Creating and Using a Safe Surgery Checklist

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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

Regulation

- 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

Regulation

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

Regulation

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

Regulation

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

Regulation

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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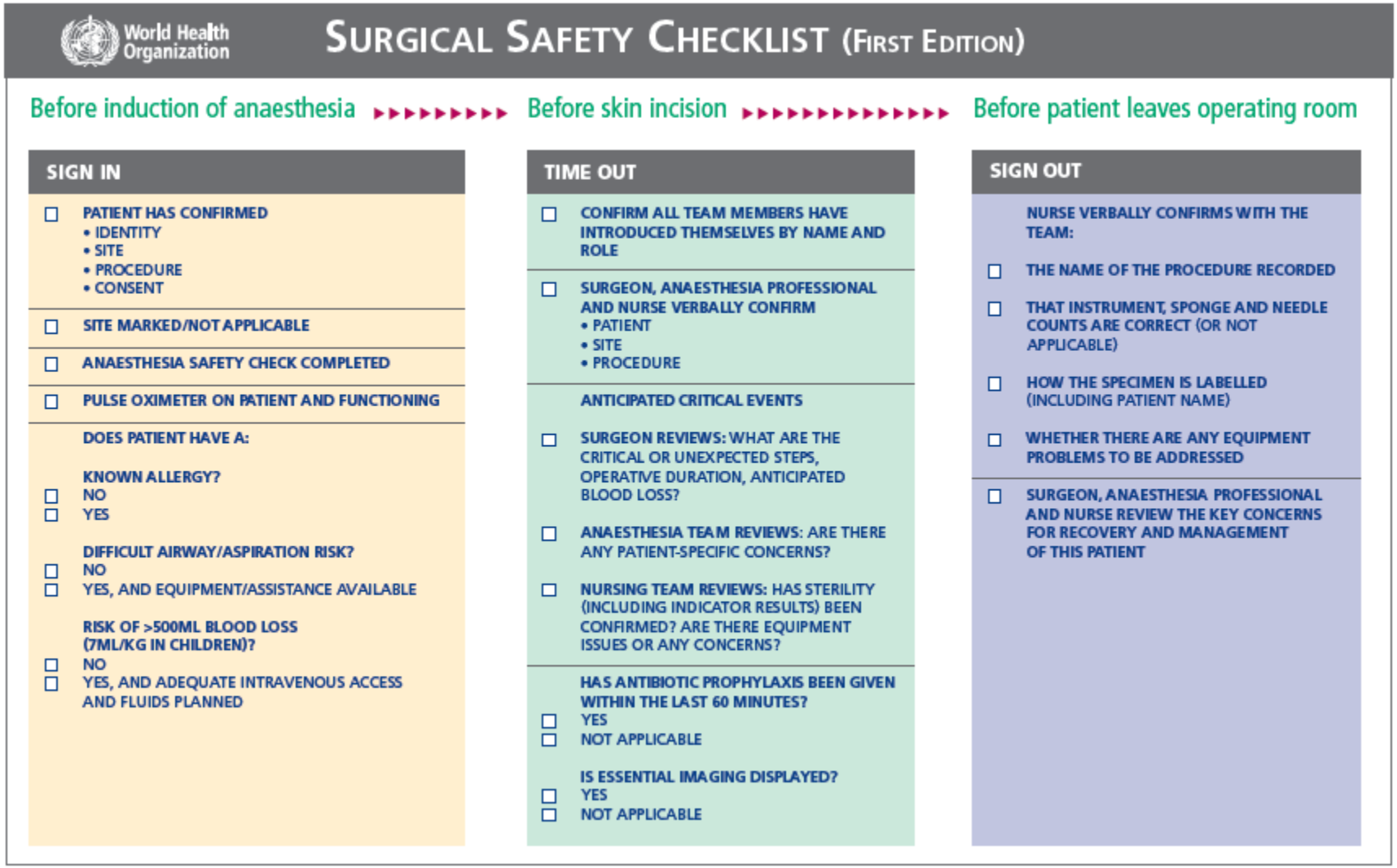
Sample Checklists – World Health Organization

Development



World Health Organization

SURGICAL SAFETY CHECKLIST (FIRST EDITION)

Before induction of anaesthesia ▸▸▸▸▸▸▸▸▸ Before skin incision ▸▸▸▸▸▸▸▸▸▸▸▸▸ Before patient leaves operating room

SIGN IN

- ☐ PATIENT HAS CONFIRMED
  - IDENTITY
  - SITE
  - PROCEDURE
  - CONSENT
- ☐ SITE MARKED/NOT APPLICABLE
- ☐ ANAESTHESIA SAFETY CHECK COMPLETED
- ☐ PULSE OXIMETER ON PATIENT AND FUNCTIONING

DOES PATIENT HAVE A:

