# Errors in the Operating Room

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# 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**

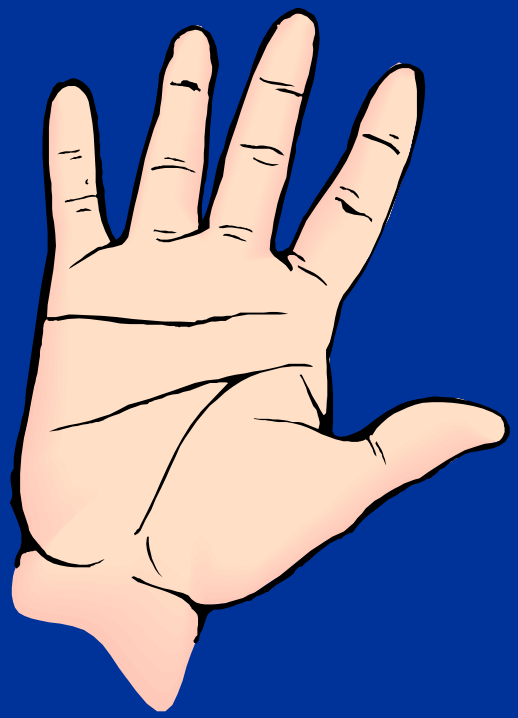
**Universal Protocol was established:**

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**



The Palm

# “7” Absolutes: #2

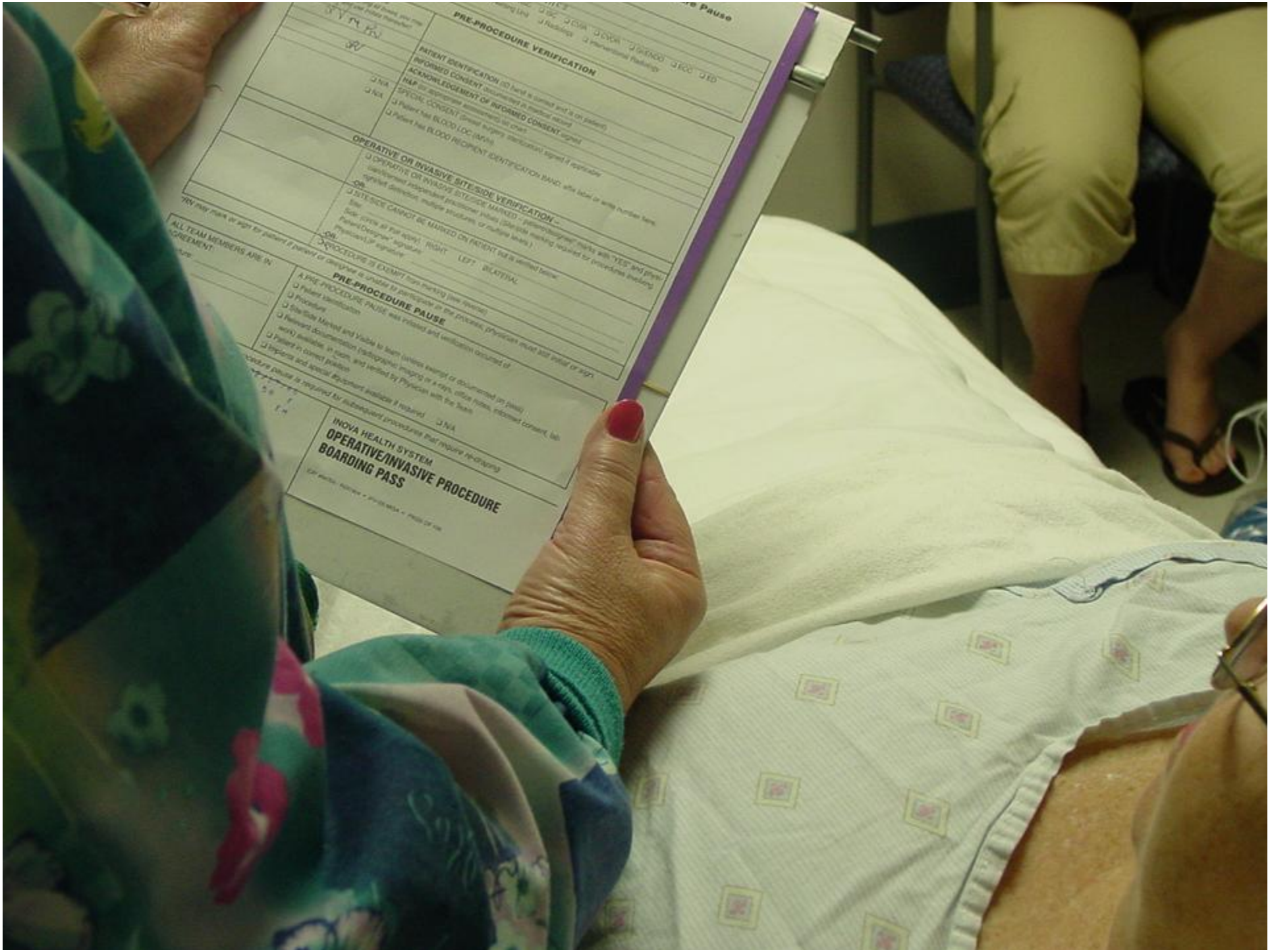
- **Preoperatively, each correct surgical site will be verified by an RN with the OR schedule and the patient’s consent form**

