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

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PATHWAY TO SUCCESS!
IMPLEMENTING A CLINICAL PATHWAY TO IMPROVE SICU CABG OUTCOMES

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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

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

Initial ICU Median Hours

<table>
<thead>
<tr>
<th>Year 2012</th>
<th>Year 2013</th>
<th>Year 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>70.8</td>
<td>41.4</td>
<td>30.7</td>
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Readmission to ICU

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<th>Year 2012</th>
<th>Year 2013</th>
<th>Year 2014</th>
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</thead>
<tbody>
<tr>
<td>5.90%</td>
<td>5.40%</td>
<td>4.20%</td>
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Initial ICU Median Ventilator Hours

<table>
<thead>
<tr>
<th>Year 2012</th>
<th>Year 2013</th>
<th>Year 2014</th>
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</thead>
<tbody>
<tr>
<td>5.2</td>
<td>4.6</td>
<td>4.2</td>
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ICU Re-intubation Rates

<table>
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<tr>
<th>Year 2012</th>
<th>Year 2013</th>
<th>Year 2014</th>
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<tbody>
<tr>
<td>5.80%</td>
<td>5.40%</td>
<td>2.50%</td>
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Mortality

<table>
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<tr>
<th>Year 2012</th>
<th>Year 2013</th>
<th>Year 2014</th>
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</thead>
<tbody>
<tr>
<td>7.80%</td>
<td>1.80%</td>
<td>0.00%</td>
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</table>

Background

• 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.

Goals

• 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 Staff on pathways
• 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

Methods

• 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.

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