WHERE ARE THE SPONGES?

ALL SPONGES
(used and unused)
ARE HERE

SPONGE ACCOUNTING
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INTRODUCTION

From Me to You:
This is a practice manual to implement the Sponge ACCOUNTing System. As with most instruction manuals, if you follow the directions and use it as outlined you will meet with success. The practice has to be implemented in all ORs or all areas where surgical sponges are used and whenever an incision is made or a wound is present. This includes Labor and Delivery rooms and Obstetrical ORs. While a spontaneous vaginal birth may not have an incision (or tear to repair) sponges have been retained in the vagina and thus a birth constitutes a circumstance where sponges need to be accounted for. The Sponge ACCOUNTing System is a transparent, simple, verifiable and inexpensive practice. If people employ the practice, it works. You will find that a new measure of engagement occurs because it’s transparent and verifiable. However, if the practice isn’t used as outlined then you can’t expect to prevent retained sponges.

Sponge ACCOUNTing is not just a nursing and surgical technologist practice change. It includes actions for surgeons, anesthesiologists, radiologists and radiology technicians. It has instructions and guidelines for all stakeholders. This can’t just be a practice change for a few of the nurses or in only a couple of ORs. If you haven't reached a widespread consensus that this is something the institution wants to take on then you will fail especially if you haven't recently had an event that brings people together or are doing it as an "improvement" project.

To make the system work well you have to change the way people have been doing things for a long time and in general people don't want to change. You have to change the way the sponges may be written on the dry erase boards.... if you don't have dry erase boards you have to get them and you have to reach consensus on how the information will be written on them and it has to be the same in all of the ORs. You have to get the nurses and surgical technologists to all change the way in which they will be "accounting" for the sponges at the end of the case...... that is ALL of the sponges (the used and unused sponges) MUST be off the field for the final count. At the time of the final count the sponges must no longer be in use. That means no holding back some to wash the car or clean the cat. All the sponges must be in the holders for the final count to be called a final count. The IN counts require the two person activity of the 3 S’s - "see, SEPARATE and say" and is actually the time when you are really counting the sponges. The SEPARATION of the sponges is the critical step. At the Closing count the surgeon has to perform a Methodical Wound Exam. This is not a “sweep” or a “swish”. Sweeping is inadequate and sponges left in the abdomen have been “swept” over. An exploration or an exam is a focused action for the surgeon to actually look and feel for the sponges BEFORE asking for closing suture. This happens at the “Pauze for the Gauze” NOT a time-out because this is not a verifiable step because the sponges are still in use. It is the FINAL count that has the team verification – the “show me” step. As it turns out when all the sponges are in the holders, working always in multiples of 10, at the FINAL count one finds that they aren't actually counting the sponges but looking for empty pockets. And anyone and everyone can look for empty pockets because the holders are always visible and hanging on the racks in the OR. The patient can’t leave the room if there is an empty pocket. Something has to be done about it. It is really quite simple but it is amazingly complex to get our OR folks to make it work. Too much customization, individual
agendas and pushback. As stated at the outset, it is hard work to change behaviors and long established practices.

The practice is a package and it is unwise to just pick and chose parts of the practice you like... for example we want to use the holders but not write down the counts the way it's outlined on the dry erase board or we want to keep our current system of 5's and 10's but just use the way you outline for the holders. We will just get the nurses and scrub techs on board because they are the ones who usually "count" but not engage the surgeons or we'll get the surgeons but not include the radiologists because we rarely call for x-rays so it probably won't make much of a difference. This attitude is like getting on a plane and saying you are only going to put on the seat belt if you are sitting in an exit row or will only use them for long haul flights and not for just a short flight. Not a surgical patient safety mentality. Of course you can do whatever you want BUT if you break it up or don't employ the whole practice it will fail. We know this because centers have done that and over the 5 years this has been evolving we have learned the hard way, the wrong way... on the backs of our patients.

This is a very comprehensive manual. It covers all the territory we have encountered in the development of the practice. We recommend you use it with the NoThing Left Behind Multistakeholder OR Policy and before beginning look both the Practice and the Policy over. The posters are available to download from the website. The surgeon champion has to develop the best way to discuss with the anesthesiology department what will be happening going forward and get to all the surgeons the slideset and the single page surgeon handout - The Methodical Wound Exam. The nursing champion has to develop the best way to get all the nurses and surgical technologists the material and have them trained. The radiology champion has to develop the best way to get the material to the radiologists and the radiology technologists. You will immediately see how you must share widely and frequently with all your colleagues who must work together to make sure we get this right. Our patients deserve nothing less.