# “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


PRE-PROCEDURE VERIFICATION
PRE-PROCEDURE PAUSE
INOVA HEALTH SYSTEM
OPERATIVE/INVASIVE PROCEDURE
BOARDING PASS

# “7” Absolutes: #5

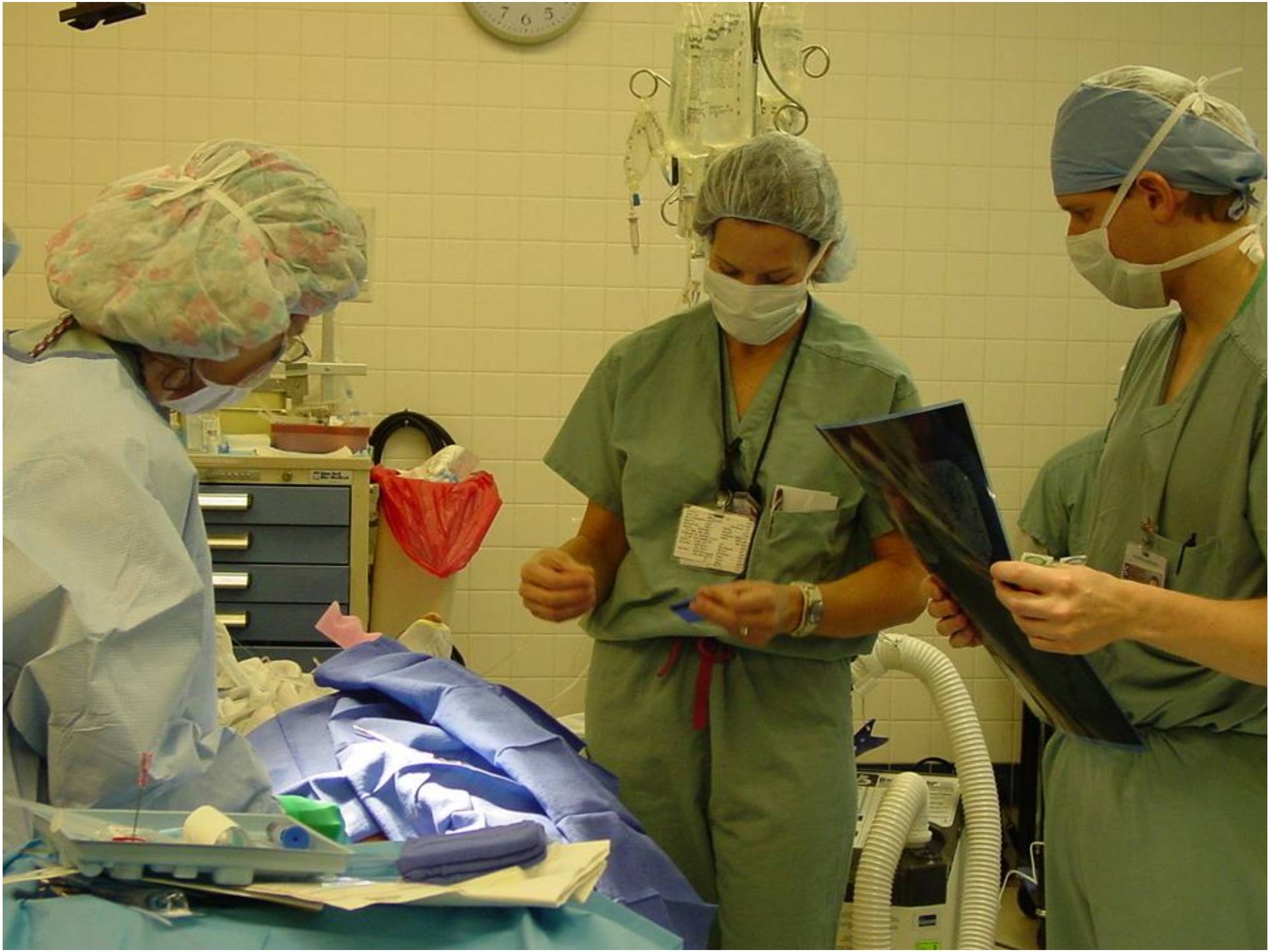
- **Intra-operatively, the circulating RN anesthesia provider and surgeon will review the patient’s medical record, results of diagnostic studies and verbally confirm the site**

