](#)

Development Credits.....[Page 9](#)

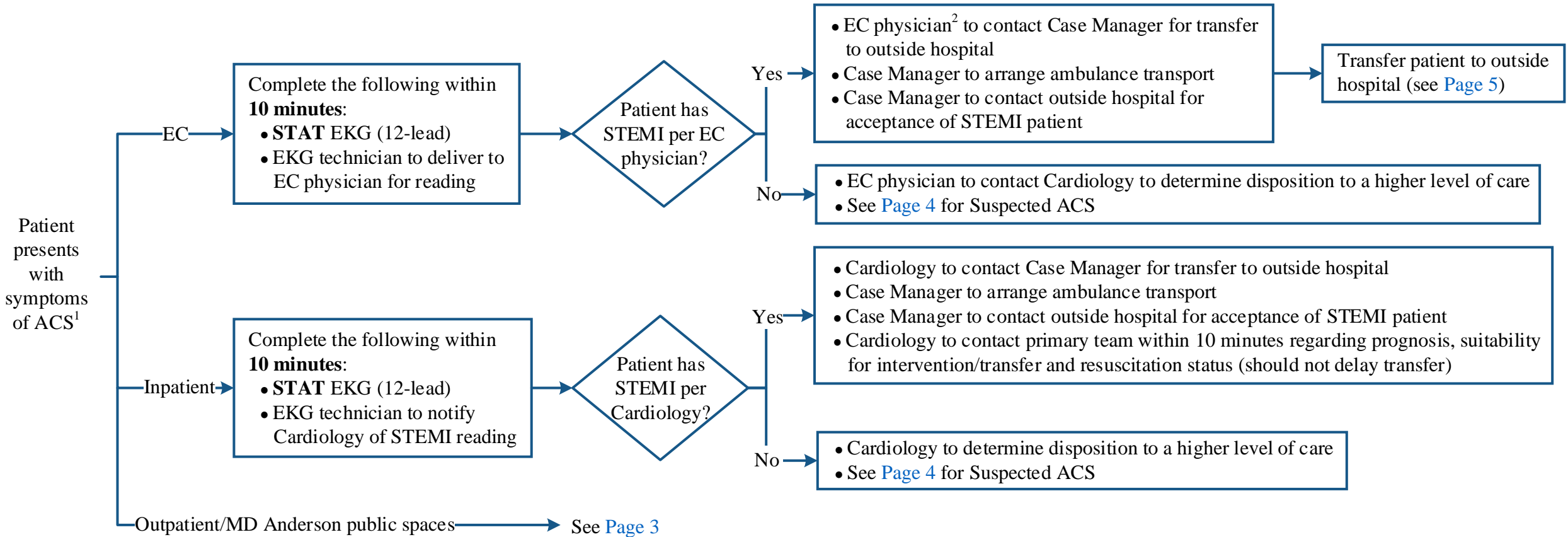
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PRESENTATION AND ASSESSMENT

DISPOSITION

Note: Patient should be transferred < 30 minutes of initial presentation [door in-door out (DIDO)] since the “door to device time” for STEMI is < 120 minutes



ACS = acute coronary syndrome
 STEMI = ST-elevation myocardial infarction

- ¹ ACS symptoms:
- Chest pain or discomfort
 - Shortness of breath
 - Pain or discomfort in one or both arms, jaw, neck, back, or stomach
 - Dizziness or lightheadedness
 - Nausea
 - Diaphoresis

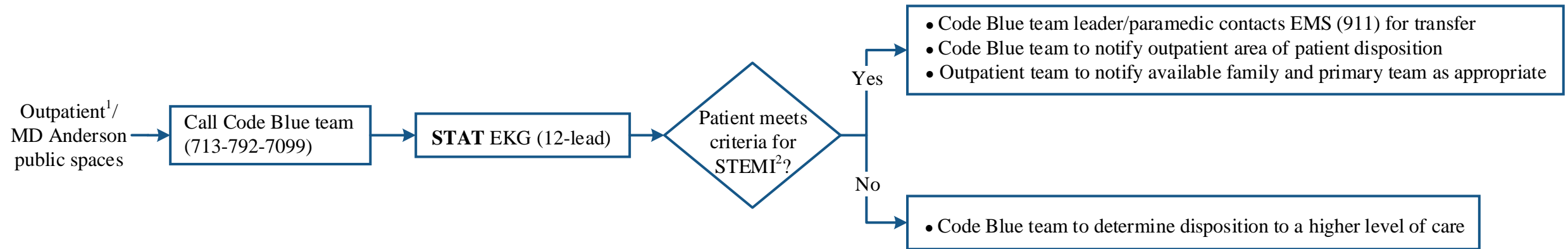
- ² EC physician to perform the following only if able to complete within 10 minutes; DO NOT DELAY TRANSFER
- Initiate medical management:
 - Aspirin 162-325 mg PO once
 - P2Y12 inhibitor loading dose: Clopidogrel 600 mg PO once **or** Ticagrelor 180 mg PO once
 - Anticoagulation-unfractionated heparin (UFH) with additional boluses if needed to maintain therapeutic activated clotting time (ACT)
 - Contact Cardiology for confirmation of STEMI
 - Contact primary team regarding prognosis, suitability for intervention/transfer and resuscitation status

