Thinking in 3’s

Patient Safety First
Hospital Association of Northern California
November 2012

Verna C. Gibbs MD
Professor of Surgery, UCSF
Staff Surgeon, SFVA
Director, NoThing Left Behind®
Quality Surgical Care

IOM, Crossing the Quality Chasm, 2002

1. Knowledge-driven
   (safe, effective)
2. Patient-centered
3. System-based
   (timely, efficient, equitable)
Knowledge

- Pace of new knowledge in ALL the surgical disciplines is beyond an individual surgeon’s capacity
- Knowledge must be shared, flow freely
- We expect best available scientific and clinical knowledge to be practiced
- Development of expertise requires experience
Knowledge Application

1. Pre-Operative Planning
2. Intra-Operative Practice
3. Post-Operative Performance
# Surgical Checklist

## Surgical Safety Checklist (First Edition)

### Before induction of anaesthesia

<table>
<thead>
<tr>
<th>SIGN IN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PATIENT HAS CONFIRMED</strong></td>
</tr>
<tr>
<td>- Identity</td>
</tr>
<tr>
<td>- Site</td>
</tr>
<tr>
<td>- Procedure</td>
</tr>
<tr>
<td>- Consent</td>
</tr>
<tr>
<td><strong>SITE MARKED/NOT APPLICABLE</strong></td>
</tr>
<tr>
<td><strong>ANAESTHESIA SAFETY CHECK COMPLETED</strong></td>
</tr>
<tr>
<td><strong>PULSE OXIMETER ON PATIENT AND FUNCTIONING</strong></td>
</tr>
<tr>
<td><strong>DOES PATIENT HAVE A:</strong></td>
</tr>
<tr>
<td>- KNOWN ALLERGY?</td>
</tr>
<tr>
<td>- NO</td>
</tr>
<tr>
<td>- YES</td>
</tr>
<tr>
<td>- DIFFICULT AIRWAY/ASPIRATION RISK?</td>
</tr>
<tr>
<td>- NO</td>
</tr>
<tr>
<td>- YES, AND EQUIPMENT/ASSISTANCE AVAILABLE</td>
</tr>
<tr>
<td><strong>RISK OF &gt;500ML BLOOD LOSS (7ML/KG IN CHILDREN)</strong></td>
</tr>
<tr>
<td>- NO</td>
</tr>
<tr>
<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><strong>CONFIRM ALL TEAM MEMBERS HAVE INTRODUCED THEMSELVES BY NAME AND ROLE</strong></td>
</tr>
<tr>
<td><strong>SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE VERBALLY CONFIRM</strong></td>
</tr>
<tr>
<td>- Patient</td>
</tr>
<tr>
<td>- Site</td>
</tr>
<tr>
<td>- Procedure</td>
</tr>
<tr>
<td><strong>ANTICIPATED CRITICAL EVENTS</strong></td>
</tr>
<tr>
<td><strong>SURGEON REVIEWS: WHAT ARE THE CRITICAL OR UNEXPECTED STEPS, OPERATIVE DURATION, ANTICIPATED BLOOD LOSS?</strong></td>
</tr>
<tr>
<td><strong>ANAESTHESIA TEAM REVIEWS: ARE THERE ANY PATIENT-SPECIFIC CONCERNS?</strong></td>
</tr>
<tr>
<td><strong>NURSING TEAM REVIEWS: HAS STERILITY (INCLUDING INDICATOR RESULTS) BEEN CONFIRMED? ARE THERE EQUIPMENT ISSUES OR ANY CONCERNS?</strong></td>
</tr>
<tr>
<td><strong>HAS ANTIBIOTIC PROPHYLAXIS BEEN GIVEN WITHIN THE LAST 60 MINUTES?</strong></td>
</tr>
<tr>
<td>- YES</td>
</tr>
<tr>
<td>- NOT APPLICABLE</td>
</tr>
<tr>
<td><strong>IS ESSENTIAL IMAGING DISPLAYED?</strong></td>
</tr>
<tr>
<td>- YES</td>
</tr>
<tr>
<td>- NOT APPLICABLE</td>
</tr>
</tbody>
</table>

