## Critical Path

<table>
<thead>
<tr>
<th>Stage</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consults</strong></td>
<td>Cardiology consult in ED</td>
<td></td>
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<tr>
<td><strong>Tests</strong></td>
<td>12 lead ECG within 10 minutes of arrival in ED; cardiac serum markers; admission blood work</td>
<td>Pre discharge ETT – for uncomplicated patient, plan on 4-5 days</td>
</tr>
<tr>
<td></td>
<td>Echo for CHF/shock/suspected mechanical complications</td>
<td>Cath(^1) patients with significant ischemia (in-hospital or pre-discharge ETT)</td>
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<tr>
<td><strong>Aspirin</strong></td>
<td>chewed in ED (325 mg)</td>
<td>160-325 mg daily</td>
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<tr>
<td><strong>Reperfusion for ST↑ or new LBBB ≤ 12 hrs of symptom onset</strong></td>
<td>Front loaded thrombolytics(^2) or Primary PTCA</td>
<td>alteplase/ reteplase, can be repeated for recurrent occlusion</td>
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<tr>
<td><strong>Heparin</strong></td>
<td>IV in alteplase/reteplase or PTCA treated patients; for large anterior MI, AF, prior embolus, LV thrombus; subcutaneous heparin for streptokinase IV heparin in LMWH subcutaneous for non-ST elevated MI</td>
<td>48 hrs in alteplase/reteplase, or emergency cath treated patients Consider subcutaneous heparin mini-dose for all until ambulatory.</td>
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<tr>
<td><strong>Beta Blockers(^3)</strong></td>
<td>IV Metoprolol (up to 15 mg in 3 divided doses) or IV Atenolol (10 mg in 2 divided doses) Calcium channel blockers if beta blockers ineffective or contraindicated</td>
<td>Oral Metoprolol 50-100 mg daily Atenolol 50-100 mg QD, or other beta blocker</td>
</tr>
<tr>
<td><strong>ACE Inhibitors</strong></td>
<td>Start within hours if BP &gt; 100, no renal failure</td>
<td>Daily for up to 6 weeks.</td>
</tr>
<tr>
<td><strong>GPIIb/IIIa</strong></td>
<td>For primary PTCA or high risk, non-ST elevated MI</td>
<td>Oral daily indefinitely</td>
</tr>
<tr>
<td><strong>Nitroglycerin</strong></td>
<td>IV for 24-48 hrs, unless HR&lt; 50, BP&lt; 90</td>
<td>Only for ongoing ischemia or uncontrolled hypertension</td>
</tr>
<tr>
<td><strong>Statins</strong></td>
<td>Indefinitely if LDL-C &gt;100 mg/dl</td>
<td>Oral for residual ischemia</td>
</tr>
<tr>
<td><strong>Activity Cardiac Rehab</strong></td>
<td>Strict bedrest Bedrest/bedside commode as tolerated</td>
<td>Start exercise Hallway ambulation</td>
</tr>
<tr>
<td><strong>Diet</strong></td>
<td>Education on low fat diet</td>
<td>Recommend low fat diet low chol, low saturated fat, no added salt as tolerated</td>
</tr>
<tr>
<td><strong>Patient / Family Teaching</strong></td>
<td>• Explain treatments • Allay fears • Sx recognition &amp; reporting • pain scale • Orient to unit &amp; room; waiting room, Family Group, Survival Guide, Telecare, MI Patient Hospital Stay Information and AHA series</td>
<td>Prepare for all Discharge procedures, explain treatments Prepare for transfer off CICU; review Sx recognition &amp; reporting Initiate as early as possible Reinforce smoking cessation Orient patient to: AHA Active Partnership workbook/video series CHD section of workbook Videos Taking Control &amp; Understanding CHD Heart Attack Discharge document</td>
</tr>
<tr>
<td><strong>Discharge Planning</strong></td>
<td>Direct family to business office Notify discharge planners</td>
<td>HOME VCR?</td>
</tr>
</tbody>
</table>
1Indications for a Cardiac Cath:
- Primary PTCA
- Rescue for the failed thrombolysis
- Clinical conditions
  - Cardiogenic shock/hemodynamic instability/CHF
  - Suspected mechanical complications (eg. VSD, acute MR)
- Recurrent symptomatic arrhythmia
- Ischemia in-hospital or pre-discharge ETT
  - Recurrent ischemia at rest with ECG changes (repeated episodes without ECG changes)
- Recurrent MI

2Contraindications/Cautions to Thrombolytics:

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<th>Contraindications</th>
<th>Cautions</th>
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<tr>
<td>Known prior hemorrhagic CVA</td>
<td>Persistent BP ≥ 180/110mgHG</td>
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<tr>
<td>IC trauma</td>
<td>Prior cerebrovascular accident/ intracerebral pathology</td>
</tr>
<tr>
<td>Active internal bleeding</td>
<td>Current use of anticoagulants in therapeutic doses</td>
</tr>
<tr>
<td>Suspected aortic dissection</td>
<td>Trauma or surgery within 2 weeks</td>
</tr>
<tr>
<td>Suspected mechanical complications</td>
<td>Noncompressible vascular punctures</td>
</tr>
<tr>
<td>Persistent BP &gt; 180/110mgHG</td>
<td>Recent (within 2-4 weeks) internal bleeding</td>
</tr>
<tr>
<td>Known prior hemorrhagic CVA</td>
<td>Active peptic ulcer disease</td>
</tr>
<tr>
<td>Prior cerebrovascular accident/intracerebral pathology</td>
<td>History of chronic severe hypertension</td>
</tr>
</tbody>
</table>

3Thrombolytic drug dosing
- alteplase 15 mg bolus; 0.75 mg/kg over 30 mins (max 50mg); 0.5 mg/kg over 60 mins (max 35mg)
- anistreplase 30U in 5 min
- reteplase, double bolus 10 units 30 min apart
- streptokinase, 1.5 million units infused over 60 min

3Relative Contraindications to Beta-blockers
- Heart rate < 60 bpm
- PR interval > 0.24 seconds
- SBP < 100mmHg
- Secondary or tertiary AV block
- Severe COPD
- Severe LV failure
- Hx of asthma
- Severe PVD
- IDDM
- Severe PVD
- Severe COPD
- Severe LV failure
- Hx of asthma