Errors in the Operating Room

Patrick E. Voight RN BSN MSA CNOR
President Association of periOperative Registered Nurses (AORN)
What We All Strive For: Patient Safety and Optimal Outcomes
Errors in the Operating Room

Wrong Patient, Wrong Procedure, Wrong Site Surgery

Surgical Site Infection (SSI)

Medication Safety
What’s TJC?

The Joint Commission (TJC)

• Sets standards and initiatives that have helped shape the delivery of health care in the United States and have helped improve the quality and safety of the care provided to the public

• Receiving government reimbursement for Medicare patients requires that organizations meet standards
Why TJC is Focusing on Patient Safety

- Institute of Medicine Report
- Number of Sentinel Events reported to TJC has significantly increased
- Professional organizations have a heightened awareness of patient safety needs
Wrong Patient, Wrong Procedure, Wrong Site Surgery

Universal Protocol
&
“Time Out”
What is Wrong Site?

AORN defines wrong site as:

“A broad term that encompasses all surgical procedures performed on the wrong patient, wrong part, wrong side of the body, or the wrong level of the correctly identified anatomical site”
The Joint Commission Patient Safety Goal

Eliminate wrong-site, wrong-patient, wrong-procedure surgery

Universal Protocol was established:
1. Preoperative verification process
2. Site marking
3. Time Out
Engagement of the entire surgical team across the perioperative process is the number **ONE** way to prevent errors.
“7” Absolutes: #1

- Preoperatively each procedure involving laterality will be scheduled with right or left designation
“7” Absolutes: #2

• Preoperatively, each correct surgical site will be verified by an RN with the OR schedule and the patient’s consent form
“7” Absolutes: #3

- Preoperatively, the patient, designee or hospital care provider will verify each surgical site in the presence of an RN and will mark
“7” Absolutes: #4

- Preoperatively, the circulation RN and the anesthesia provider will interview the patient and review the patient’s current medical record to re-verify each surgical procedure and site.
“7” Absolutes: #5

- Intra-operatively, the circulating RN anesthesia provider and surgeon will review the patient’s medical record, results of diagnostic studies and verbally confirm the site.
“7” Absolutes: #6

• Intra-operatively, once the patient is draped, the surgical team will pause and verbally confirm........
“Time-out”

Include correct patient, agreement of procedure, correct site and side, correct position, correct images, and that all special equipment is available prior to the incision being made.
“7” Absolutes: #7

• Intra-operatively, the circulating nurse will document the verification process in the patient’s medical record
Recent Changes to the Universal Protocol
Effective October 1, 2009
Correct Site Surgery

Endorsed by:

- American College of Surgeons
- American Society of Anesthesiologists
- American Society for Healthcare Risk Management
- American Hospital Association
- American Association of Ambulatory Surgery Centers
Safe Surgery Saves Lives

World Health Organization
Safe Surgery is a Public Health Priority

Why Focus on Surgery

234 million surgeries worldwide each year

- 1 surgery for every 25 people alive
- Unevenly distributed - 30% of world’s population receives 75% of major operations
- Lack of access to high quality surgical care
- Major complications of inpatient surgical procedures
  - 3 – 16% (industrialized countries)
- Permanent disability or death rates
  - Approximately 0.4 – 0.8% (industrialized countries)
  - 5 – 10% death rate (developing countries)
- 7 million are harmed
- 1 million die during or immediately after a procedure
While surgical procedures are intended to save lives, unsafe surgical care can cause substantial harm

*Five facts about surgical care:*

1. Complications after inpatient operations occur in up to 25% of patients

2. Mortality rate after major surgery is 0.5 – 5%

3. In industrialized countries nearly ½ of all adverse events in hospitalized patients are related to surgical care

4. At least ½ of the cases in which surgery led to harm are considered to be preventable

5. Known principles of surgical safety are inconsistently applied even in the most sophisticated settings
Four working groups of the Global Patient Safety Challenge

