Develop a System to Improve a Patient's Readiness for Revascularization

Scope of the problem:

Currently urgent patients with or without a recent MI make up 60% of the isolated CABG surgery deaths. The NNECDSG believes there are opportunities during the preoperative period to reduce a patient's risk of dying.

Goal:

Our goal is to reduce the in-hospital mortality of urgent patients (with and without recent MI) undergoing cardiac surgery.

Strategies:

1. Patient readiness will focus on the development of a system to guarantee appropriate diagnostic testing has been ordered, resulted and reviewed, and that appropriate medication/treatment strategies have been implemented and are effective.
2. Use checklist/computer reminders to assure patients are on all appropriate medications and treatments. Medications include: aspirin, adequate beta-blockade, statin**.** Treatment strategies include: delaying surgery if they have an MI<3 days, defining handoffs between cardiology and cardiac surgery, optimizing patients' lung who have poor pulmonary function, creatinine at baseline value for patient and having a patient's blood sugar under-control.
3. Information feedback systems and redundant processes to improve implementation of checklists medications/treatments.

Activities:

1. Checklist are in place at 6 of the NNE centers.
2. For two centers preoperative order were updated to include recommended medication and treatment strategies.

Progress:

1. A chart review was completed by 5 centers for the last NNE meeting of the centers last 50 cardiac surgery patients. Beta-blocker use ranged from 80% to 98%. Aspirin Use from 72% to 100%. Statin use from 82% to 90%. Heart rate<80 from 26% to 96%. Pulmonary function tests ranged from 6% to 90%.
2. The next steps will be to develop treatment strategies for complex patients (patients with >1 comorbid conditions). Examine checklist use and feedback systems. (for example: What systems are in place to stop patient from moving through the system if pre-operative medications, treatments and goals for the patient are not met?)
3. Assess impact on in-hospital mortality in urgent patients.