KNOWN ALLERGY?
- ☐ NO
- ☐ YES

DIFFICULT AIRWAY/ASPIRATION RISK?
- ☐ NO
- ☐ YES, AND EQUIPMENT/ASSISTANCE AVAILABLE

RISK OF >500ML BLOOD LOSS (7ML/KG IN CHILDREN)?
- ☐ NO
- ☐ YES, AND ADEQUATE INTRAVENOUS ACCESS AND FLUIDS PLANNED

TIME OUT

- ☐ CONFIRM ALL TEAM MEMBERS HAVE INTRODUCED THEMSELVES BY NAME AND ROLE
- ☐ SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE VERBALLY CONFIRM
  - PATIENT
  - SITE
  - PROCEDURE

ANTICIPATED CRITICAL EVENTS

- ☐ SURGEON REVIEWS: WHAT ARE THE CRITICAL OR UNEXPECTED STEPS, OPERATIVE DURATION, ANTICIPATED BLOOD LOSS?
- ☐ ANAESTHESIA TEAM REVIEWS: ARE THERE ANY PATIENT-SPECIFIC CONCERNS?
- ☐ NURSING TEAM REVIEWS: HAS STERILITY (INCLUDING INDICATOR RESULTS) BEEN CONFIRMED? ARE THERE EQUIPMENT ISSUES OR ANY CONCERNS?

HAS ANTIBIOTIC PROPHYLAXIS BEEN GIVEN WITHIN THE LAST 60 MINUTES?
- ☐ YES
- ☐ NOT APPLICABLE

IS ESSENTIAL IMAGING DISPLAYED?
- ☐ YES
- ☐ NOT APPLICABLE

SIGN OUT

NURSE VERBALLY CONFIRMS WITH THE TEAM:

- ☐ THE NAME OF THE PROCEDURE RECORDED
- ☐ THAT INSTRUMENT, SPONGE AND NEEDLE COUNTS ARE CORRECT (OR NOT APPLICABLE)
- ☐ HOW THE SPECIMEN IS LABELLED (INCLUDING PATIENT NAME)
- ☐ WHETHER THERE ARE ANY EQUIPMENT PROBLEMS TO BE ADDRESSED
- ☐ SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE REVIEW THE KEY CONCERNS FOR RECOVERY AND MANAGEMENT OF THIS PATIENT

THIS CHECKLIST IS NOT INTENDED TO BE COMPREHENSIVE. ADDITIONS AND MODIFICATIONS TO FIT LOCAL PRACTICE ARE ENCOURAGED.

SCA

Sample Checklist – AORN

Development

COMPREHENSIVE SURGICAL CHECKLIST

Blue = World Health Organization (WHO) Green = The Joint Commission - Universal Protocol (JC) 2010 National Patient Safety Goals Orange = JC and WHO

PREPROCEDURE CHECK-IN	SIGN-IN	TIME-OUT	SIGN-OUT
In Holding Area	**Before Induction of Anesthesia**	**Before Skin Incision**	**Before the Patient Leaves the Operating Room**
Patient/patient representative actively confirms with Registered Nurse (RN):	**RN and anesthesia care provider confirm:**	**Initiated by designated team member** All other activities to be suspended (unless a life-threatening emergency)	**RN confirms:**
Identity ☐ Yes Procedure and procedure site ☐ Yes Consent(s) ☐ Yes Site marked ☐ Yes ☐ N/A by person performing the procedure **RN confirms presence of:** History and physical ☐ Yes Preanesthesia assessment ☐ Yes 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	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 Difficult airway or aspiration risk? ☐ No ☐ Yes (preparation confirmed) Risk of blood loss (> 500 ml) ☐ Yes ☐ N/A # of units available _____ Anesthesia safety check completed ☐ Yes **Briefing:** All members of the team have discussed care plan and addressed concerns ☐ Yes	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? **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?	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? _____ _____ _____ _____ _____ _____ _____ April 2010 AORN

The JC does not stipulate which team member initiates any section of the checklist except for site marking.
The Joint Commission also does not stipulate where these activities occur. See the Universal Protocol for details on the Joint Commission requirements.

SCA

Atul Gawande's Guidance on Checklist Development

DEVELOPMENT Do you have clear, concise objectives for your checklist?	DRAFTING Does the checklist consider the following?	VALIDATION Before you implement the checklist, have you done the following?
• 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?	• 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?	• 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

Development

- World Health Organization (WHO)
  - http://www.who.int/patientsafety/safesurgery/ss_checklist/en/
- SafeSurg.org:
  - For a modifiable template: http://www.safesurg.org/template-checklist.html
  - For examples, including for endoscopy centers: http://www.safesurg.org/modified-checklists.html
- AORN (combines WHO checklist and JC universal protocol)
  - http://www.aorn.org/PracticeResources/ToolKits/CorrectSiteSurgeryToolKit/Comprehensivechecklist/
- ASCA Connect
- Gawande, A. (2009). The Checklist Manifesto. New York, NY: Picador Books

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Implementing a Safe Surgery Checklist

Implementation

- 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

Implementation

- 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

Implementation

- 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

Implementation

- 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

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