Goal: Improve the safety of surgical care around the world by defining a core set of safety standards
Ten Essential Objectives for Safe Surgery

The Team Will:

1. Operate on the correct patient at the correct site
2. Use methods known to prevent harm from anaesthetic administration, while protecting the patient from pain
3. Recognize and effectively prepare for life-threatening loss of airway or respiratory function
4. Recognize and effectively prepare for risk of high blood loss
5. Avoid inducing an allergic or adverse drug reaction known to be a significant risk to the patient
6. Consistently use methods known to minimize risk of surgical site infection
7. Prevent inadvertent retention of sponges or instruments in surgical wounds
8. Secure and accurately identify all surgical specimens
9. Effectively communicate and exchange critical patient information for the safe conduct of the operation
10. Hospitals and public health systems will establish routine surveillance of surgical capacity, volume and results
System-wide approach to improve surgical safety:

There is no single remedy that will improve surgical safety. It requires reliable completion of a sequence of necessary steps in care, not just by the surgeon, but by a team of health-care professionals working together within a supportive health system for the benefit of the patient

World Health Organization
The development of the Checklist was guided by 3 principles:

- Simplicity
- Wide Applicability
- Measurability
“Systems Thinking”

- Carefully developed and applied sets of:
  - Rules
  - **Checklists**
  - Standards
  - Technologies
  - Training programs that helps good caregivers give good care and prevents them from inadvertently harming their patients

- Creating a culture that prizes safety, focuses on it as a core professional value, and is open to discussing errors and learning from them

- System thinking is both – proactive & reactive
SURGICAL SAFETY CHECKLIST (First Edition)

Before induction of anaesthesia

<table>
<thead>
<tr>
<th>SIGN IN</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Patient has confirmed</td>
</tr>
<tr>
<td>• Identity</td>
</tr>
<tr>
<td>• Site</td>
</tr>
<tr>
<td>• Procedure</td>
</tr>
<tr>
<td>• Consent</td>
</tr>
<tr>
<td>- Site marked/not applicable</td>
</tr>
<tr>
<td>- Anaesthesia safety check completed</td>
</tr>
<tr>
<td>- Pulse oximeter on patient and functioning</td>
</tr>
</tbody>
</table>

Does patient have a:

<table>
<thead>
<tr>
<th>KNOWLEDGE ALLERGY?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- No</td>
</tr>
<tr>
<td>- Yes</td>
</tr>
</tbody>
</table>

Difficult airway/aspiration risk:

<table>
<thead>
<tr>
<th>NO</th>
<th>YES, and equipment/assistance available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Risk of &gt;500ml blood loss (7ml/kg in children)?</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Yes, and adequate intravenous access and fluids planned</td>
</tr>
</tbody>
</table>

Before skin incision

<table>
<thead>
<tr>
<th>TIME OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Confirm all team members have introduced themselves by name and role</td>
</tr>
<tr>
<td>- Surgeon, anaesthesia professional and nurse verbally confirm</td>
</tr>
<tr>
<td>• Patient</td>
</tr>
<tr>
<td>• Site</td>
</tr>
<tr>
<td>• Procedure</td>
</tr>
</tbody>
</table>

Anticipated critical events:

<table>
<thead>
<tr>
<th>Surgeon reviews: what are the critical or unexpected steps, operative duration, anticipated blood loss?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaesthesia team reviews: are there any patient-specific concerns?</td>
</tr>
<tr>
<td>Nursing team reviews: has sterility (including indicator results) been confirmed? Are there equipment issues or any concerns?</td>
</tr>
</tbody>
</table>

Has antibiotic prophylaxis been given within the last 60 minutes?

| Yes |
| Not applicable |

Is essential imaging displayed?

| Yes |
| Not applicable |

Before patient leaves operating room

<table>
<thead>
<tr>
<th>SIGN OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse verbally confirms with the team:</td>
</tr>
<tr>
<td>- The name of the procedure recorded</td>
</tr>
<tr>
<td>- That instrument, sponge and needle counts are correct (or not applicable)</td>
</tr>
<tr>
<td>- How the specimen is labelled (including patient name)</td>
</tr>
<tr>
<td>- Whether there are any equipment problems to be addressed</td>
</tr>
</tbody>
</table>

| 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.
Medication Safety
Medication Safety

A Survey of 1,600 facilities conducted by the Institute of Safe Medication Practices found that only 41 percent of hospitals always label medication and solutions used in operating settings.

