Reduction of Surgical Site Infections (SSI) for Colon Resection Patients Using Elements of an Advanced Colon Bundle

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**Purpose:** to decrease surgical site infections for colon resection patients at Mary Greeley Medical Center. A multidisciplinary team came together to institute elements of an advance colon bundle.

- Free home health nursing visit within 48 hours of discharge
- Procedural closing corner
- Post-op high concentration oxygenation at 60% FiO2 for 2 hours post-op and weaned to room air. (October 2017)
- Combined, the list addressed intra-op, post-op and discharge/home phases of patient care.

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<thead>
<tr>
<th>Key Elements</th>
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**Closing Corner**

In January 2017 a procedural closing corner was implemented by operating room nursing staff utilizing the Association of Operating Room Nursing (AORN) guidelines.

The utilization of a closing mayo for colon resections was initially only used by 1 out of 5 general surgeons.

**Closing Corner Includes:**
- allows for the separation of dirty from clean instrumentation
- clean drapes
- gloves
- supplies
- suture
- dressings

<table>
<thead>
<tr>
<th>Closing Corner</th>
<th>Surgeon Utilization</th>
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</thead>
<tbody>
<tr>
<td>Pre-Jan17</td>
<td>20%</td>
</tr>
<tr>
<td>Post-Jan17</td>
<td>100%</td>
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</tbody>
</table>

**Post-Op High Concentration Oxygenation**

Implemented 60% FiO2 for at least 2 hours post-op, per oxy-mask, and weaned to room air. The oxy-mask provides increased accuracy of FiO2 delivery, as well as patient comfort.

Patient exceptions to the treatment included:
- those with a history of COPD
- asthma and
- obstructive sleep apnea

Two to three patients per month fell into the exceptions category. 12 of 19 patients falling into the exception definition still received treatment post-op, per doctor's decision/order.

**Evaluation**

The project is considered successful due to the reduction of surgical site infections in our colon resection patients, ease of implementation and staff embraced the changes.

In our efforts to get to “zero infections” we continue to work with our team to identify additional SSI reduction opportunities, specific to colon resections, including:
- Preoperative mechanical bowel preparation combined with oral antibiotics
- Antimicrobial sutures
- Glucose management

Currently, glucose management is being considered as the next step to SSI reduction.

**Evidence-Based References**


