Reduction in Post-PCI Medication Error with a Standardized Communication Tool

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Background

At Surrey Memorial Hospital (SMH), patients admitted with acute coronary syndrome ("heart attack") undergo coronary angiogram and percutaneous coronary intervention (PCI), procedures designed to identify blocked coronary blood vessels and to subsequently open up these vessels by means of a stent. These procedures are carried out offsite at Royal Columbian Hospital (RCH). Once PCI is completed, patients are returned to SMH. Subsequently, nurses on duty are tasked with calling an on-call cardiologist for post-PCI orders. Unfortunately, these cardiologists are often unfamiliar with the patient. Due to transferring of patients and the lack of patient familiarity, post-PCI medications can be missed or administered in an untimely manner.

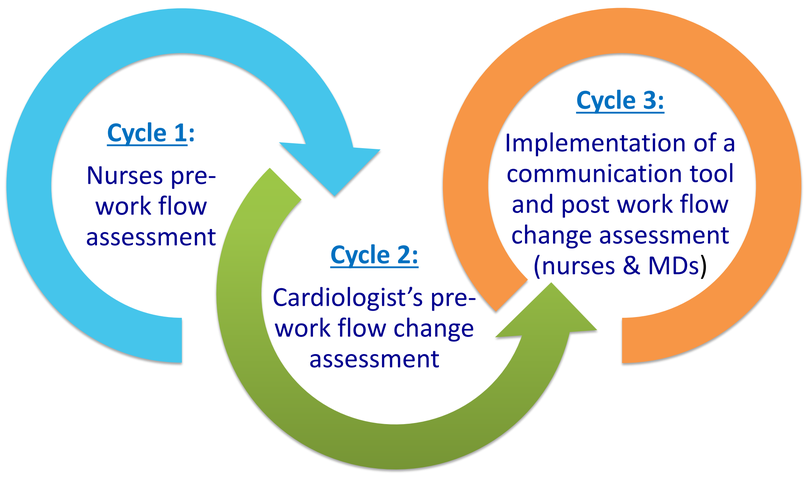
Missed or delayed dual anti-platelet therapy (DAPT), which is a combination of medications (Aspirin & Clopidogrel, or Aspirin & Ticagrelor), can lead to stent thrombosis, cardiogenic shock and death. Additionally, missed anticoagulation after PCI can lead to strokes for patients with atrial fibrillation or valve thrombosis for patients with mechanical valves. Therefore, the focus of this project is to create an effective, standardized communication tool that will allow nurses to relay all pertinent information to the on-call physician in hopes of reducing medication errors.

Aim

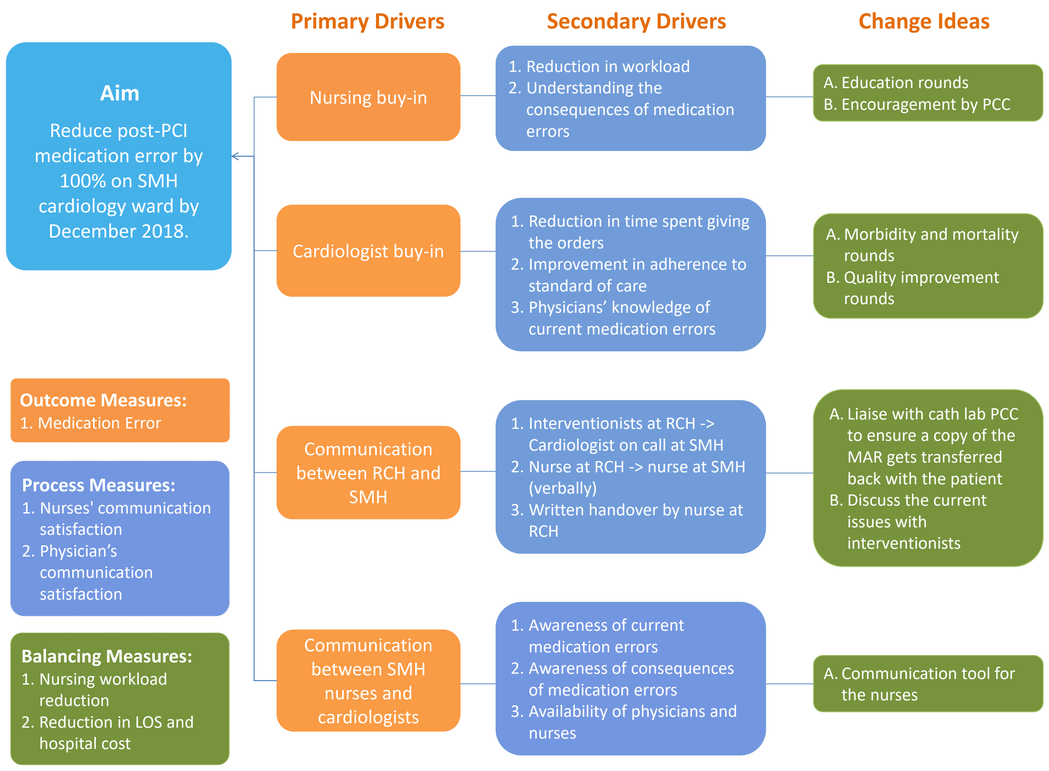
Reduce post-PCI medication errors by 100% by December 2018 at Surrey Memorial Hospital Cardiology ward.