An Alarming 18 percent of the hospitals don’t label containers at all and another 42 percent apply labels inconsistently.
Properly Labeled Medication on Back Table

“Labeling all medications and solutions in the operating room is fundamental step in making surgical care safer”

(Denis S. O’Leary, MD, Former President of the TJC)
AORN developed the tool kit to help hospitals and operating rooms meet The Joint Commission standards.
Surgical Site Infections (SSI)
Surgical Site Infections (SSIs)

- Subset of a larger group of infections known as Health Care-Associated Infections (HAIs)
- 27 million surgeries performed annually in the United States
  - Estimated 500,000 SSIs
- Surgical site infections are the 3rd most common reported HAI
- SSIs account for ¼ of all HAIs
Financial Impact of Surgical Site Infections

- Average cost per patient $50,000 - $150,000
- Increased hospital stay up to 16 days
- Centers for Medicare and Medicaid (CMS) billed $25 - $30 billion to treat SSIs
  - New CMS policy = No Payment for SSIs
- Surgery at Hospitals account for 60% of hospitals profits
- SSIs destroy hospital profits
The Scope of The SSI Problem

Two Trends in Modern Healthcare:

1. Increased acuity of patients (complex co-morbidities)

2. Increasing number of patients with
   - Methicillin-Resistant Staphylococcus Aureus (MRSA)
   - Vancomycin-Resistant Enterocci (VRE)
Awareness of The Problem of SSIs

Transparency by consumer “watchdog” groups

- Leapfrog
- Consumers Union
- Consumer Reports

Post-operative infections under-reported by surgeons (outpatient surgery)

Surgical Care Improvement Project (SCIP)

- National partnership focused on decreasing SSIs
- Steering Committee:
  - Association of periOperative Registered Nurses (AORN)
  - American College of Surgeons
  - American Hospital Association
  - CMS – CDC – IHI

Goal: decrease surgical complications by 25% by year 2010
Preventing SSIs

Role of the Perioperative Nurse is Critical

- Begins with patient assessment through discharge from OR Suite
- Proper hand washing – most essential
- Prophylaxis antibiotics
- Correct skin preparation
- Reducing OR traffic
- Ensure area sterile/ensure sterile field is maintained
- Proper room turn-over
More Recent Attention to Control SSI, includes:

1. Normal Thermia, Hyper-Oxygenation
   Maintain core body temp above 36.5 degrees Celsius optimizes oxygen pressure at surgical site – reduces SSI

   Preoperative/Intraoperative Warming
   - Systemic means – warmed IV fluids, warmed inhalation agents
   - Extrinsic means – forced air warming, heating pads

2. Glucose Control
   - Blood sugar >200 mg/dL x 2 more risk of SSI
   - Issue: undiagnosed and untreated hyperglycemia
Centers for Disease Control (CDC) Guidelines

CDC recommends the use of disposable patient care items

- Minimize cross contamination of medication-resistant microorganisms
- Nearly everything that comes in contact with patient is disposable
  - Blood pressure cuffs
  - Stethoscopes
  - Anesthesia breathing circuit
  - Prep Kits
  - Pulse oximeters
  - OR supplies and equipment

Evidence has shown that by using disposable versions of these items, the spread of infection can be reduced even though many items never come in contact with the surgical wound
The Bottom Line

- Surgery drives profitability for hospitals in the United States
- Nurses have the most direct influence in their hospital’s profitability

Nurses Are Patient Advocates