If there are any questions or problems please feel free to contact me. Good luck.
PLAN FOR IMPLEMENTATION OF THE SPONGE ACCOUNTING SYSTEM

One meeting with leadership

Retained surgical sponges are the result of problems with communication and OR practices. Sponge ACCOUNTing has been designed to address these two error prone areas. Most retained sponges are a surprise. The sponge was usually left during a case when the final surgical count was called correct and at some later time the retained sponge was discovered. These cases are the result of problems with OR practices. To remedy this problem OR personnel have to change the practice of how they manage the sponges during use. The exchange of information and knowledge during the new sponge management practice will also change and this will address the problems in communication which have occurred in retained sponges cases where the patient left the OR in spite of a known incorrect final count. If well implemented and completely executed, no matter what the setting, it is expected that the Sponge ACCOUNTing practice will improve OR interactions between surgeons, nurses and scrubtechs, decrease miscounts and stop retained sponges from occurring.

Because this practice requires behavior change of all OR personnel (surgeons, nurses, scrub persons, anesthesiologists, radiologists, radiology technicians and even environmental management personnel) it is mandatory to have widespread and unequivocal leadership support. It is assumed you have already obtained (or mandated) complete OR Nursing and Scrubperson support. Even with this cognitive assent, during the implementation of Sponge ACCOUNTing visceral resistance from nursing personnel appears. As you introduce this practice change throughout the OR, MD refusal and pushback may appear. Leadership has to step forward and address these concerns and outline the institutions commitment to the process. It can’t be left to the people on the ground to resolve their differences. It can’t be left to the nurses to fight the battles with the surgeons or the surgeons to fight the battles with the administration. Retained sponge cases reflect systemic problems in the OR and trying to prevent retained sponges from occurring requires system change. At the outset everyone needs to be very clear on the going forward strategy, what the project will entail with a timeline, fault zones and what likely challenges will emerge.

Establish structural elements:

Nurse, Surgeon and Radiologist Champions:

1. Nurse champion works with nursing and scrubtech personnel to reach unanimity on organization of information to be put on dry erase boards and format of the sponge counts. Boards need to be wall-mounted and configured before go-live date. Make sure operative record has a space for clear documentation of counts. Review terminology of counts. Provide samples of all radiopaque cotton gauze disposables with their common terminology to radiologist champion.

2. Surgeon champion needs to determine most effective way (emails, letters, brochures, meetings) to reach all members of the surgical staff with Sponge ACCOUNTing educational and process materials and look at calendar for execution. The surgeon champion must be clear on state and hospital definitions of what constitutes a retained surgical item and what regulatory reporting requirements exist. The Surgeon champion should also discuss with Chief of Anesthesiology going forward plans and provide educational materials.

3. Radiologist champion needs to evaluate radiology technicians competency and current practice in obtaining intraoperative xrays and timeliness of readback to OR. Review and distribute educational materials. Make a booklet of XR imaging
materials for radiologist review. Go over the Missing Surgical Item (MSI) guidelines with Radiology Technologists. Take xray of all radiopaque cotton gauze disposables used in the facility and construct some visible training aide to assist in xray identification of same.

Purchase supplies (if not already present)
Order posters, wall and rack signs
Print handouts (TBD depending on training model – see below)
Pick a target go-live date for all to work towards

Training of OR personnel and Labor and Delivery staff

Depending on how many OR nurses and scrub techs there are you can have all personnel trained in a one day session or a number of sessions in one or two days and then the nurse educator will perform individual competency assessments of each nurse and scrub tech. Alternatively you can have a train the trainer session. If you use the train the trainer model then the trained trainers will train personnel at each facility and also do individual competency assessments.

Individual competency assessment means that each nurse and scrub tech views a powerpoint slideset, understands count terminology, takes a quiz, physically demonstrates loading of the holders and documentation of the counts, understands the consequences of non-compliance, has all questions answered, and signs off on successful performance. This must occur BEFORE the go-live date.

Send out powerpoint slideset, get brochures, handout and literature to surgeons
Send guidelines to anesthesiologists
Follow-up with Radiology stakeholders
Educational posters up in common areas

GO-LIVE
Rack Sign on every sponge holder rack, Wall poster #1 and Wall poster #2 in every OR
Perform Every Case End Audits for first 2-3 weeks on all cases
  • correct any observed errors immediately when recognized
Complete Miscount reports for any miscounts
Discuss at monthly OR committee or QI or inservice session
  • Send copies of reports to surgeon champion to review and discuss issues with any specific surgeon(s) as needed
RCA within 48 hours of discovery if any events occur

Any new personnel must undergo training and competency assessments.
Any new medical staff must receive slideset and handout as part of OR orientation

External Audit
At 4-6 months, disseminate external audit tools to all personnel to review.
Unannounced visit to look at progress, compliance and general review
Act on results of external audit

At one year…………at zero,
annual competency and education performed.
Keep it up until satisfied that “this is the way we do it here”.
Consistency yields excellence.
IMPLEMENTATION CHECKLIST

Equipment & Pre Training Preparation  (see following photos)

☐ 1  Sponge holder racks and IV pole in each OR/procedural/labor & delivery room with 'Sponge Accounting' signs (put sponges here) on each rack.

