**HOW DOES A POSTOPERATIVE CARE PROTOCOL IMPACT NURSING CARE? A STUDY OF PYLOROMYOTOMY PATIENTS.**

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**Introduction**
- Pyloric stenosis, a thickening of the pylorus muscle, presents with progressive projectile non-bilious emesis. This affects two to four per 1,000 live births and is treated with a pyloromyotomy.
- Without a postoperative care protocol (PCP) in place, the postoperative orders for patients following a pyloromyotomy vary widely among our hospital's eight surgeons.
- We saw prolonged postoperative lengths of stay with this wide variety of postoperative care methods.
- With increasing healthcare costs, we wanted to decrease variability in care to increase consistency and cut costs.

**Objectives**
- Understand rationale and need for a standardized care protocol in a setting with multiple providers writing orders for similar patients.
- Describe the steps used to implement a care protocol.
- Describe the benefits and limitations of a care protocol.

**Methods**
- IRB approved study.
- Reviewed historical cohort to identify factors related to prolonged hospital stay and issues with ordered feeding regimens.
- Reviewed literature to determine if there was a standard for best practice in pyloromyotomy patients.
- PCP and order set were developed with input from surgeons, advanced practice providers, and nurses.
- Education was provided to attendings, fellows, residents, advanced practice providers and nurses on the surgery unit.
- PCP was implemented on our surgery unit in September 2011.
- Patients were recruited prospectively and compared to the historical cohort from 2010-2011.
- Patients with co-morbidities and intraoperative or postoperative complications were excluded.

**Results**
- A total of 136 patients were included in this study (70 retrospective, 66 prospective).
- Following PCP implementation we saw:
  - Improved nursing documentation with intake and output
  - Increased adherence to the ordered feeding regimen
  - Decreased pLOS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Retrospective (n=70)</th>
<th>Prospective (n=66)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation</td>
<td>62</td>
<td>65</td>
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<tr>
<td>Feeds</td>
<td>62 (89%)</td>
<td>65 (99%)</td>
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<tr>
<td>Output</td>
<td>63 (89%)</td>
<td>65 (99%)</td>
<td></td>
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<tr>
<td>Adherence to Feeding Regimen</td>
<td>45</td>
<td>53</td>
<td>0.0552</td>
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<tr>
<td>Yes</td>
<td>45 (64%)</td>
<td>53 (80%)</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>8 (11%)</td>
<td>13 (20%)</td>
<td></td>
</tr>
<tr>
<td>Cannot Tell</td>
<td>17 (24%)</td>
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<tr>
<td>Length of Stay</td>
<td></td>
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<tr>
<td>pLOS &gt;1 Day</td>
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<td>9</td>
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<tr>
<td>Total LOS</td>
<td>97</td>
<td>75</td>
<td>0.0127</td>
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</table>

**Implications for Practice**
- We have demonstrated the positive impact of a care protocol in the postoperative pyloromyotomy patient population and seen how protocols can simplify and delineate patient care expectations.
- Our data shows that improvement in adherence to ordered feeding regimen approached statistical significance and we believe with a larger sample size this value would reach statistical significance.
- An adequate sample size in the prospective group would likely have provided appropriate information to truly evaluate the change in pLOS.
- Resource utilization can be improved with clear expectations for the plan of care and discharge.
- A protocol is beneficial in populations with a predictable hospital course.
- Protocols can not be applied to every single patient and the patient condition must always be considered first.
- In light of the impending affordable care act, we encourage additional research and consideration for the impact of care protocols.

**References**
Aspelund G; Langer J; Current Management of Hypertrophic pyloric stenosis, Sem Ped Surg 2007;16:27-33

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