Pathway to Success! Implementing a Clinical Pathway to Improve SICU CABG Outcomes

Rosy Canete-Yoham
South Miami Hospital, rosyc@baptisthealth.net

Edwin Vides
South Miami Hospital, edwinvi@baptisthealth.net

Follow this and additional works at: https://scholarlycommons.baptisthealth.net/se-all-publications

Citation
https://scholarlycommons.baptisthealth.net/se-all-publications/854
PATHWAY TO SUCCESS!
IMPLEMENTING A CLINICAL PATHWAY TO IMPROVE SICU CABG OUTCOMES

Authors: Rosy Canete-Yoham MSN, ARNP-BC, CCRN-CSC and Edwin Vides MSN, RN Critical Care Services, South Miami Hospital

**Background**

- Prolonged stay in the Intensive Care Unit (ICU) is associated with high mortality, morbidity and costs, with respiratory problems as the leading complication.
- The Society of Thoracic Surgeons (STS) is a national reporting database that benchmarks South Miami Hospital (SMH) Critical Care on the following indicators:
  - ICU length of stay (LOS) <48 hours
  - Ventilator Time <6 hours.
- ICU CABG Length of stay in 2011 was 75 hours.
- Median Ventilator time was 4.8 Hours.
- This prompted a need to develop a guideline for all disciplines involved in the care which lead to improvements in patient care, utilization of resources and outcomes.

**Goals**

- Develop and implement an evidence-based post cardiac surgery clinical pathway to improve coordination of care, utilization of resources and patient outcomes.
- Successful outcomes are defined as:
  - CABG ICU LOS <48 hours
  - CABG Ventilator Time < 6 hours with an internal stretch goal of <4 hours.

**Key Stakeholders**

- Critical Care Department
- Respiratory Therapy Department
- Pharmacy Department
- Baptist Health Cardiac & Thoracic Surgical Group
- SMH CT Surgery Taskforce Committee Members
- Physical Therapy Department
- Cardiac Rehabilitation Department
- Dietary Department

**Methods**

- Establish an interdisciplinary team of surgeons, ARNPs, pharmacists, nurses, rehabilitation specialists and respiratory therapists.
- Set clear daily goals from immediate post-operative time until discharge.
- Develop a Cardiac Surgery Clinical Pathways.
- Designate a dedicated step-down area for post open heart patients.
- Designate CCU as the step-down unit for post open heart patients.
- Educate the Critical Care Nurses on care of the post open heart patient in the ICU and Step-down unit.
- Create a clinical dashboard to trend patient data and outcomes.
- Monitor compliance with utilization of Clinical Pathway via daily chart audits by leadership team.
- Assess patient tolerance and adherence to the pathway daily with the Critical Care team during Interdisciplinary Rounds.
- Discuss unit progress and outcomes monthly at the SMH Cardiac Surgery Taskforce meeting.
- Utilizing the SICU Cardiac Surgery Clinical Pathway on CABG patients led to positive patient outcomes by eliminating variations in care.
- Based on this success, it was decided that other Cardiac Surgery patients would benefit from the pathway and the population was extended to include Valves and Combined CABG/Valve Procedures.

**Society of Thoracic Surgeons (STS) Adult Cardiac Surgery Database Isolated CABG ICU Data**

- **Initial ICU Median Hours**
  - Year 2012: 70.8
  - Year 2013: 41.4
  - Year 2014: 30.7

- **Initial ICU Median Ventilator Hours**
  - Year 2012: 5.2
  - Year 2013: 4.6
  - Year 2014: 4.2

- **Readmission to ICU**
  - Year 2012: 5.90%
  - Year 2013: 5.40%
  - Year 2014: 4.20%

- **ICU Re-intubation Rates**
  - Year 2012: 5.8
  - Year 2013: 5.4
  - Year 2014: 2.5

- **SMH CABG ICU Mortality**
  - Year 2012: 7.80%
  - Year 2013: 1.80%
  - Year 2014: 0.00%