



# Sanger Heart & Vascular Institute

## Memorandum

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To: Emergency Departments, Transferring Centers, STEMI Team Members

From: William Downey, MD, Medical Director Cardiac Cath Labs and Stephen Wright, AVP Invasive Cardiology SHVI

Subject: Change in Code STEMI Protocol

Date: 6/10/2013

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Effective, June 19<sup>th</sup> 2013, there will be important changes to the existing STEMI protocol. The goal of these changes is to promote prompt transfer and treatment for our STEMI patients, while following the latest clinical evidence.

Here are the important changes (See Medication Table):

- No load of a P2Y12 inhibitor prior to cath
- Continue to load aspirin 324mg chewed
- Continue to administer Heparin Bolus
- Administer Atorvastatin prior to cath

Why not load clopidogrel anymore?

- Ticagrelor and prasugrel are favored in STEMI and other ACS in appropriate patients (improved outcomes).
- The rapidity of onset of ticagrelor and prasugrel means that effective platelet inhibition is achieved with a dose given in the cath lab.
- Avoid switching from one drug to another
- For patients who require CABG, there is no delay in surgery due to need for washout of clopidogrel.

Why not load prasugrel or ticagrelor in ER?

- No demonstrated benefit to early load versus load on table in cath lab.
- Allows ER staff to focus on facilitating transfer for PCI rather than medications.
- Avoids potential for delay in CABG due to need for washout.
- Eliminates possibility of giving drugs to patients with contraindications (eg. Prasugrel to patients with prior stroke).

What is the rationale for using atorvastatin prior to revascularization in STEMI?

- Over the past decade, a series of trials have convincingly demonstrated that treatment with high-dose atorvastatin prior to PCI for stable angina and acute coronary syndromes markedly improves peri-procedural outcome. For instance, the ARMYDA-ACS trial (*JACC* 49: 1272) showed that two doses of high-dose atorvastatin prior to PCI reduced MACE from 17% to 5%.
- The STATIN-STEMI (*JACC Cardiovasc Interv* 3:332) trial expanded this finding to the STEMI population. Patients being taken to primary PCI were randomized to atorvastatin 80mg vs placebo. All patients received atorvastatin after the procedure. While it was a small trial, it demonstrated an improvement in MACE from 10.6 to 5.8%. Importantly, secondary analyses showed improved myocardial perfusion immediately after primary PCI as assessed by resolution of ST elevation, myocardial blush, and TIMI frame count.

### STEMI Medication Changes

#### PRIMARY PCI PATIENTS

Medication	Dosage	Notes
Aspirin	324 mg po (81mg x4)	Patient to chew and swallow tablet
Heparin Bolus	60 units /kg IV	Max dosage 4000 units No continuous infusion
Do Not Administer Antiplatelet Agents		
Nitroglycerin	0.4 mg SL q 5 min prn x 3 doses max or 1 inch to skin	Hold for SBP less than 90
Morphine	2-4 mg IV prn (max total of 12 mg)	PRN for chest pain unrelieved by Nitroglycerin
Atorvastatin	80 mg po	