# “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

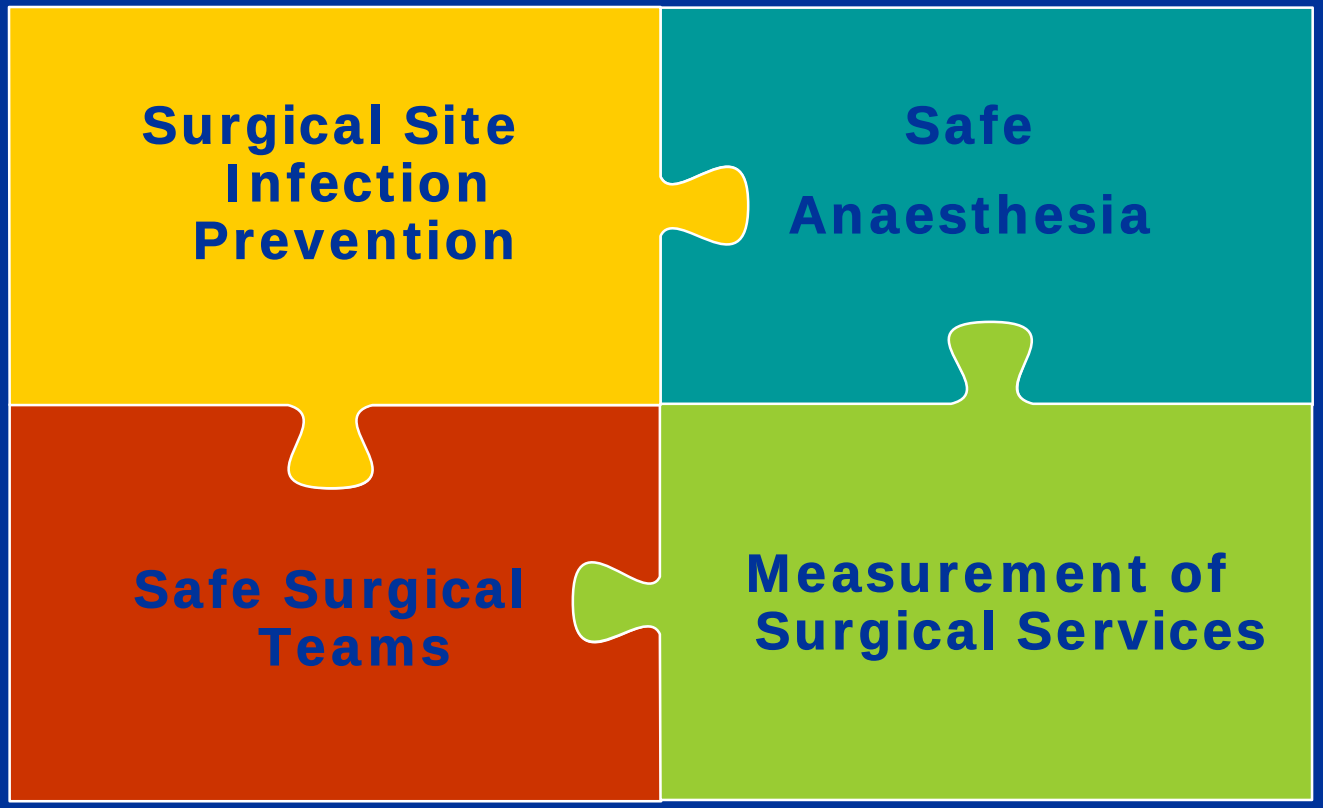
2. Mortality rate after major surgery is 0.5 – 5%