Project Design & Strategy

PDSA ("Plan, Do, Study, and Act") Cycles:

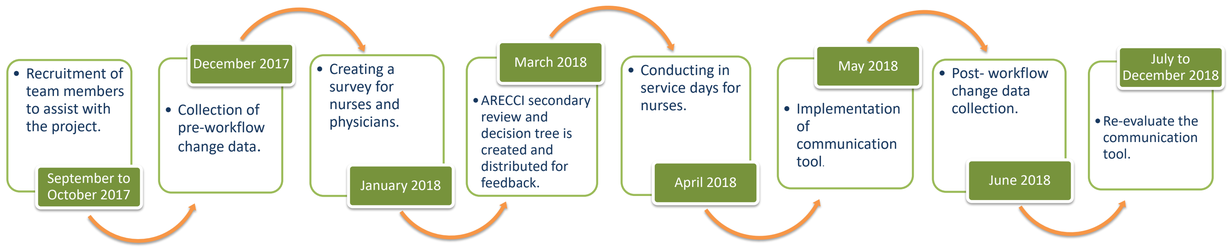


Driver Diagram

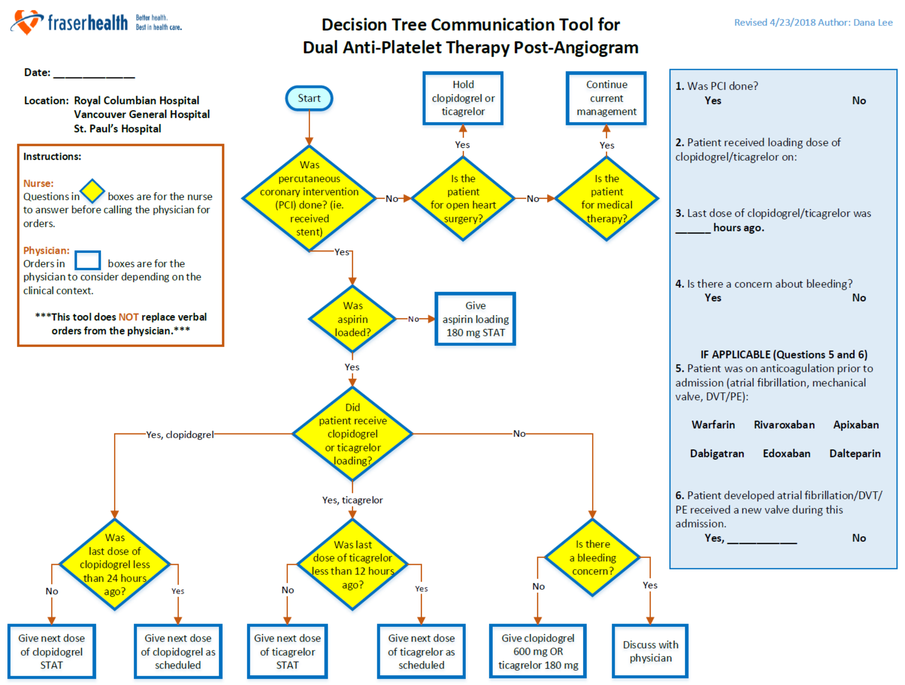


Changes Made

Over the course of the past six months, the project has implemented a number of changes with more to follow. These changes are described below:

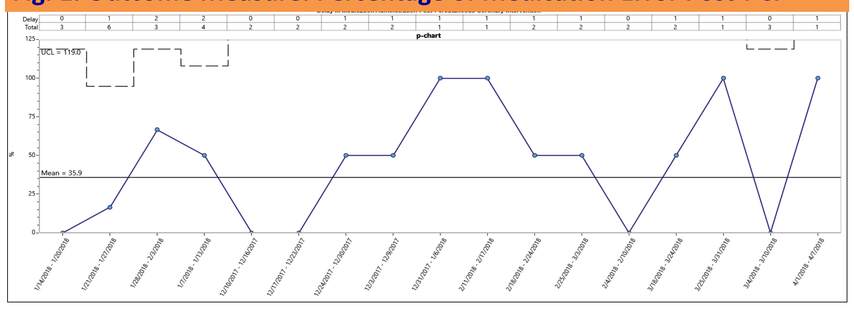


Standardized Communication Tool



Results

Fig. 1. Outcome Measure: Percentage of Medication Error Post-PCI

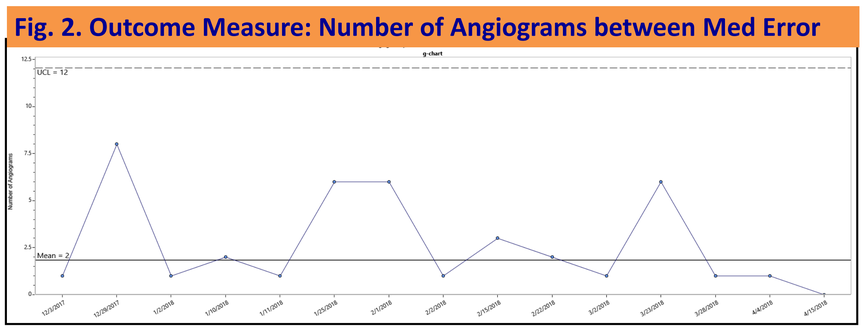


Definition of Medication Error:

Clopidogrel: Greater than 24hr interval dosing

Ticagrelor: Greater than 12hr interval dosing

Fig. 2. Outcome Measure: Number of Angiograms between Med Error



Lessons Learned

- Variable knowledge levels amongst nursing staff regarding appropriate post-PCI medications and consequences of delayed treatment
- On-call cardiologists dissatisfied with current nursing communication
- Lack of protocolized and detailed nursing handover between RCH and SMH nursing

Team

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