☐ 2  Only blue backed sponge holders are used for accounting for sponges.

☐ 3  White board in every room and the standardized instructions on the use of the white board printed and distributed to each health care provider participating in the operation, procedure and/or delivery.

☐ 4  Review that multiples of 10 raytex and 10 laps are added to the field as the only option available for operations/procedures. Review custom packs. Plan to add 5 laps to get to multiples of 10 for odd numbered custom packs until old supply used.

☐ 5  Only clear bags (no white or red bags) used in kick buckets. Red bags are only used for disposing of the full sponge holders with the blood borne hazardous waste at the end of the operation, procedure and/or delivery.

☐ 6  Blue towels are not used inside of the patient. Radio opaque white towels are available and tracked on the white board (in number added to field) when used.

Training of Medical Personnel

☐ 7  Every nurse in the department reviews the Sponge ACCOUNTing powerpoint slideset and completes the specific skills test per the established instructions.

☐ 8  Sponge ACCOUNTing presented to surgeons and other physicians (obstetricians), specifically the methodical wound exam and specific charting requirements. They review the Surgeons powerpoint slideset

☐ 9  Sponge ACCOUNTing presented to radiologists, including the two views and specific request for what exactly is missing and readback to the OR.

Evaluation of Implementation

☐ 10  OR manager or clinical specialist use the audit checklist until the results are 10 days consecutive 100% compliance in all rooms.
SAS SETUP
RACK IV POLE FROM BACK
RACK IV POLE FROM SIDE
CORRECT FINAL COUNT 10 LAPS
CORRECT FINAL COUNT 10 RAYTEX
HOLDER DISPOSAL
POSTERS AND HANDOUTS

There are 5 pdf files.

1, 2, and 3 are essential to the work. They need to be in every OR and Labor and Delivery room. They serve as reminders of what has to be done - every day, every case, until behavior is hardwired and this cooperative process becomes your norm: “the way we do it here” They can be laminated and attached to the wall near the dry erase board if possible.

1. **OR Safety Rules** – These are OR Memory Joggers. Place one in each OR. Should print out to 8 ½” x 14” (legal size piece of paper). Can be printed from a color printer. Recommend good stiff stock paper must be laminated/wipeable surface.

![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.

SPONGE ACCOUNTING

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2. **OR Rack Sign** – should print out to 11” x 11”. Get mounted on PVC or laminated paper with wipeable surface (runs about $8-10 per placard). These are placed in each rack in each OR.
3. OR Yield Poster – Incorrect Count Actions – Place one in each OR. The checklist that tells everyone what to do if there is a Missing Surgical Item (MSI).
4. **Nurses Poster** – Prints out to 19” x 22”. Best for wall mounting in nurse and scrub tech areas. Has to go to a printer (A Kinko’s can do it).
5. **Surgeons Poster** – Prints out to 19” x 22”. Best for wall mounting in surgeon’s area. Has to go to a printer (A Kinko’s can do it).
UNIT BASED TRAINING AND INDIVIDUAL SKILLS ASSESSMENT

- Lap sponges (2 packs of 5)
- Raytex sponges (1 pack of 10)
- 1 Package of 4x4 dressing sponges
- Gloves
- Kick bucket or ring stand lined with a clear plastic bag
- Plastic basin (to mix fake blood)
- 2 blue-backed sponge holders, sponge holder rack and IV pole
- Terry cloth bath towels or chux (to keep pole and floor clean)
- Tomato juice (large bottle) - Red food coloring (1 bottle) mix together to make “blood”
- Flip chart (to use as a substitute white board in your demonstration)
- Power Point presentation
- LED projector

Training nurses includes having each nurse demonstrate actually rolling up the sponges and loading them in the holders from the bottom up as described below. This is appropriate for a skills day activity and for new hires.

Mix fake blood and add some to a plastic basin containing 10 raytex, 10 laps and ONE (1) 4x4 sponge. Put all the sponges into a clear plastic bag-lined kick bucket. Hang the two sponge holders on the rack mounted to the IV pole. Ask the nurse/trainee to load the holder as they would do in the OR and demonstrate how they would record the count on the flip chart.

The trainee should discover that there is a non-radiopaque 4x4 sponge in the mix of sponges while loading the holders. If the trainee loads the 4x4 and ends up with an extra raytex sponge at the end this would be considered a mistake. The trainee should be able to mark on the flip chart the standardized, designated way your OR has decided to record the count. Mistakes and discrepancies need to be corrected and proper technique reinforced. Tell the trainee not to tell others about the stealth “4x4”.

What other information is important for you to know?
- In your OR documentation, make sure four classes of items are accounted for.
  It is possible to have an incorrect sponge count but correct needle, instrument and small miscellaneous item counts, and the OR record has to be able to reflect this.