### Before patient leaves operating room

<table>
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<tr>
<th>SIGN OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NURSE VERBALLY CONFIRMS WITH THE TEAM:</strong></td>
</tr>
<tr>
<td><strong>THE NAME OF THE PROCEDURE Recorded</strong></td>
</tr>
<tr>
<td><strong>THAT INSTRUMENT, SPONGE AND NEEDLE COUNTS ARE CORRECT (OR NOT APPLICABLE)</strong></td>
</tr>
<tr>
<td><strong>HOW THE SPECIMEN IS LABELED (INCLUDING PATIENT NAME)</strong></td>
</tr>
<tr>
<td><strong>WHETHER THERE ARE ANY EQUIPMENT PROBLEMS TO BE ADDRESSED</strong></td>
</tr>
<tr>
<td><strong>SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE REVIEW THE KEY CONCERNS FOR RECOVERY AND MANAGEMENT OF THIS PATIENT</strong></td>
</tr>
</tbody>
</table>

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**This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.**
Quality Surgical Care

1. Knowledge-driven
   (safe, effective)
2. Patient-centered
3. System-based
   (timely, efficient, equitable)

IOM, Crossing the Quality Chasm, 2002
Reality

- Too often patient care is directed at what is convenient for...
  - Providers
  - Facilities
  - Staff
Think of the patient

- Rather than thinking of yourself and your needs
  - “If I do that it will increase my liability”
  - “But this is my practice and it works for me”
  - “I only read what I see”

- Think of the patient’s needs FIRST
  - Good information
  - Safe operation
  - Uncomplicated recovery
Quality Surgical Care

IOM, Crossing the Quality Chasm, 2002

1. Knowledge-driven
(safe, effective)

2. Patient-centered

3. System-based
(timely, efficient, equitable)
System Problem

• A case of a retained surgical item should be thought of as a “canary in the surgical coal mine”.
• It tells you there is a system problem in the OR
• System problems require system solutions
Case
Can’t Happen to You?

- This is a system problem
  1. Surgeon’s inadequate sweep
  2. Nurse’s incorrect count
  3. Radiologist’s incorrect film interpretation
Dimensions of Quality

1. Structure
   the attributes of how system is organized and its components

2. Process
   the collection of individual steps to achieve desired outcome

3. Outcome
   change in status attributed to the process
Nurses use a standardized process to put sponges in hanging plastic holders and document the counts on a wall-mounted dry erase board in every OR.

Surgeons perform a methodical wound exam in every case and before leaving the OR - verify with the nurses that all the sponges (used and unused) are in the holders.
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Surgeons perform a methodical wound exam in every case and before leaving the OR - verify with the nurses that all the sponges (used and unused) are in the holders.

PROCESS
NoThing Left Behind

ZOOMING IN ON

ZERO

RETAINED SURGICAL SPONGES

OUTCOME
Surgical Patient Safety

Establish structure of safe surgical care
Prevent surgical errors
Optimize human performance

FedEx delivers 7.5 million packages a day at low cost with low error rates yet surgical teams using 10 sponges per case fail to retrieve them all
Time to Coordinate Efforts in Surgical Patient Safety

1. The Wrongs
2. Surgical Fires
3. Retained Surgical Items
The Wrongs

1. Wrong patient
   ➤ Planned operation performed on the wrong person

2. Wrong operation
   ➤ Wrong operation performed on the right person

3. Wrong site
   ➤ Planned operation performed at the wrong place (usually wrong side or wrong level)
Surgical Safety CheckList

To: Surgeons, Anesthesiologists & CRNAs, OR Nurses & Scrub Techs

NEW “TIME OUT” IN THE SFVA SURGICAL PATIENT SAFETY ✓ LIST

GO LIVE: Friday, October 1, 2010
ALL TEAM MEMBERS AND ALL SECTIONS

REQUIRED ACTIONS:

OR BRIEFING
Who: Any surgeon, circulating RN, anesthesia staff
When: Prior to or after induction

New TIME OUT
Who: Must be called by the Attending surgeon who must be present in the OR. The “Time Out” cannot be done by a resident. The Attending does not have to be scrubbed but must be in the room.
When: “Time Out” must be performed just before the incision is made. The scalpel will not be provided until the “Time Out” is completed.

