Creating and Using a Safe Surgery Checklist
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Agenda

1. Welcome
2. Overview
3. Regulatory and Accreditation Requirements
4. Checklist Development
5. Checklist Implementation
6. Closing Thoughts
7. Questions
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The Origins of the Checklist

• 1930’s aviation—technology considered too complicated for the pilots

• Experience that showed the person with the most experience not always the one with the best results

• Checklists developed by pilots to ensure critical steps were not missed

• Focused on correcting mistakes or defects before they happened

• Drove improvement

• Spawned many federal agencies—FAA, NTSB
Thoughts from Atul Gawande – The Checklist Manifesto

• The professional Code of Conduct
  – Selflessness—place the needs of others above ours
  – Skill—aim for excellence in regards to knowledge and skill
  – Trustworthiness—responsible for personal behavior with others

• Aviators add another dimension
  – Discipline—following prudent procedure when working with others

• Medicine focuses on autonomy
  – Direct opposition to discipline

• In the current medical environment of increasingly complicated technology, autonomy does not seem to be what we should focus on
Why Use a Checklist?

• The more complex a procedure, the more opportunities there are to miss a critical step

• Checklists work because they point out missed steps or problems that may have been overlooked secondary to our own sense of familiarity with the procedure

• No matter how expert we are, a well-designed checklist has been proven to improve outcomes

• It is the right thing to do for our patients
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Medicare Reporting Requirements

• Initial reporting via QualityNet (www.qualitynet.org) summer of 2013

• May answer yes if used during any point in 2012

• Flexibility in design and use

• “No” answers do not incur financial penalties but may have public relations or local community implications

• No validation included in Medicare surveys
Medicare Detailed Requirements

Must address effective communication and safe surgery practices in each of the three perioperative periods

• Prior to administering anesthesia
• Prior to incision
• Prior to the patient leaving the operating room
Conditions for Coverage Requirements

Interpretive Guidelines for 42 CFR Section 416.42

• Generally accepted procedures to avoid such surgical errors require:
  – A pre-procedure verification process to make sure all relevant documents (including the patient’s signed informed consent) and related information are available, correctly identified, match the patient, and are consistent with the procedure the patient and the ASC’s clinical staff expect to be performed
  – Marking of the intended procedure site by the physician who will perform the procedure or another member of the surgical team so that it is unambiguously clear
  – A “time out” before starting the procedure to confirm that the correct patient, site, and procedure have been identified, and that all required documents and equipment are available and ready for use
Accreditation Requirements – TJC

Universal Protocol

- Developed and published the use of a standardized checklist in 2003
- UP.01.01.01: Conduct a pre-procedure verification process
- UP.01.02.01: Mark the procedure site
- UP.01.03.01: A time out is performed immediately prior to starting procedures
- The Joint Commission’s Universal Protocol (UP) and National Patient Safety Goals (NPSG) are aligned with the CMS requirements for a safe surgery checklist
- The Joint Commission encourages organizations to supplement the UP with additional good practices that will increase patient safety
Accreditation Requirements – AAAHC

Chapter 10. U and Chapter 10. V

• The organization utilizes a process to identify and/or designate the surgical procedure to be performed and the surgical site and involves the patient in that process.
  – The person performing the procedure marks the site
  – For dental procedures, the operative tooth may be marked on a radiograph or a dental diagram (Chapter 10. U)