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PRESENTATION AND ASSESSMENT

DISPOSITION

Note: Patient should be transferred < **30 minutes** of initial presentation [door in-door out (DIDO)] since the “door to device time” for **STEMI** is < **120 minutes**



EMS = Emergency Medical Services
 STEMI = ST-elevation myocardial infarction

¹ For outpatient areas not covered by Code Blue services, call 911 and provide supportive care until EMS arrives

² Criteria for STEMI

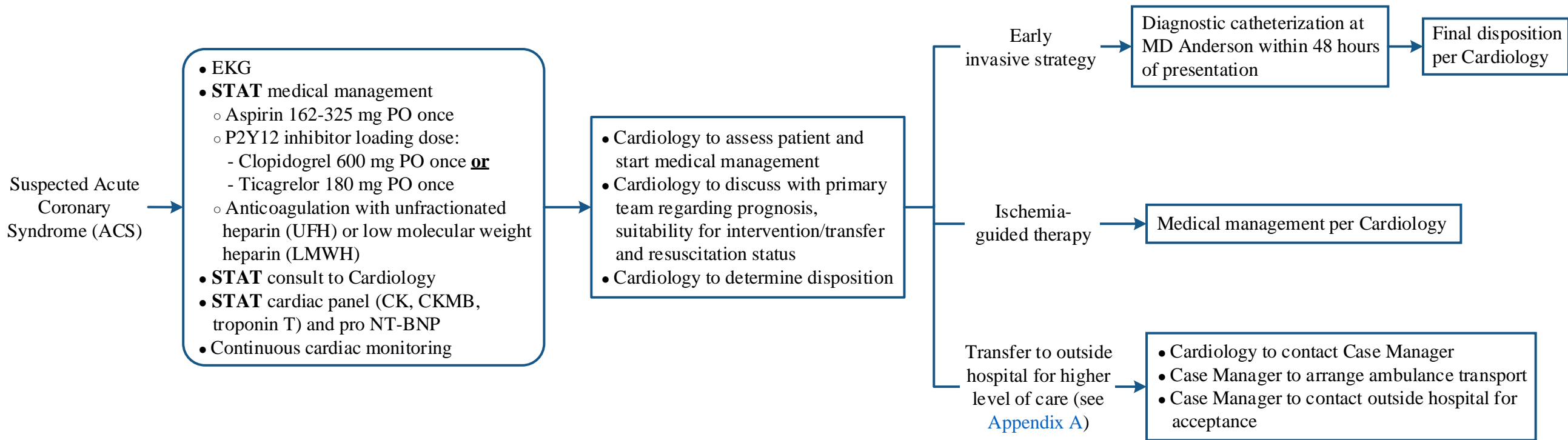
- New ST elevation at the J point in two contiguous leads of > 0.1 mV in all leads other than leads V2-V3
- For leads V2-V3 the following cut points apply:
 - Men ≥ 40 years old: ≥ 0.2 mV
 - Men < 40 years old: ≥ 0.25mV
 - Women regardless of age: ≥ 0.15 mV
- New or presumed new left bundle branch block (LBBB)