OR DEBRIEFING
Who: Any surgeon, circulating RN, anesthesia staff
When: At the completion of the case

SEE THE NEW SFVA SURGICAL PATIENT SAFETY CHECKLIST (aka MITT tool)
Surgical Fires

Surgical Fire Risk Assessment Protocol

<table>
<thead>
<tr>
<th>Alcohol-based prep solution dried for &gt;5 minutes. No pooling observed.</th>
<th>Yes</th>
<th>No</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Circle appropriate option)</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>* Surgical site or incision above the trachea, or involving airway or pulmonary components</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>* Open oxygen source: 40% oxygen (supplemental oxygen via face mask or nasal cannula) potential airway leak, proximity of ETT, double-lumen tube</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>* Available ignition source: i.e. monopolar electrocautery unit, laser, fiberoptic light source</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Total score

Scoring:
3 = High risk
2 = Low risk
1 = Low risk

* High Risk Fire Protocol initiated by: Anesthesia provider, Surgeon, RN, Scrub tech (circle one)

Fire Risk Protocols:

Score 3 = High Risk
The circulating nurse, surgeon and anesthesia providers take these precautions and communicate at handoff:

Circulating nurse:
- Write “Fire Risk High” on dry erase board
- Ensures appropriate draping techniques to minimize oxygen
- Suction by O₂ prongs to “scavenge” O₂
- Maximizes the perimeter around the incision point.
- Confirms verbally the heat source setting
- Assess that enough time has been allowed for fumes of alcohol-based prep solutions to dissipate (minimum of 3 min)
- Use of saline-dampened sponges
- Brass of sterile saline and bulk syringe are available for fire suppression
- Places laser in “standby” mode when not in use. Secures laser foot pedal to prevent accidental activation

Anesthesia provider:
- Notify the surgeon and documents if O₂ concentration >40% or risk of air leak present
- Before an ignition source is activated:
  - Reduce the oxygen concentration to 40% or less if possible
  - Stop the use of nitrous oxide

Surgical Tech:
- Water or saline available for the surgical field.
- Wet sponges
- Suction always available on field
- ESU in holder when not in use; light source turned off when not in use

Surgeon:
- Before an ignition source is activated:
  - Wet sponges used as barrier between ESU and oxygen source
  - Announces the initial intent to use an ignition source
  - Verifies that the anesthesia provider has reduced the O₂ concentration to the minimum acceptable level for 1-3 min before using ignition source.
  - Confirms verbally the heat source setting – minimize ESU setting if possible

In Case of Fire:
1) Shout “Fire”
2) Remove ETT (if airway fire)
3) Turn off O₂
4) Throw saline on field

Revised 9/15/10ce
Airway Fire
Retained Surgical Items

- New preferred term rather than RFO
- Foreign Objects include swallowed pennies, pins, shrapnel, bullets
- Surgical Items are the tools and materiel that we use in procedures to heal not to harm
- It’s a surgical patient safety problem
A 35-YEAR-OLD MAN PRESENTED TO THE EMERGENCY DEPARTMENT WITH DYSURIA, RECTAL BLEEDING, ABDOMINAL PAIN, AND A SHRUNK, MONOCHROMATIC STOMACH. ON PHYSICAL EXAMINATION, HE WAS FOUND TO BE HYPOBEMIC, WITH A BLOOD PRESSURE OF 70/40 MM HG, A PULSE OF 130 BEATS PER MINUTE, AND AN OXYGEN SATURATION OF 90%. ABDOMINAL EXAMINATION REVEALED A STACK AND THE PRESENCE OF PERITONEAL SIGNS. THERE WAS NO EVIDENCE OF TRAUMA. A FOREIGN BODY WAS FOUND ON RECENT EXAMINATION BUT WAS NOT VISIBLE. ONCE THE PATIENT WAS HEMODYNAMICALLY STABLE, ILED-FILM RADILOGraphy OF THE ABDOMEN WAS PERFORMED, AND AN AIR-THROTTLED BOTTLE WAS SEEN IN THE RECTOSIGMOID COLUM. LAPAROTOMY REVEALED A GLASS BOTTLE OF BEER INJECTED IN THE SIGMOID COLUM, WITH MULTIPLE ASSOCIATED LACERATIONS IN THE RECTOSIGMOID COLUM. THE BOTTLE WAS RETRACTED, AND HARTMANN'S COLOSTOMY WAS PERFORMED. THE PATIENT WAS TREATED WITH BROAD-SPECTRUM ANTIMONIA AND STREPTOCOCCAL AND UNDERWENT COLOSTOMY REANASTOMOSIS, AFTER WHICH THE RECOVERY WAS UNEVENTFUL.
Recently in California

December 2011

14 Hospitals cited with Administrative Penalties.
Vary from $25,000 to $100,000.

7 of the 14 related to retained surgical items

1. Fresno Surgical Hospital
2. LAC+USC
3. Mission Hospital Regional Med Ctr
4. Scripps Memorial
5. Sutter Solano
6. Torrance Memorial
7. Ventura County Med Ctr

CDPH Issues $850,000 in Penalties to California Hospitals

Date: 12/8/2011
Number: 11-062
Incidence 2012

STILL > ZERO
When is it Retained?

