

**Date:** May 2019

## **QUALITY IMPROVEMENT PROJECT CHARTER**

### **PROBLEM AND BACKGROUND**

*What is the core quality issue that you are trying to improve, and what are the factors involved?*

The diagnosis of acute coronary occlusion has rested on traditional STEMI criteria, aided by automated interpretation. But there's increasing recognition of computer error and limits to STEMI criteria, while new literature on STEMI equivalent or subtle occlusions offer the potential to reduce diagnostic delay

### **RATIONALE AND BENEFITS**

*Why is this an important problem to tackle, and what are the expected benefits?*

Acute coronary occlusion is the pre-eminent time-sensitive emergency. When time is myocardium, delays to reperfusion lead to worse outcomes (including disability and death), so reducing diagnostic delay can improve patient outcome

### **AIM STATEMENT AND DELIVERABLES**

*What are the goal and objectives of this project?*

Using web-based feedback to all emergency physicians including cases and literature, I will reduce the ECG-to-activation time for code STEMI with culprit lesions by 10 minutes, without increasing the percentage of code STEMI without culprit lesions.

### **SCOPE**

*What are the things (people, tasks, processes) that this project WILL and WILL NOT touch on?*

Traditional STEMI benchmarks have focused on door-to-ECG (involving triage nurses and ECG techs) or ECG-to-cath lab (involving transportation), and UHN has previously adopted a stat cardiology process involving the cardiologists.

This project focuses exclusively on the emergency physician diagnosis of acute coronary occlusion. This will involve assessing the sensitivity of automated interpretation, traditional STEMI criteria, and new literature on STEMI-equivalents and subtle signs of occlusion. It will also introduce the metric of ECG-to-activation (ETA) time (the time from the index ECG to the time the emergency physician activates a code STEMI or consults cardiology) to measure diagnostic delay and assess the impact of feedback and education.

### **MEASURES**

*What are the outcome, process and balancing measures that you are planning on looking at?*

- outcome: average ETA, and percentage of cases with ETA>30 minutes
- process: website views and visitors
- balancing measures: percentage of code STEMI without culprit lesions

-other measures: sensitivity of automated interpretation, traditional STEMI criteria, and STEMI-equivalents or subtle signs of occlusion

**Project name:** Sharing and Teaching ECGs to Minimize Infarction (STEMI)

**University Health Network  
Emergency Department**

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### **CHANGE IDEAS**

*What are you going to be attempting or changing, if already known?*

Using feedback and education on the evolving literature on STEMI equivalents and subtle occlusions, the goal is to reduce emergency physician diagnostic delay

### **PROJECT LEADER, TEAM MEMBERS AND RESPONSIBILITIES**

*Who is the point person accountable for the project's progression, who are the other members, who will do what?*

I'm the project team leader, and will review all code STEMI cases from the ED and will create the website and provide weekly posts. I will liaise with the cardiology fellow working on reducing false activations, and with the ED QI committee

### **RESOURCES**

*What resources will you require – human, financial, equipment, authorizations and permissions, etc?*

I got permission from REB and privacy, and am solely responsible for reviewing cases, creating the website and writing weekly posts.

### **TIMELINES AND MILESTONES**

*When do you anticipate STARTING to work on this project, IMPLEMENTING this project, and COMPLETING it?*

This project started last summer when I began reviewing STEMI cases. Implementation began in December with a survey to emergency physicians followed by grand rounds in January, when I also launched the website. The first five months of the project is completed.