<table>
<thead>
<tr>
<th></th>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Needle/Sharps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small/Misc Items – Device Fragments</td>
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</tbody>
</table>

If there is an incorrect FINAL count, make sure the circulating nurse completes an Incorrect Count Report (p24). The Miscount Report (p 21) is for a miscount NOT for an incorrect FINAL count. See Count Terminology (p22-23) for clarification.
MISCOUNT REPORT

Please use for internal OR quality improvement. Use as needed to determine what occurred in the event of a discrepancy/missing item in surgical count. Please return to OR Nurse Managers or Nurse Champion.

Patient Name: ______________________________ MR#: __________________________

Date: __________________________       Time: __________________________

OR#: __   Operation: ___________________________________________________________________

Physician Surgical Team:
1. ___________________________________________________
2. ___________________________________________________

Scrub/Circulating Team (specify relief):
1. ___________________________________________________
2. ___________________________________________________

MISSING / MISCOUNTED ITEM:
Sponge (type e.g. lap, raytex, cherry, tonsil, etc.) ______________________

Number of sponges recorded on board __________
Number of sponges in holders __________

ACTION:
Areas Checked:

<table>
<thead>
<tr>
<th>Sterile Field</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Garbage</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Laundry</td>
<td>Yes</td>
<td>No</td>
</tr>
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</table>

Other places, ___________________________________________________________

X-rays taken?  □ Yes  □ No (why not?) _______________________________________

Findings? _______________________________________________________________

Methodical Wound Exam performed? □ Yes  □ No (why not?) _______________________

What happened? How was item found? What is the learning that could be shared with your facility and system wide?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
COUNT TERMINOLOGY

Purpose: To clarify terminology for use when accounting for sponges so we have clear and consistent communication.

At the FINAL count:
(which is documented in the medical record as either Correct or Incorrect)

What is a CORRECT final count?
Definition – The skin is closed and all of the sponges (used and unused) are placed in the pockets of the sponge holders. The team (physician, nurses, scrub) verifies that the number of sponges documented on the white board agree with the number of sponges in the sponge holders.

What is an INCORRECT final count?
Definition- The skin is closed and some sponges (one or more) are missing in the sponge holder. There are empty pockets. The number of sponges in the sponge holder does not agree with the number on the white board.
• The stability of the patient must be assessed and the patient should remain in the OR if conditions warrant.
• The surgeon must be immediately notified
• The nurse manager is notified
• Plan of action is decided upon and documented in the medical record

Call for x-ray(s)
   a) tell radiologist what item is missing e.g. lap pad, raytex 4x4
   b) plan for xrays of entire surgical wound (remove extraneous objects from field)
   c) take additional view (oblique) if item not seen on initial view

Each sponge holder is checked to make sure there is only ONE sponge per pocket
The scrub will search all sterile areas
The circulator will search the linen, drapes and garbage
Anyone who has left the room will be contacted and the circulator will review any visitors in the room or opportunities for a sponge to have been inadvertently removed from the room e.g. with a pathology specimen, or with a newborn taken to the nursery.
The surgeon will decide when to move the patient to the next level of care and obtain additional x-rays if the sponge is not found.
When the patient is awake, if the item is not found, the incorrect count is disclosed to the patient.
A CT scan should be considered to rule out a retained sponge if the sponge is not found.
What are miscounts; (missing item, mistaken count)?
(Also referred to as discrepancies)
Definition- At an interim count (closing count, count during closure of a cavity within a cavity, count at a permanent change of relief or a count called any time a member of the surgical team requests one) when the number of sponges on the field, on the table and in the sponge holders does not match what is recorded on the white board. After looking, finding and recounting, the count is rectified. These should be considered “near miss” events and provide learning opportunities for where problems may occur yet illustrate how the system works to prevent retention.

There are two kinds of miscounts:
1) Mistaken count – when sponges were counted and there were more or less than the number on the white board. Upon recount and looking at the existing sponges (perhaps two had stuck together, or there were two in one pocket, or the individual had simply made a mistake in the counting) the error is identified and resolved and the count is rectified.
2) Missing item – when the count identifies that the number of sponges is less than the number on the white board. A sponge is missing.

What are the next steps if you have a Missing item?
• The surgeon should perform or repeat a methodical wound exam
• Repeat the counting of the sponges on the field, table and in the holders
• Each sponge holder is checked to make sure there is only ONE sponge per pocket
• Call for x-ray(s)
  a) cover wound with sterile plastic drape or non-radiopaque sterile towel
  b) tell radiologist what item is missing e.g. lap pad, raytex 4x4
  c) plan for x-rays of entire surgical wound (remove extraneous objects from field)
  d) take additional view (oblique) if item not seen on initial view or start with 2 views
• The scrub will search all sterile areas
• The circulator will search the linen, drapes and garbage
• Anyone who has left the room will be contacted and the circulator will review any visitors in the room or opportunities for a sponge to have been inadvertently removed from the room e.g. with a pathology specimen, or with a newborn taken to the nursery.