• Immediately prior to beginning a procedure, the operating team verifies the patient's identification, intended procedure, and correct surgical site, and that all equipment routinely necessary for performing the scheduled procedure along with any implantable devices to be used, are immediately available in the operating room
  – The provider performing the procedure is personally responsible for ensuring that all aspects of this verification have been satisfactorily completed prior to beginning the procedure (Chapter 10. V)
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<table>
<thead>
<tr>
<th>SIGN IN</th>
<th>TIME OUT</th>
<th>SIGN OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PATIENT HAS CONFIRMED</strong></td>
<td><strong>CONFIRM ALL TEAM MEMBERS HAVE</strong></td>
<td><strong>NURSE VERBALLY CONFIRMS WITH THE</strong></td>
</tr>
<tr>
<td>• IDENTITY</td>
<td><strong>INTRODUCED THEMSELVES BY NAME AND ROLE</strong></td>
<td><strong>NAME OF THE PROCEDURE Recorded</strong></td>
</tr>
<tr>
<td>• SITE</td>
<td><strong>SURGEON, ANAESTHESIA PROFESSIONAL</strong></td>
<td>** THAT INSTRUMENT, SPONGE AND NEEDLE**</td>
</tr>
<tr>
<td>• PROCEDURE</td>
<td><strong>AND NURSE VERBALLY CONFIRM</strong></td>
<td><strong>COUNTS ARE CORRECT (OR NOT</strong></td>
</tr>
<tr>
<td>• CONSENT</td>
<td><strong>PATIENT</strong></td>
<td><strong>APPLICABLE)</strong></td>
</tr>
<tr>
<td><strong>SITE MARKED/NOT APPLICABLE</strong></td>
<td><strong>SITE</strong></td>
<td><strong>HOW THE SPECIMEN IS LABELLED</strong></td>
</tr>
<tr>
<td><strong>ANAESTHESIA SAFETY CHECK COMPLETED</strong></td>
<td><strong>PROCEDURE</strong></td>
<td><strong>(INCLUDING PATIENT NAME)</strong></td>
</tr>
<tr>
<td><strong>PULSE OXIMETER ON PATIENT AND FUNCTIONING</strong></td>
<td><strong>ANTICIPATED CRITICAL EVENTS</strong></td>
<td><strong>WHETHER THERE ARE ANY EQUIPMENT</strong></td>
</tr>
<tr>
<td><strong>DOES PATIENT HAVE A:</strong></td>
<td><strong>SURGEON REVIEWS: WHAT ARE THE CRITICAL</strong></td>
<td><strong>PROBLEMS TO BE ADDRESSED</strong></td>
</tr>
<tr>
<td><strong>KNOWN ALLERGY?</strong></td>
<td><strong>OR UNEXPECTED STEPS, OPERATIVE DURATION,</strong></td>
<td><strong>SURGEON, ANAESTHESIA PROFESSIONAL</strong></td>
</tr>
<tr>
<td><strong>NO</strong></td>
<td><strong>ANTICIPATED BLOOD LOSS?</strong></td>
<td><strong>AND NURSE REVIEW THE KEY CONCERNS FOR</strong></td>
</tr>
<tr>
<td><strong>YES</strong></td>
<td><strong>ANAESTHESIA TEAM REVIEWS: ARE THERE</strong></td>
<td><strong>RECOVERY AND MANAGEMENT OF THIS PATIENT</strong></td>
</tr>
<tr>
<td><strong>DIFFICULT AIRWAY/ASPIRATION RISK?</strong></td>
<td><strong>ANY PATIENT-SPECIFIC CONCERNS?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>NO</strong></td>
<td><strong>NURSING TEAM REVIEWS: HAS STERILITY</strong></td>
<td></td>
</tr>
<tr>
<td><strong>YES, AND EQUIPMENT/ASSISTANCE AVAILABLE</strong></td>
<td><strong>(INCLUDING INDICATOR RESULTS) BEEN</strong></td>
<td></td>
</tr>
<tr>
<td><strong>RISK OF &gt;500ML BLOOD LOSS</strong></td>
<td><strong>CONFIRMED? ARE THERE EQUIPMENT</strong></td>
<td></td>
</tr>
<tr>
<td><strong>(7ML/KG IN CHILDREN)?</strong></td>
<td><strong>ISSUES OR ANY CONCERNS?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>NO</strong></td>
<td><strong>HAS ANTIBiotic PROphylaxis BEEN GIVEN</strong></td>
<td></td>
</tr>
<tr>
<td><strong>YES, AND ADEQUATE INTRAVENOUS ACCESS</strong></td>
<td><strong>WITHIN THE LAST 60 MINUTES?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AND FLUIDS PLANNED</strong></td>
<td><strong>YES</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>NOT APPLICABLE</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>IS ESSENTIAL IMAGING DISPLAYED?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>OFFICIAL</strong></td>
<td><strong>YES</strong></td>
<td></td>
</tr>
<tr>
<td><strong>NOT APPLICABLE</strong></td>
<td></td>
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</table>

This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.
Sample Checklist – AORN

### Comprehensive Surgical Checklist

#### PREPROCEDURE CHECK-IN
- **In Holding Area**
- **Patient/patient representative actively confirms with Registered Nurse (RN):**
  - Patient allergies □ Yes □ N/A
  - Difficult airway or aspiration risk? □ No
  - □ Yes (preparation confirmed)
- **Diagnostic and radiologic test results:** □ Yes □ N/A
- **Blood products:** □ Yes □ N/A
- **Any special equipment, devices, implants:** □ Yes □ N/A
- **Include in Preprocedure check-in as per institutional custom:**
  - Beta blocker medication given (SCIP) □ Yes □ N/A
  - Venous thromboembolism prophylaxis ordered (SCIP) □ Yes □ N/A
  - Normothermia measures (SCIP) □ Yes □ N/A

#### SIGN-IN
- **Before Induction of Anesthesia**
- **RN and anesthesia care provider confirm:**
  - Confirmation of: identity, procedure, procedure site and consent(s) □ Yes
  - Site marked □ Yes □ N/A by person performing the procedure
- **Patient allergies □ Yes □ N/A**
- **Risk of blood loss (> 500 ml)** □ Yes □ N/A
  - □ Yes □ N/A # of units available ______
- **Anesthesia safety check completed** □ Yes

#### TIME-OUT
- **Before Skin Incision**
- **Initiated by designated team member**
  - All other activities to be suspended (unless a life-threatening emergency)
- **Introduction of team members □ Yes**
- **All:**
  - Confirmation of the following: identity, procedure, incision site, consent(s) □ Yes
  - Site is marked and visible □ Yes □ N/A
- **Relevant images properly labeled and displayed □ Yes □ N/A**
- **Any equipment concerns?**