- After all incisions have been closed in their entirety
- Devices have been removed
- Final surgical counts have concluded
- Patient has been taken from the operating/procedure room

http://www.qualityforum.org/projects/hacs_and_sres.aspx
Why do they occur?

• Communication and Practice problems with the THREE major stakeholders

➤ 1. Surgeons
➤ 2. Nurses
➤ 3. Radiologists
Elements of Causation

Applying Swiss Cheese Model of Sir James Reason BMJ 2000;320:768

LATENT FACTORS

Hazards

Exploration: SURGEONS

Counts: NURSES

X-ray: RADIOLOGISTS

COMMUNICATION

OR PRACTICES
Common Language
Who’s on First?

• Final count “correct”
• That’s 8 + 2 in the vagina
• Is that correct?
• Yes, there are two
• No, 8+2 that’s 10, the count is 10
• Oh, yes, count correct

But there were two sponges left in the vagina!
Communication

• It’s **what is right not who is right**
  ➤ Between nurses and surgeons
    • “We’re missing a sponge” “OK, Let’s re-explore the wound!”
    • “Dr. Is this a good time for lunch relief?”
  ➤ Between nurses and scrub techs
    • “Separate each raytex so we can make sure we have 10”
    • “Let’s verify the sponge holders before you take permanent relief”
  ➤ Between surgeons
    • “Make sure you check behind the heart for any raytex before you close”
    • “Let’s do our wound exam and look for sponges”
OR Practices

• What we do and how we manage our work
  We = Multiple Stakeholders
• Anesthesiologists: 4X4 management, coordinated reversal from anesthesia
• Surgeons: use only radiopaque items, perform a wound exploration
• Nurses: surgical item accounting process
• Scrub Techs: organize field, know equipment
• Radiologists/Technologists: film quality, review
• Risk Managers/Administrators: resources
Perception vs Reality

OR STAFF – How things really work: unintended variation

OR MANAGER – How I think things work (or should work)
Practice Issues

• Variable counting processes exist throughout an OR - no standardization, little transparency, counting in unit of issue
• Frequent confirmation bias between scrub and circulator
• Loss of situational awareness and missing events that occur outside the scrub or circulator’s locus of control
• Normalization of deviance
• Retained sponge cases have occurred when low numbers of sponges (<20 sponges) have been used or in any size wound - it’s not about counting!
Sponge Management

**Policy**

**Process**

**Practice**

- **Safe Care**
  - Computer Assisted Sponge Counting
    - 2D matrix labeled sponges
    - handheld bar code reader
  - Sponge ACCOUNTing System
    - plastic hanging sponge holders
    - wall mounted dry erase boards
  - Smart Sponge System
    - RFID chip labelled sponges
    - bucket scanner and wand

- **Standardized Care**

- **Incorrect Count**
  - XRAY

- **Incorrect Count**
  - XRAY

- **Incorrect Count**
  - RF System
    - RF tagged sponges
    - detector plastic wand

**Customized Care**
New Technology

At least right now there are:

THREE CHOICES
Count

Two dimensional data matrix label. Sponges passed under reader and counted in at the beginning of case and then counted out at the end of case.

Maintains “line of sight”, provides accuracy, all sponges
Detect

Reusable detecting wand, 9ft cord attaches to console. Can scan trash in any receptacles in room. Reads through tissue up to 24 inches Readout on console
Count and Detect

Inventory display and in count touch pad

WAND

Out scanner bucket

Complete count and detection system

Standalone RFID wand system

7mm RFID tag
Which one to choose?