When the sponge is located, a recount is done and all items appear to have been accounted for.
The case continues to the FINAL count. (See above)

A miscount report should be completed for all miscounts. These reports should be used for internal OR QI review and discussion to identify problematic practices and improve care processes.
INCORRECT FINAL COUNT REPORT

Complete an electronic ERS report and this paper report and submit to Nurse Manager. Have the forms in the OR or in an electronic format that can be readily obtained.

(check all those that apply):

- Surgeon present in the OR
- Nurse manager present in the OR
- Count repeated
- Sponge holders checked to make sure only ONE sponge per pocket
- Surgical technologist checked all sterile areas
- Circulator searched linen, drapes, floor, trash and room
- Visitors contacted
- Pathology specimens, newborn to nursery verified no included item
- Small needle (<15mm) in large cavity, needle not found
- Non-radiopaque surgical item not found
- Intraoperative x-rays obtained
- Type of missing item specified on x-ray request
- Full extent of wound included on x-rays
- Two views (AP and oblique) obtained if needed
- Radiology readback verification of results for specific item
- Clinical decision by surgeon not to retrieve device fragment or item
- Extreme Emergency Condition and counts aborted
- Therapeutic Packing Performed - Unknown number of sponges placed intracorporally
- Additional X-rays to be ordered at next level of care
- Event reported through Event Reporting System
- Risk manager notified
- Patient disclosure rules reviewed
- Counts and actions documented in medical record

Follow-up Required:

_____________________________________________________________________________________
_____________________________________________________________________________________

e.g.  Nurse Manager will follow-up on documentation
      Risk Manager will report to regulatory agencies
      Patient disclosure discussion by surgeon documented in medical record
      Next level of care X-rays were ordered, obtained and read by a radiologist
      Surgeon verbally notified of X-ray results
      Staff discussion of case to be held at next educational session
END CASE CHECKLIST

Date: ________________                                              OR Room #:___________

FIRST CASE IN ROOM:

☐ All kick buckets are lined with clear plastic bags
☐ Blue-backed sponge holders are on a rack, mounted to a movable pole that doesn’t tip
☐ Count is recorded in a standardized format on a dry erase board as a “running total”
☐ During IN count(s) scrub and circ “see, SEPARATE, say” ten (10) sponges
☐ Every CLOSING count has a surgeon perform a methodical wound exam
☐ Full sponge holder(s) at FINAL count had a visual team verification

Auditor’s initials: _______

SECOND CASE IN ROOM:

☐ All kick buckets are lined with clear plastic bags
☐ Blue-backed sponge holders are on a rack, mounted to a movable pole that doesn’t tip
☐ Count is recorded in a standardized format on a dry erase board as a “running total”
☐ During IN count(s) scrub and circ “see, SEPARATE, say” ten (10) sponges
☐ Every CLOSING count has a surgeon perform a methodical wound exam
☐ Full sponge holder(s) at FINAL count had a visual team verification

Auditor’s initials: _______

THIRD CASE IN ROOM:

☐ All kick buckets are lined with clear plastic bags
☐ Blue-backed sponge holders are on a rack, mounted to a movable pole that doesn’t tip
☐ Count is recorded in a standardized format on a dry erase board as a “running total”
☐ During IN count(s) scrub and circ “see, SEPARATE, say” ten (10) sponges
☐ Every CLOSING count has a surgeon perform a methodical wound exam
☐ Full sponge holder(s) at FINAL count had a visual team verification

Auditor’s initials: _______
SPONGE ACCOUNTing SYSTEM

Nurses use a standardized process to put sponges in hanging plastic holders and document the counts on a wall-mounted dry-erase board in each 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.

EXTERNAL AUDIT TOOL

50 lap pads accounted for
**Sponge ACCOUNTing Audit Tool for OR and Procedure Rooms**