#### SIGN-OUT
- **Before the Patient Leaves the Operating Room**
- **RN confirms:**
- **Name of operative procedure**
- **Completion of sponge, sharp, and instrument counts □ Yes □ N/A**
- **Specimens identified and labeled □ Yes □ N/A**
- **Any equipment problems to be addressed? □ Yes □ N/A**

**To all team members:**
- **What are the key concerns for recovery and management of this patient?**

**Anticipated Critical Events**
- **Surgeon:**
  - States the following:
    - □ critical or nonroutine steps
    - □ case duration
    - □ anticipated blood loss
- **Anesthesia Provider:**
  - □ Antibiotic prophylaxis within one hour before incision □ Yes □ N/A
  - □ Additional concerns?

**Scrub and circulating nurse:**
- □ Sterilization indicators have been confirmed
- □ Additional concerns?

- **April 2010**
### Development

**DEVELOPMENT**

Do you have clear, concise objectives for your checklist?

- Does it include the critical safety steps that are highly likely to be missed?
- Are the items not adequately checked by other mechanisms?
- Are the items actionable, with a specific response?
- Can the items be affected by the use of the checklist?
- Is the checklist designed to be read out loud?
- Have all team members been included in the checklist development?

### Drafting

**DRAFTING**

Does the checklist consider the following?

- Utilize breaks in workflow?
- Use simple language?
- Have a title that reflects its objectives?
- Have a simple, logical, uncluttered format?
- Fit on one page?
- Minimize the use of color?
- Is the font sans serif, upper and lower case, large enough to read?
- Is the text dark on a light background?
- Are there fewer than 10 pause points per item?

### Validation

**VALIDATION**

Before you implement the checklist, have you done the following?

- Trialed the checklist with front line users?
- Modified the checklist in response to repeated trials?
- Ensured that the checklist fits the flow of work?
- Ensured that errors are detected at a time when they can still be corrected?
- Determined that the checklist can be completed in a reasonably brief period of time?
- Put in place a review and revision timeline?
Safe Surgery Checklist Resources

- World Health Organization (WHO)

- SafeSurg.org:
  - For a modifiable template: [http://www.safesurg.org/template-checklist.html](http://www.safesurg.org/template-checklist.html)
  - For examples, including for endoscopy centers: [http://www.safesurg.org/modified-checklists.html](http://www.safesurg.org/modified-checklists.html)

- AORN (combines WHO checklist and JC universal protocol)
  - [http://www.aorn.org/PracticeResources/ToolKits/CorrectSiteSurgeryToolKit/Comprehensivechecklist/](http://www.aorn.org/PracticeResources/ToolKits/CorrectSiteSurgeryToolKit/Comprehensivechecklist/)

- ASCA Connect

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Implementing a Safe Surgery Checklist

- Engage actively with key stakeholders
- Develop clear tools and processes to support implementation
- Set clear expectations for individual accountability
- Mark it part of your culture
Engagement with Key Stakeholders

- Lack of engagement in the development and revision of the checklist is the number one reason for poor checklist pull-through

- Include all members of the team in the development and implementation of the checklist

- Identify key physicians who will champion the process

- Focus on the WHY
  - Evidenced-based studies showing that checklist improvement improves results
  - Gawande’s thoughts on autonomy

- Agree on usage commitments
  - Ask your MD champion to talk about the checklist with colleagues and ask for support with the process
  - Track usage and report on success at MEC/Governing Board/Medical Staff meetings and teammate meetings
Tools and Processes

• Test the checklist
  – Try out the suggested checklist a few times—either simulated or live
  – Make changes if needed and re-test

• Model the usage of the checklist in detailed way
  – Tool Kits
  – Videos
  – Flow diagrams
Personal Accountability

• Set expectations
  – Clear definition of top level performance
    – Deliver results/demonstrate technical competency and live the values
    – What does it look like?
    – Pay for performance
  – Include clear expectations on checklist use
    – As a teammate, you cannot be a top performer if you do not continually work to improve results
    – As a leader, you cannot be a top performer if you do not deliver clinical results

• Set the pace
  – Observe time outs
  – Verify checklist pull-through
  – Talk about clinical quality at the start of every call and meeting
  – Use the WHY to drive pull-through
Culture of Patient Safety

• Paint the picture
  – Talk in terms of Healthcare Harm
  – Good is not enough
  – Widely disseminate the metrics/results

• Set standard for transparency
  – Have the tough conversations/openly discuss errors
  – Agree to call each other out on mistakes, omissions, behavior not consistent with values
  – Not point out and error is as serious as making an error

• Celebrate success
  – Stories
  – Turnarounds
  – Consistency
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Key Takeaways

• The more complex a procedure, the more opportunities there are to miss a critical step.

• Checklists work because they point out missed steps or problems that may have been overlooked secondary to our own sense of familiarity with the procedure.

• No matter how expert we are, a well-designed checklist has been proven to improve outcomes.

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