Optimizing Patients Prior to Surgery

**Funding:**
- Agency for Healthcare Research and Quality (AHRQ)
- Life Sciences Discovery Fund
- Nestle HealthCare Nutrition
- UW Patient Safety Innovation Program
- UW Department of Surgery

facs.org/strongforsurgery
Objectives of Strong for Surgery

Offer resources to hospitals and clinics to help them optimize patient health
- Presurgery checklists for surgical patients in four target areas
- Implementation support to standardize best practices in clinical practice

Drive improvements to make surgery safer by getting research results back into health care practice to facilitate system change
## Focus on Four Modified Areas

<table>
<thead>
<tr>
<th>Nutrition</th>
<th>Blood Sugar</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Screening for malnutrition</td>
<td>- Screening for risk of diabetes</td>
</tr>
<tr>
<td>- Testing albumin levels for risk stratification</td>
<td>- Screening for blood sugar</td>
</tr>
<tr>
<td>- Evaluating for immunonutrition</td>
<td>- Monitoring perioperative glucose management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Smoking</th>
<th>Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Screening to identify smoking habits and history</td>
<td>- Identification of drugs that could cause bleeding and cardiac risks</td>
</tr>
<tr>
<td>- Advising patient on how to establish a quit plan</td>
<td>- Reconciling herbal medications</td>
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</tbody>
</table>
Why Nutrition?

- Malnutrition prevalent in surgical patients
- Best determinant of surgical outcome
- Modifiable with appropriate intervention
- Immunonutrition may improve recovery

SCOAP: Albumin and Complications
Elective Colon/Rectal Procedures 2011

Adverse Outcome Rates

<table>
<thead>
<tr>
<th>Albumin Levels (g/dL)</th>
<th>Re-operation</th>
<th>Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2.0</td>
<td>12.0%</td>
<td>15.0%</td>
</tr>
<tr>
<td>2.0-2.4</td>
<td>9.0%</td>
<td>9.0%</td>
</tr>
<tr>
<td>2.5-2.9</td>
<td>6.0%</td>
<td>6.0%</td>
</tr>
<tr>
<td>3.0-3.4</td>
<td>3.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>3.5-3.9</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>4.0+</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
</tbody>
</table>
Why Smoking?

- Surgical site infections are more prevalent for smokers
- Quitting smoking before surgery decreases risk of adverse events
- Wound healing is faster for nonsmokers
- The presurgery visit is an opportunity to discuss the benefits of quitting for life
Hyperglycemia doubles the risk of SSI

- In some studies 47% of hyperglycemic episodes were in nondiabetics.

Of the adult population over 65 years:

- 1 in 4 will have diabetes
- 2 in 4 are prediabetic
  - In a study of patients from 2005-2008 (U.S. adults over 20 years), 35% had prediabetes.
Some medications and herbal remedies increase risk of bleeding

- Echinacea, Garlic, Ginkgo, Ginseng, Kava, Saw Palmetto, St. John’s Wort, Valerian ↑ risk
- Aspirin can be safely continued

Beta-blocker continuation, however, is associated with fewer cardiac events and mortality
Checklists help standardize presurgical evaluation and provide opportunities for appropriate interventions

Screening questions are designed to compliment existing patient presurgical assessments and QI initiatives
Program Implementation

Hospital/Clinic Expectations:
• Change team formation and support champion
• Commitment through post-implementation
• Checklist adoption
• Data abstraction and sharing
• Stakeholder call attendance
• Feedback for improvement

Strong for Surgery:
• Preassessment
• Workflow mapping
• Assessment of resource needs
• Feedback—clinicians and staff
• Post-assessment
Pilot Year – 2012

[Map of Washington State with locations marked: Bellingham, Seattle, Spokane, Vancouver, Portland]
Current Impact
For more information

Visit the website: facs.org/strongforsurgery
  • Read the evidence
  • View our checklists

E-mail us: strongforsurgery@facs.org

Social media:  Facebook StrongforSurgery
              Twitter @Strong4Surgery