<table>
<thead>
<tr>
<th>V6</th>
<th><strong>Sponge ACCOUNTing Practice</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Hospital Visited:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Total Number of people interviewed/observed:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Equipment:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Room:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>1. Clear Bags in Kick Buckets</strong></td>
</tr>
<tr>
<td></td>
<td><strong>2. IV pole with rack or hooks for sponge-holders</strong></td>
</tr>
<tr>
<td></td>
<td><strong>3. Rack Sign</strong></td>
</tr>
<tr>
<td></td>
<td><strong>4. Wall Poster</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Signage in Room:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Question:</strong> why are the rack signs important to keep up on the sponge racks?</td>
</tr>
<tr>
<td></td>
<td><strong>Answer:</strong> they serve as memory joggers and unifiers for ALL stakeholders (surgeons, nurses, scrub techs, maintenance personnel, nurse travelers, registry recruits, anesthesiologists) to remind everyone to get the sponges into one place so they can be accounted for and then disposed of</td>
</tr>
<tr>
<td></td>
<td><strong>Observe (O)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>(O) White Board:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>6. a) Wall-mounted dry erase board</strong></td>
</tr>
<tr>
<td></td>
<td><strong>7. b) Note position of Sponge counts on the White Board (e.g. RU, LU, LL) should be the same place in all ORs</strong></td>
</tr>
<tr>
<td></td>
<td><strong>8. c) Recording of Count</strong></td>
</tr>
<tr>
<td></td>
<td><strong>• Format (horizontal – H or vertical - V) same in all ORs</strong></td>
</tr>
<tr>
<td></td>
<td><strong>9. ▪ Multiple of 10 for free sponges - 10, 20, 30, 40 Yes/No</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Free sponges are those handed back and forth without an instrument. Usually laps, raytex, mini laps, appy tapes etc. Does not include RadioOpaque towels (ROT) if they are used in the wound. ROT should be recorded separately in unit of issue. If odd number of sponges still present in custom packs when opened, should put one pack of 5 laps to get to a multiple of 10.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>10. ▪ Running total (RT) 10¹³⁰³⁰¹⁰³⁰¹⁰³⁰¹⁰³⁰¹⁰³⁰¹⁰³⁰ for free sponges, ok for ROT</strong></td>
</tr>
</tbody>
</table>

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### Rationale for recording the count:
Sponge counts should be recorded the same as the needle count so there aren’t two separate systems being used. First number of the running total indicates the initial number of sponges (May be greater than 10). Last number of the running total shows everyone in the room how many sponges are out which will tell us how many holders should be full of sponges at the end of the case. No one has to do arithmetic to reach a sum under complex, busy conditions. Counts should be easy to read, simple to understand. No secret codes, strange markings, initials or cross-outs.

### (O) Sponge Management in the OR

<p>| | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
</table>
| 11 | 1. Circulator loads bottom pocket first moves horizontally to top  
Yes/No “bottoms up!” |
| 12 | 2. Blue markers face forward inside the pocket (not dangling out)  
Yes/No If sponges are very wet having the blue tags dangling out pulls on the pocket and also can act as a wick drawing blood and fluid up the tag to drip on the floor. Put the tags INSIDE the pocket. |
| 13 | 3. Moves sponges out of kick bucket into holder, e.g no sponges remain in kick buckets for > 5-10 mins  
Yes/No |
| 14 | (O) Watch circulator and scrubperson for an “IN” count  
Do they “See, separate and say”? Yes/No |
| 15 | (O) Did the surgeon perform a wound exam? Yes/No |
| 16 | (O) Did the surgeon at the end of the case look at the holders or perform a “show me” step? Yes/No |