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 sugical care around the world by defining a core set of safety standards

# Ten Essential Objectives for Safe Surgery

***The Team Will:***

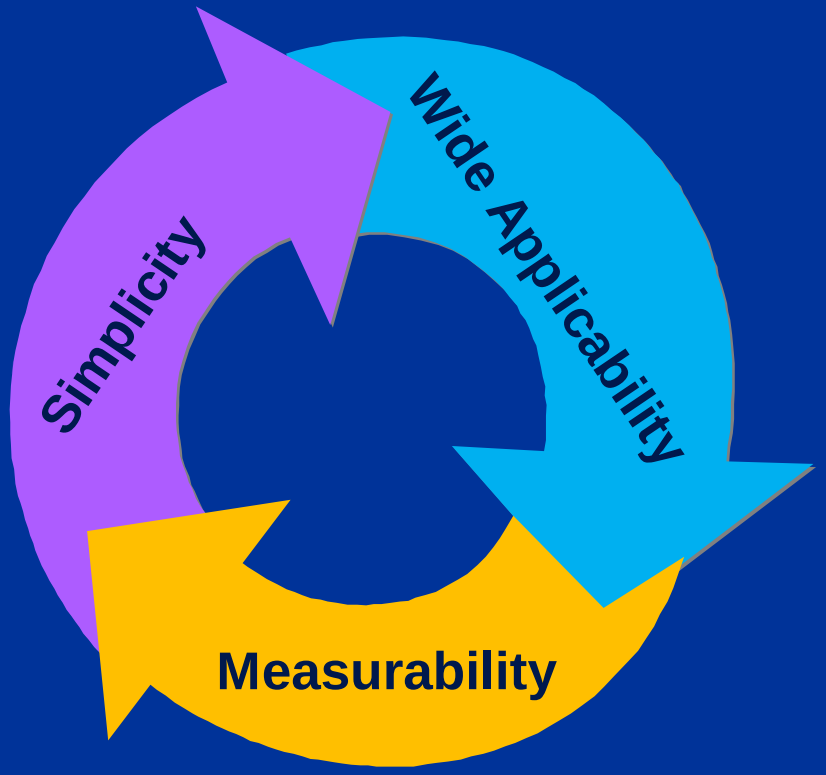
1. Operate on the correct patient at the correct site
2. Use methods known to prevent harm from anaesthetic administration, while protecting the patient from pain
3. Recognize and effectively prepare for life-threatening loss of airway or respiratory function
4. Recognize and effectively prepare for risk of high blood loss
5. Avoid inducing an allergic or adverse drug reaction know 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