• Local environments will need individual solutions

• All new systems are adjuncts to a manual count (at least for now)

• Cost vs benefit

• Behavior change needed for surgeons and nurses for successful adoption of any program to prevent retained items
Analogy

- Glucose
- Sugar
- Sweet & Low (saccharine)
- Equal (aspartame)
- Splenda (sucralose)
- Stevia
- ? What’s next

- Manual Practice (SpongeACCOUNTing)
- SurgiCount (2D matrix counter)
- RF Surgical (RF tag detection)
- ClearCount (RFID)
- OR Locate (RFID)
- ? What’s next
New Standard

Reliable Manual Practice

DON’T JUST COUNT - ACCOUNT!
NoThing Left Behind

- Multistakeholder project
- Work with any hospital
- Adoption of simple principles and if needed, technological adjuncts
- Engage in research studies to define best practices
- Develop an evidence base to inform policies and procedures that can be systematically applied
What I see is ..... 

• Lots of practice variation within OR
• Focus on “counting”
• Massaging the policy
• Adding steps that aren’t part of natural work flow
• Reliance on Memory - “don’t forget to.....”
• Not seeing how people have set themselves up for failure
• Risk management trumps patient safety
SPONGE ACCOUNTING SYSTEM
Monitoring "Sponge Traffic"

- Nurses use a standardized process to put sponges in hanging plastic holders and document the counts on a wall-mounted dry erase board in every OR
- Surgeons perform a methodical wound exam in every case and before leaving the OR - verify with the nurses that all the sponges (used and unused) are in the holders.

50 lap pads accounted for
[NoThing Left Behind]
NLB Policy & Practice

POLICY
NoThing Left Behind®:
Prevention of Retained Surgical Items Multistakeholder Policy

PRACTICE
WHERE ARE THE SPONGES?
ALL SPONGES (used and unused) ARE HERE

Sponge Accounting

http://www.nothingleftbehind.org
Zero for at Least a Year

Policy review, revisions, reinforcement

Sponge ACCOUNTing
NoThing Left Behind: Retained Sponges in Participating Hospitals

Collective Experience Pre: 70 Retained Sponges --> 18 Post
Findings

• 80% of retained sponge cases occur in the setting of a CORRECT COUNT
  ➤ Problems with OR practices

• 20% occur in the setting of an INCORRECT COUNT
  ➤ Problems with knowledge and communication
SPONGE ACCOUNTING SYSTEM

Monitoring "Sponge Traffic"

• **Nurses** use a standardized process to put sponges in hanging plastic holders and document the counts on a wall-mounted dry erase board in every OR

• **Surgeons** perform a methodical wound exam in every case and before leaving the OR - verify with the nurses that *all* the sponges (used and unused) are in the holders.

50 lap pads accounted for
Trust but Verify

In Count

3 S's:
See, Separate, and Say

Operation

Closing Count

Kick Bucket Ring Stand

Final Count

Verify

IN CORRECT

INCORRECT: DIDN'T FIND THE SPONGE

Correct: Found the Sponge

MD

MD

MD

MD

RN

RN

RN

MD

Patient

Administration

Look in Trash

X-Rays

AP

Oblique

Surgeon

Radiologist Verify

X-Rays

MD

Alert

RN

MD

RN
WHERE ARE THE SPONGES?

ALL SPONGES (used and unused) ARE HERE

SPONGE ACCOUNTING

WHERE ARE THE SPONGES?

EASY AS

1. @ IN COUNT(S) ALWAYS
   CHECK SPONGES
   ...for packaging errors.

2. @ CLOSING COUNT TAKE A
   PAUZE FOR THE GAUZE
   ...to perform the Methodical Wound Exam.

3. @ FINAL COUNT SAY
   SHOW ME
   ...that ALL sponges are in the holders.

WHERE ARE THE SPONGES?

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Safety Rules Poster

WHERE ARE THE SPONGES?

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   SHOW ME...that ALL sponges are in the holders.

SPONGE ACCOUNTING
Incorrect Count CheckList

• Visible in every OR
• Levels the playing field
• Knowledge and Communication so all team members can do the right thing
• It’s what is right not who is right… remember?
NOT business as usual

- Practice change for nurses and surgeons, accounts for sponges
- Visible, transparent system
- Different process for use of sponge holders (not counters), dry erase board data for all to see
- “Show me” step proves that “the count is correct”
Nursing Essence

- In every case where an incision is made and surgical sponges are used, the sponges MUST be accounted for.
- Work with free sponges ONLY in multiples of TEN.
- At the IN count the most important element is to SEPARATE the sponges.
- At the FINAL count all the sponges (used and unused) must be in the sponge holders.
SPONGE ACCOUNTING PROCESS