### Ask OR personnel if you can’t observe actual practice:

<table>
<thead>
<tr>
<th></th>
<th>OBSERVATIONS/COMMENTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Show me please how you would record a sponge count for 40 laps or raytex. If wrong, show and tell the person what is the correct way</td>
</tr>
</tbody>
</table>
| 18 | How would you put laps in the sponge holder? Please describe.  
“Bottoms up!” |
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>19</strong> What would you do if the rack was full of holders, filled with sponges and the racks couldn’t accommodate another holder?</td>
<td>Move the pole and rack with all the sponges hanging to a corner of the room and get another pole and rack and holders and keep going. If there was no other pole and rack set available then place the full holders in a clear plastic bag so the sponges can be seen during the final count and “show me” steps.</td>
</tr>
<tr>
<td><strong>20</strong> Tell me what you do when new sponges are added to the field.</td>
<td>2 person count. Look at the sponges together, separate each one, call out the count, circulator writes the count on the dry erase board</td>
</tr>
</tbody>
</table>
| **21** Get an unopened pack of laps or raytex and ask: | How many sponges are in this pack? (black box question)  
*If the person answers with a number 5 or 10 this is an incorrect answer. The correct answer is “I don’t know, I have to count them to find out”* |
| **22** Have you ever had a “bad” pack (wrong# of sponges in a package)? | **• What kind of sponges?**  
**• What did you do?**  
**• What would you do if this happened to you?**  
*If the person says “throw it in the garbage” this is an incorrect answer. The sponges should be removed from the OR so they won’t confound the accounting of the sponges actually used for the case. They should also report the bad pack and tell the nurse manager who should notify purchasing.* |
<p>| <strong>23</strong> What is meant by the “IN” count(s)? | <em>Initial count of sponges in the custom packs. Count of sponges which are added “in” to the field during the case</em> |
| <strong>24</strong> Why do we do an IN count? | <em>To identify manufacturing or packaging error, to establish a baseline, to know how many sponges are being used in the case</em> |
| <strong>25</strong> What is the “Closing” count? | <em>Count performed just before closure of the wound begins. Also referred to as the second count, but closing count is the preferred terminology</em> |</p>
<table>
<thead>
<tr>
<th></th>
<th>What is supposed to happen at the “Closing” count?</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Everyone takes a “pauze for the gauze”</td>
</tr>
<tr>
<td></td>
<td>Surgeon performs a methodical wound exam to get the sponges out so the circulator and scrub person can do a two person count of the sponges on the field, back table and in the holders. Goal is to minimize places where there are sponges.</td>
</tr>
<tr>
<td></td>
<td>Scrub person should pass off sponges that are unlikely to be needed</td>
</tr>
<tr>
<td></td>
<td>All sponges should be out of kick buckets</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>What is the “Final” count?</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>When the skin of the wound is closed, a dressing is applied and all used and unused sponges are in the sponge holders the nurse shows the surgeon that all sponges have been accounted for. “no empty pockets or all of the pockets are full!”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>What are the two possibilities for the FINAL count?</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>Correct and Incorrect</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>What is an incorrect FINAL count?</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>When the number of sponges in the holders does not match the number on the dry erase board. There is an empty pocket(s).</td>
</tr>
<tr>
<td></td>
<td>• What actions should be performed for an incorrect final count?</td>
</tr>
<tr>
<td></td>
<td>Surgeon should be notified</td>
</tr>
<tr>
<td></td>
<td>Search room and area, people, items brought in or taken out of room</td>
</tr>
<tr>
<td></td>
<td>Call for x-rays</td>
</tr>
<tr>
<td></td>
<td>Patient (if stable) can’t leave room until sponge found</td>
</tr>
<tr>
<td></td>
<td>Notify nurse manager, report filed, disclosure to patient if sponge not found.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>What do you tell radiology when ordering an Xray from the OR?</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>type of sponge that is missing</td>
</tr>
<tr>
<td></td>
<td>give phone number for direct call back of results to OR</td>
</tr>
<tr>
<td></td>
<td>bring two plates so can get 2 views (AP and oblique) if sponge not seen on first view</td>
</tr>
<tr>
<td></td>
<td>tech needs to get an image that covers entire surgical field (take films that include patient on the table from side to side)</td>
</tr>
<tr>
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</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
| **31** | **In Sponge ACCOUNTing what is a correct FINAL count?**  
*When the number of sponges in the holders agrees with the number on the dry erase board. A team verification of the holders has taken place “show me” step. By saying that count is correct you are saying that there were no empty pockets and all sponges were accounted for.* |
| **32** | **Why do you need to have all of the sponges in the holder?**  
*If all the sponges are in the holder then there can’t be any in the patient. Also all the sponges can be disposed of at one time in a biohazard bag and won’t be available to confound a count in a subsequent case.* |
| **33** | **What is a miscount?**  
*A mistake during an interim count or when there are too many sponges or a sponge is missing during an interim count.  
So how is a miscount different from an incorrect count?  
A miscount is a type of incorrect count but a miscount is rectified. A miscount implies a mistake that is fixed. Either a recount is performed and corrected or an xray is taken or search performed and the missing sponge(s) is found. Consider using miscount reports to evaluate frequency and cause of these errors. The wording - incorrect count - is only used for the final count.* |
| **34** | **Why is standard terminology important?**  
*E.g what is a retained sponge, what is a correct count, what is the closing count, when is the wound considered closed.  
Communication is one of the key elements of good practice. We all have to speak the same language and know what we are talking about.* |
| **35** | **Do the surgeons perform a wound exam before closing wound?** |
| **36** | **Do the surgeons ask to see the holders or do you show them the holders at the end of the case? If the surgeon doesn’t do this, who does do it?** |
| 37 | **All employees are trained and have documentation on file?**  
Review minimum of 10 files, look at what competency assessment was performed for each individual employee rather than group training (e.g. quiz results, proof of skills assessment, - loading holders, dry erase board marking - which should be performed by the trainee, demonstrating competency and understanding “hands-on” to the nurse educator |
| 38 | **How are new employees trained?**  
Documentation of some program, plan, organized training for travelers, registry, temporary employees (surgeons, nurses, scrub techs) e.g. powerpoint slideset, quiz, hands-on skills assessment |
| 39 | **When is it considered retained?**  
*Many states follow the NQF definitions.* The broad wording has been “after surgery” and this has now been more clearly defined that it’s retained if all incisions have been closed, devices removed, final counts concluded and the patient taken from the OR. |
| 40 | **What are your reporting requirements? Who gets told and what do they need to know?**  
*In California, retained surgical item cases have to be reported to the state. Everyone should know what the rules are for their particular setting.* |
MULTISTAKEHOLDER ACTIONS
Implementation of Multi-Stakeholder Operating Room Actions to Prevent Retained Surgical Sponges

The problem of retained sponges is an OR system problem. Much like the prevention of wrong-site surgery the prevention of retained surgical items will require a system solution. The best efforts of all perioperative care personnel – anesthesiologists, surgeons, nurses, scrub techs, radiologists and hospital administrators are needed to address the problem.