# “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

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.**

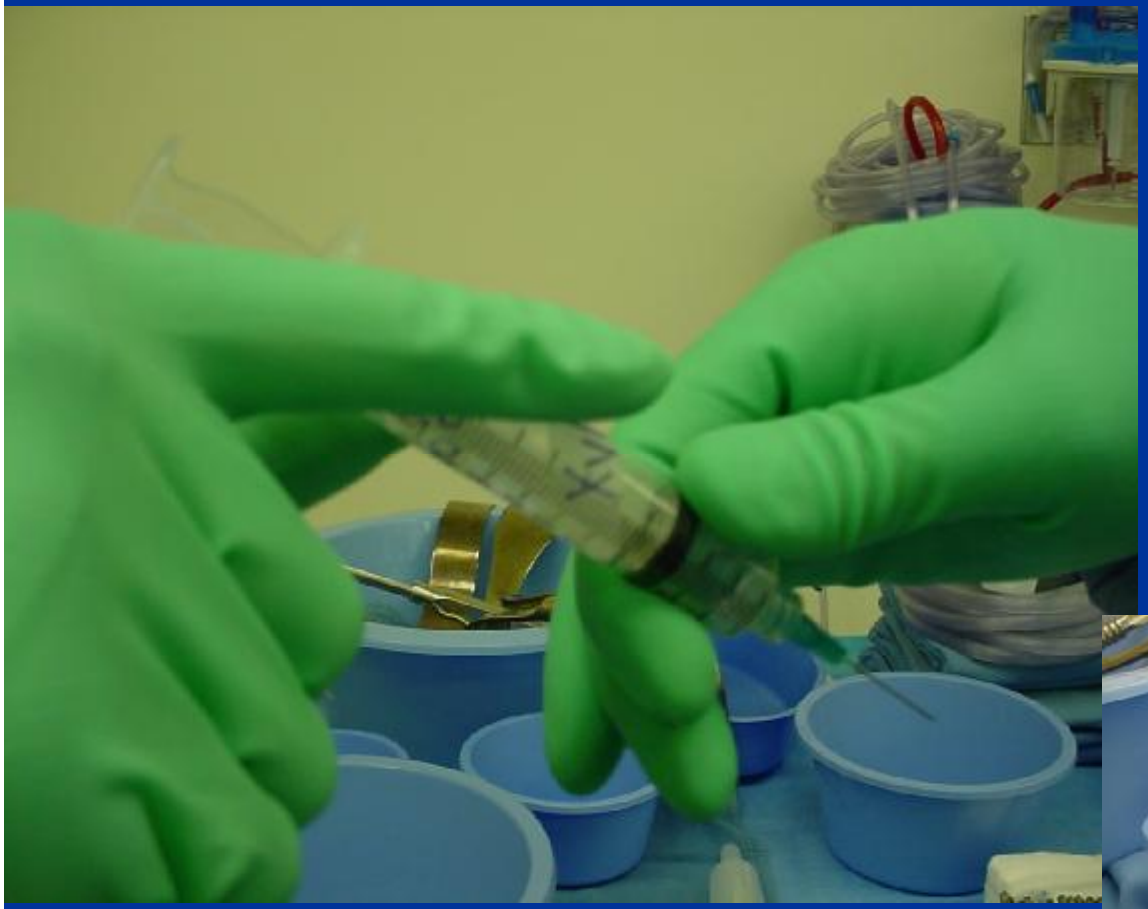
# Medication Safety

# 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

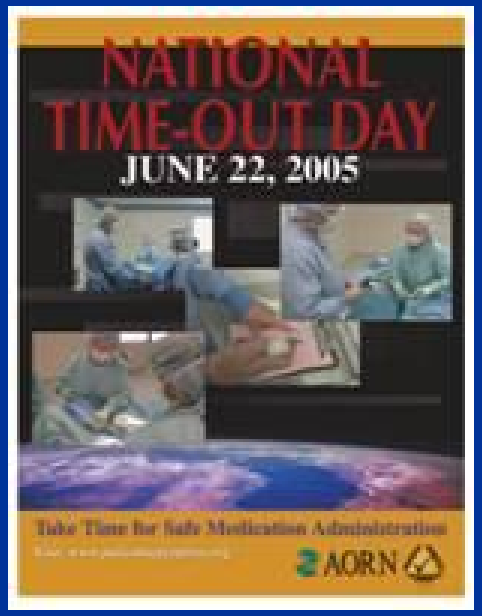
# Properly Labeled Medication on Back Table

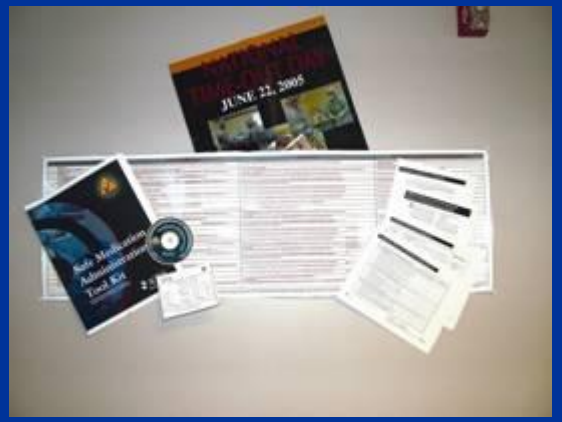


*"Labeling all medications and solutions in the operating room is fundamental step in making surgical care safer"*

(Denis S. O'Leary, MD,
Former President of the TJC)

# Medication Safety Tool Kit




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 know as Health Care-Associated Infections (HAIs)
- 27 million surgeries performed annually in 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