USE PLASTIC HANGING SPONGE-HOLDERS FOR LAPS AND RAYTEX

This process involves the use of plastic hanging blue-backed sponge-holders which each contain 5 pouches. Each pouch has a 3-ring binder divider which separates each pouch into 3 pockets. One sponge should be placed in each pocket. One sponge per pocket, 2 pockets per pouch and 5 pouches per holder means that each holder can accommodate 10 sponges. We recommend that each holder always be set up to hold 10 sponges be they laparotomy pads or raytex. Different types of sponge should not be mixed within one holder. A wall-mounted dry erase board to record operative information and the IV counts should be easily visible in each room. This process should be standardized for use throughout all operating rooms to provide consistency in all types of operative cases.

The single most important element in the use of the hanging sponge-holders is to make sure that “the final count” is taken when all the sponges that have been opened during the case (used and unused) have been placed in the holders. The surgeon and nurse can then visually verify that all sponges have been accounted for and none remain in the patient.

1. Use sponge holders on all cases that require a sponge count. Add Laps and Raytex in groups of 10.
2. Hang the holders on the special racks attached to designated IV poles. Use a separate holder for each sponge type e.g., one for laps, one for raytex.
3. Used sponges coming from the operative field should be placed into a CLEAR plastic bag-lined receptacle (e.g. lock buckets or ring stands).
4. Take each used sponge from the receptacle. Make sure you have only one sponge. Open it up to its full length and then fold it up into an oval. Place one (1) sponge per pocket; two (2) sponges per pouch; ten (10) sponges per container.
5. Put the first sponge in the LAST pocket in the bottom of the holder. Load the holder horizontally from the bottom row to the top row, filling first the bottom two pockets and continuing upwards. This process (going from the bottom to the top) will make visual determination of the filled holder easier to see from the OR table.
6. Place the folded sponge inside the pocket with the blue tag or blue stripe visible. The blue stripe must be visible because this is what differentiates a sponge with a radiographic marker from a dressing sponge. When viewing the holder note the blue stripe not the white sponge. Place another sponge in the other pocket in the other side of the pouch. Periodically throughout the case put the used sponges in the holder.
7. At the time of the final count, all sponges MUST be in the sponge holders and the final verification must be taken by two people viewing the sponge holders.
8. Keep a running total of the sponges placed in the surgical field on the dry erase board using the same format that is used to count needles. The count should be a multiple of 10. The last number should always be the total number of sponges currently on the field.
9. At a permanent change of shift, the number of sponges in the holders should be physically reviewed using visual and audible communication between the circulating nurses changing positions before the relieved nurse departs to the OR.
10. Sponge holders should remain hanging in their racks from the IV poles or they may be placed in CLEAR plastic bags if the IV poles become overloaded. However, the final count must have visual confirmation of all sponges in the holders to ensure that each holder is fully loaded with 10 sponges.

10 LAPS / 10 RAYTEX / 10 POCKETS / 10 STEPS...
Surgeon Essence

• Perform a methodical wound exam in every case
• If you’re told of a missing sponge, stop closing the wound and look again
• At the end of every case say “show me” and look at the sponge holders and see that there are no empty pockets
**Sponge Accounting Process**

**Closing Count**
Methodical Wound Examination (MWE)

Don’t just “Swish or Sweep”
The goal is to get all the sponges OUT so they can be accounted for.

1. **Check Sponges**
   - IN COUNT(S)
   - Only use x-ray detectable sponges or towels.
   - Don’t alter them.
   - Avoid use of small sponges in large cavities.

2. **Show Me**
   - FINAL COUNT
   - Before you leave the OR, look at the sponge holders to verify they are full. Then dictate in OR report “a MWE was performed and sponges were accounted for.”

3. **Pauze for the Gauze**
   - CLOSING COUNT
   - Perform a methodical wound exam (MWE), to get all the sponges out. CALL OUT “I think all the sponges are out” THEN ask for closing suture.

**Final Count**
GET TO 0 in 10 min.

**Notes:**
- Examine all four quadrants of the abdomen with attention to:
  - Lifting the transverse colon
  - Checking above around the liver and above around the spleen
  - Examining within and between loops of bowel
  - Inspecting anywhere a retractor or retractor blades were placed

- Examine the pelvis:
  - Look behind the bladder, uterus (if present) and around the upper rectum.
  - The vagina should be examined if it was entered or explored as part of the procedure.

