Compliance with Preoperative Instructions Before and After An Education Change

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Research Question

Did compliance with preoperative oral intake guidelines improve with consistent written educational materials and instructions?
Significance

Using evidence based practice, this research will identify if there is an impact to patient compliance with preoperative oral intake guidelines after implementing a consistent educational protocol.
Background

Historically, the preoperative fasting guideline for adult same day surgical patients has been “NPO after midnight” or nothing to eat or drink after midnight. Prior research has identified that this practice is no longer required; however, change has been slow to occur.

Recognizing this, in conjunction with Dr. Kett (Department of Anesthesia Chairman), the Saint Peters University Hospital (SPUH) preoperative guideline and Surgical Patient Education Sheet was changed to reflect the American Society of Anesthesiologists practice.
Problem

Upon preoperative clinical assessment it was recognized that this population of patients were not receiving a consistent form of education and therefore not benefitting from the practice change. In direct relation to this inconsistency was the education and communication provided by the surgeon office and our clinical staff.
Methodology

One hundred same day surgical patient charts were reviewed prior to the change to identify the percentage of patient compliance.

After the education, one hundred same day surgical patients’ preoperative assessments were reviewed to identify the compliance with preoperative fasting.

Implementation of this change occurred after IRB approval. Success was measured by the patient understanding the instructions and/or compliance with the fasting guideline.
<table>
<thead>
<tr>
<th>PAT PHONE</th>
<th>Sg Time:</th>
<th>Circle:</th>
<th>Compliant with instructions:</th>
<th>Last Solids: Date/Time/Type</th>
<th>Did they understand the instructions?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NPO after Mid</td>
<td>YES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Solids 8 Hours</td>
<td>NO state reason</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clears 3 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MD office</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PAT/SPUH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Column 1. Tracking where Green sheet is received in MD office and/or PAT office.
Column 2. Tracking fasting instructions rec’d and who initiated them. Circle all that apply
Comments: Anything related to fasting and case (delay, cancellation, reason patient was non-compliant)
The following is the Department of Anesthesia recommended guidelines for eating and drinking before adult elective surgery:

These instructions must be followed to prevent a delay or cancellation in your surgery: Unless you receive other instructions from your Anesthesiologist.

1. Up to 3 hours before surgery you may have these clear fluids only: Limit Fluid to 12 Ounces

Gatorade, Water, or Apple juice.

For patients with Diabetes- G2 Gatorade (low sugar).

No solid food for 8 hours before surgery.

When instructed to take your medications you may take them with a sip of water up to one hour before surgery.

The hospital will call you the day before to finalize your surgery and arrival times and answer any questions you may have.
Preoperative Assessment

- 100 preoperative assessments/charts were reviewed to establish the percentage of patients compliant with the fasting guideline. It was identified that 11 patients were compliant with clears up to 2-3 hours before surgery.
  1. 7 had water only
  2. 3 had apple juice
  3. 1 had ginger ale

- Of the 11 patients compliant with the fasting guideline of 2-3 hours prior to surgery
  1. 5 attended a Preadmission Testing (PAT) visit
  2. 6 received the telephone fasting guideline by the PAT nurses.

- Further noted 30 patients attended a Preadmission testing department nursing visit with a written instruction sheet and 70 patients received a phone assessment without the benefit of written instructions.
During the assessment interview, the clinical staff noted that the patients were confused by the mixed fasting instructions they received from the Surgeon office, PAT nurses, and the clinical staff the night before the procedure.

The PAT nurses were performing assessments up to 30 days prior to a scheduled procedure with a consistent message regarding the clears, 2-3 hours prior to surgery. It was identified that the staff performing the telephone call the night before surgery were inconsistent with their fasting message. Within the 70 phone call instructions the night before surgery, 30 were told to follow the surgeon’s instructions or to remain NPO after midnight.

As a result of this finding it was decided to offer the education to the nursing staff who were contacting the patient. In addition, the chief of anesthesia drafted a memo to request the support of the surgeons in following the new guidelines. We also provided them with copies of the guidelines to be given to all surgical patients, regardless if they were coming to PAT.
To all Surgeons and Office Staff,

The Department of Anesthesia has revised the fasting requirements in accordance with the American Society of Anesthesiologists preoperative fasting guidelines. To provide consistent communication to all of our surgical patients, we are requesting that the attached "Steps to Follow for Your Surgery" patient education sheet be given to patients being scheduled for surgery at Saint Peters.

We appreciate your anticipated cooperation and continued commitment to our patients.
Post Education Data

- After the education was implemented, 108 patients were interviewed.
- The education sheet was received by 32 patients (9 from the Surgeon’s office and 23 from PAT) and 13 unsure if they received it at all. 63 patients did not receive written education.
- 14 patients who received the written and fasting guidelines complied.
- 16 patients who received the updated fasting telephone instructions only, from the nursing staff, were compliant.
- 1 patient did not follow the guidelines correctly and had their surgery cancelled, this patient received a phone call only.
- 19 patients were not given the updated telephone instructions from clinical staff at SPUH but told to follow their doctor’s instructions (NPO after midnight).
- 44 said they received the updated telephone fasting instructions but didn’t follow the new guidelines because:
  - Didn’t want to
  - Afraid to, had always heard NPO after midnight
  - Case too early in the morning
# Summary of Findings

The information received is summarized in the table below:

<table>
<thead>
<tr>
<th>Instruction Method</th>
<th>Period</th>
<th>Number of Patients</th>
<th>Not Compliant</th>
<th>Compliant N</th>
<th>Compliant %</th>
<th>Fisher Exact Test 2-Sided P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone</td>
<td>Before</td>
<td>70</td>
<td>64</td>
<td>6</td>
<td>8.6%</td>
<td>0.0395</td>
</tr>
<tr>
<td></td>
<td>After</td>
<td>76</td>
<td>60</td>
<td>16</td>
<td>21.1%</td>
<td></td>
</tr>
<tr>
<td>Written</td>
<td>Before</td>
<td>30</td>
<td>25</td>
<td>5</td>
<td>11.0%</td>
<td>0.0283</td>
</tr>
<tr>
<td></td>
<td>After</td>
<td>32</td>
<td>18</td>
<td>14</td>
<td>43.8%</td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>Before</td>
<td>100</td>
<td>89</td>
<td>11</td>
<td>11.0%</td>
<td>0.0028</td>
</tr>
<tr>
<td></td>
<td>After</td>
<td>108</td>
<td>78</td>
<td>30</td>
<td>27.8%</td>
<td></td>
</tr>
</tbody>
</table>
Results

Comparison of the overall compliance rate suggests a statistically significant increase in “before” vs. “after” education change (11.0% vs. 27.8%, Fisher’s Exact Test P=0.003).

Statistically significant increases in compliance rates were also observed in “before” vs. “after” education change in both subsets: those who received instructions via phone (8.6% vs. 21.1%, Fisher’s Exact Test P=0.040), as well as those who received written instructions (11.0% vs. 43.8%, Fisher’s Exact Test P=0.028).

Future studies would benefit from statistical and data collection input to questionnaire design, to ensure that data collection and study objectives are aligned.
References