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PRESENTATION AND ASSESSMENT

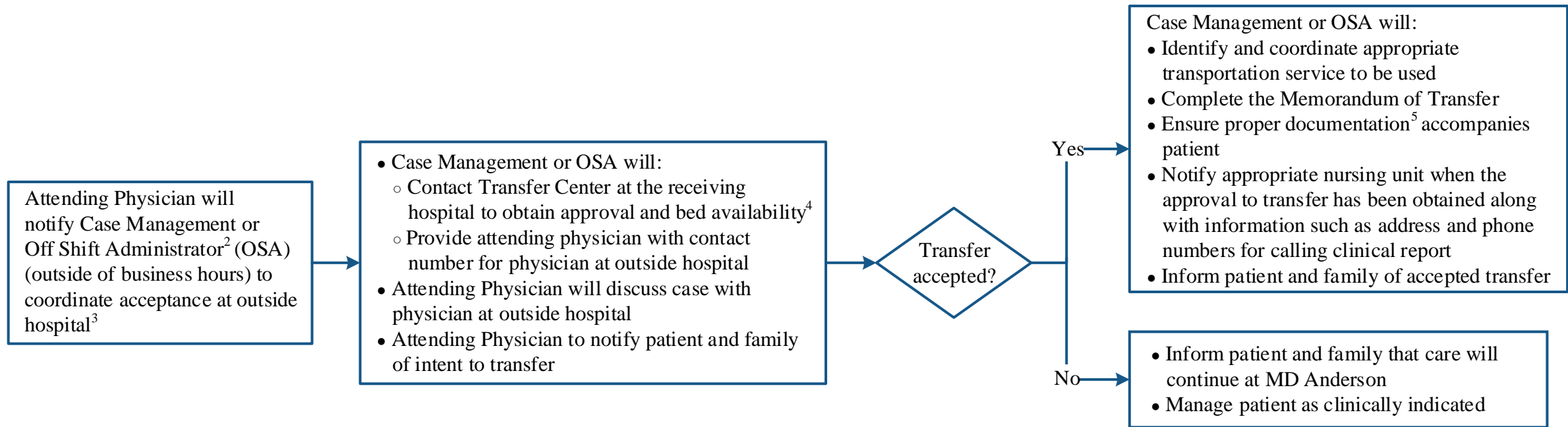
DISPOSITION



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EMERGENCY TRANSFER ADMINISTRATIVE PROCESS¹

DISPOSITION



¹ If patient is not stabilized prior to transferring to another facility, continue to pursue a transfer if the individual requests the transfer **or** the expected benefits outweigh the increased risks of the transfer (see MD Anderson Institutional Policy #CLN3280 - Emergency Medical Screening Examination Stabilization, and Appropriate Transfers Policy)

² Contact Case Management or OSA via operator

³ Refer to MD Anderson Institutional Transfer Policy (#CLN0614)

⁴ Discuss with Attending Physician regarding preference for receiving hospital based on clinical scenario. See [Appendix B: Texas Medical Center \(TMC\) Hospital Contact Information](#). If transfer approval is not promptly obtained, Case Management to contact alternate hospitals to avoid delay.

⁵ Documentation:

- “Face sheet”
- Medical records to include a current reconciled medication list and transfer orders per primary care team
- Others as appropriate

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APPENDIX A: TIMI (Thrombolysis in Myocardial Infarction) Score

TIMI score calculation (1 point for each):

- Age greater than or equal to 65 years old
- Aspirin use in the last 7 days (patient experiences chest pain despite aspirin use in past 7 days)
- At least 2 angina episodes within the last 24 hours
- ST changes of at least 0.5 mm in contiguous leads
- Elevated serum cardiac biomarkers
- Known coronary artery disease (CAD) (coronary stenosis greater than or equal to 50%)
- At least 3 risk factors for CAD, such as:
 - Hypertension greater than 140/90 mmHg or on anti-hypertensives
 - Current cigarette smoker
 - Low HDL cholesterol (less than 40 mg/dL)
 - Diabetes mellitus
 - Family history of premature CAD:
 - Male first-degree relative or father younger than 55 years old
 - Female first-degree relative or mother younger than 65 years old

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APPENDIX B: Texas Medical Center (TMC) Hospital Contact Information

	Memorial Hermann TMC	CHI St. Luke's TMC	Methodist TMC
For Transfers:	Transfer Center (713) 704-2500	Transfer Center (832) 355-2233	Transfer Center (713) 441-6804

Additional contacts:

	Memorial Hermann TMC	CHI St. Luke's TMC	Methodist TMC
ACS/STEMI	Fax EKG to (713) 704-0665 (for EC patients)	On-call STEMI fellow via page operator (832) 355-4146 On-call STEMI attending via transfer center (888) 875-1434 Catheterization Lab (832) 355-6650 Dr. George Younis (Catheterization Lab Med Director) (832) 816-7324	On-call STEMI attending via page operator (713) 790-2201 Catheterization Lab (713) 441-5292

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SUGGESTED READINGS

Jneid, L., Addison, C., Bhatt, L., Fonarow, A., Gokak, A., Grady, M., . . . Pancholy, J. (2017). 2017 AHA/ACC Clinical performance and quality measures for adults with ST-elevation and non-ST-elevation myocardial infarction: A report of the American College of Cardiology/American Heart Association task force on performance measures. *Circulation: Cardiovascular Quality and Outcomes*, 10(10), e000032. <https://doi.org/10.1161/HCQ.0000000000000032>

MD Anderson Institutional Policy #CLN0614 – Transfer of Patients to, from and Within MD Anderson Cancer Center Policy

MD Anderson Institutional Policy #CLN3280 – Emergency Medical Screening Examination Stabilization, and Appropriate Transfers Policy

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