- Unless clinically contraindicated for a specific patient, the following general steps should be taken for procedures performed in the mediastinum or thorax:
  - In a mediastinal procedure, if the mediastinal pleura were opened, examine the ipsilateral pleural cavity.
  - In a cardiac procedure, elevate the apex of the heart and examine the retrocardiac space.
  - Examine the transverse sinus to the right and left of the aorta and pulmonary artery.
  - In a thoracic procedure, examine the thoracic cavity with attention to the thoracic apex and base of the lungs, parietal pleura, and inferior recesses of the diaphragm. Place a hand or finger behind the lung and palpate from apex to base.
Radiology Guidelines

- Region of Interest specifics
- Instructions for radiology techs to take correct images
- Information to help get it right

MISSING SURGICAL ITEM (MSI) — Radiographic Exams
Upon identification of a missing surgical item, the Surgeon or Nurse will order STAT X-Rays for the specific region of interest (ROI) as listed below. The Radiology Technologist can use this guidelines for planning optimal image quality.

<table>
<thead>
<tr>
<th>Exam</th>
<th>Views</th>
<th>ROI</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSI Cranium</td>
<td>AP &amp; Lateral (2V)</td>
<td>Top of Skull to below Mandible and bilateral skin borders.</td>
<td>Include Face and Neck if ENT surgery</td>
</tr>
<tr>
<td>MSI Chest</td>
<td>AP &amp; Oblique (2V)</td>
<td>Apices to Costophrenic Angles (CPA) and bilateral skin borders.</td>
<td>This may require more than one film for the AP projection. The Oblique may be a single 14x17 of the ROI</td>
</tr>
<tr>
<td>MSI Abdomen/Pelvis</td>
<td>AP &amp; Oblique (2V)</td>
<td>Diaphragm to Pubis and bilateral skin borders</td>
<td>This may require more than one film for the AP projection. The Oblique may be a single 14x17 of the ROI</td>
</tr>
<tr>
<td>MSI Vagina</td>
<td>AP &amp; Inlet (2V)</td>
<td>Inferior gluteus to above crest and bilateral skin borders. Inlet must show the pelvic ring.</td>
<td>Inlet: Place 14x17 vertical with 25 degree caudal angulation. Special attention needed to avoid grid cut-off</td>
</tr>
<tr>
<td>MSI Extremity</td>
<td>AP &amp; Lateral</td>
<td>Include above and below ROI and bilateral skin borders.</td>
<td>Use large films. Order must be specific to ROI: LUE or LLE RUE or RLE</td>
</tr>
</tbody>
</table>

Most portable units have a maximum kVp of 90 - 120 and maximum mAs of 320. The x-ray source must be set at the safest distance to preserve the sterile field. Because of these limitations adequate images may be impossible to obtain in the morbidly obese patient. Image quality should be discussed with a radiologist.
Findings

• 80% of retained sponge cases occur in the setting of a CORRECT COUNT
  ➤ Problems with OR practices
• 20% occur in the setting of an INCORRECT COUNT
  ➤ Problems with knowledge and communication
Case
Intraoperative Xray

• “There isn’t anything easily seen.”
• “But it’s not a complete view”
• “OK - Let’s take another film to see the diaphragm”
Repeat OR Film

- “There isn’t anything there. The film is negative. Let’s get out of here.”
Repeat OR Film

• “Could there be something in the midline there?”
• “No, it's just the spinous process”
ICU film

- Oblique view
- Return to OR for removal
Incorrect Count CheckList

- Visible in every OR
- Levels the playing field
- Knowledge and Communication so all team members can do the right thing
- It’s what is right not who is right… remember?
SURGEONS

“PAUSE FOR THE GAUZE”

SHOW ME PLEASE

123
SURGEONS ↔ NURSES

"PAUSE FOR THE GAUZE"

123

SHOW ME PLEASE

FINAL COUNT

123

TEAMWORK
Did you find the missing raytex?
Time to Coordinate Efforts to Prevent Retained Surgical Items

There is NO excuse
Options

• Evaluate current OR practices to prevent retained surgical items
• If at zero, stay the course
• If not, is there room for improvement?
• Patient Safety First development of expanded options to assist you in your efforts
SAFER SURGERY

Verna C. Gibbs M.D.

www.nothingleftbehind.org