A key issue involved in retained sponges is one of communication between operating room personnel. It is a problem of the work interactions between all OR personnel but the key players are surgeons, nurses and radiologists so the solution to the problem is a responsibility that must be shared between them. The solutions advanced to prevent retained surgical items have to address this fundamental interaction and outline processes to improve communication as well as direct how the work should be performed.

Most past efforts have addressed only the issues of processes of care in the nursing domain by forcing adherence to or development of better counting policies. Policies and procedures for performing counts have been in place for many years, yet the problem of retained surgical items has persisted. This problem requires more than a “count policy” with a prescription to adhere to it.

At the end of every surgical case the usual question is “What’s the count?” or “Is the Count Correct?” Which leads to undue reliance on the attainment of “the count” and pressure to affirm that indeed it is correct. The quest for “the count” is sought to the exclusion of other actions that can be taken to prevent retained surgical sponges. In our efforts to change the behavior of the two primary stakeholders in the OR – nurses and surgeons, we think a different question needs to be asked and our actions should be directed to answer this new question in each and every case.

The Question is: Where are the sponges?
The Answer is: All of them are in the Hanging Sponge-Holder (and therefore none are left in the patient!)

Nurses and Surgeons will cooperate in taking the necessary actions to remove all sponges from the patient and cross - verify at the end of every case that indeed, all the sponges are in the hanging sponge-holder. Radiologists are integral team members who we need when we are missing an item. This manual is for the content expert champions to use to teach and train their counterparts. Together our actions will give real meaning to the statement “the final sponge count is correct” and will PROVE that indeed there is “NoThing Left Behind”.

Surgeons:
1. Explain When an Item is Considered to be Retained
2. Review the Methodical Wound Exam (MWE) – Beyond the “Swish” or “Sweep”
3. Performance of the MWE with the Closing Count – Take a “Pauze for the Gauze”
4. Review the Surgeon Guidelines
   a. IN - Only radiopaque, unaltered sponges go in the wound
   b. CLOSING - “Pauze for the Gauze”
      i. MWE, Call Out, Respond Back (Closing count)
   c. FINAL - Visually verify the sponge-holders before leaving OR - “Show Me” - then dictate in the operation report “I performed a MWE and saw that the sponges were accounted for”
5. Review what to do when told that there is something missing (a Missing Surgical Item – MSI)
6. Review Surgeon section of Multistakeholder policy

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7. Develop a plan for surgeon performance assessment  
   Consider a checkbox on intraoperative report for MWE performance Y/N  
   Review dictated operative reports for compliance

**Nurses:**  
**Process for the accounting of surgical sponges:**  
1.) **Plastic Hanging Sponge-Holders**  
   Use **blue-backed** plastic sponge holders  
   Laparotomy pads and raytex sponges  
   **Clear** plastic bags to line all buckets and receptacles in room  
2.) **White dry erase board and washable markers**

   1. Demonstrate method for organization of dry erase board and explain rationale.  
   2. Demonstrate method for recording IN sponges on dry erase board and explain rationale  
   3. Demonstrate method for loading sponge-holders and explain rationale.  
   4. Review Nursing Guidelines (IN counts, closing count, final count)  
      a. Review closing count practices  
      b. Explain special importance of the final count  
      c. Emphasize that all sponges MUST be in the sponge-holder for the final count  
      d. Reinforce that no patient can leave the OR until all the sponges are visibly present in the sponge-holders  
      e. Explain the “show-me” step from the Surgeon “Easy as 1,2,3” that will be a joint verification of the final count  
      f. Explain where posters will be placed and why  
      g. Review count terminology  
   5. Develop workable process and plan for how to audit implementation  
      a. Review use of every case end checklist  
      b. Consider a checkbox on the intraoperative report  
         o IN counts performed  
         o closing count performed  
         o final count performed and verified  
      c. Review use of miscount reports  
         i. End of day nurse review  
   6. Review actions to employ in setting of a Miscount  
   7. Review actions to employ if there is an Incorrect FINAL Count  
   8. Review Nursing Actions for Multistakeholder policy  
   9. Develop plan for testing nursing comprehension and competence  
      a. Monthly in-service on process for first 6 months  
      b. Testing individual nurses with a “learning by doing” skill assessment module on loading sponge holders and methodology for recording the IN counts  
10. Develop a plan for how to receive, evaluate and incorporate feedback  
11. At 6 months perform an external audit using Sponge ACCOUNTing audit tool. Provide feedback to nurses, surgeons, OR and hospital leadership.

**Radiologists:**  
**Process for Providing Timely, High Quality Intraoperative Xray with Rapid Readback**  
1. Discuss capabilities and resources for providing xray intraoperative technical support  
2. Review Radiologist Guidelines  
3. Discuss process for accurate communication when there is a Missing Surgical Item (MSI)
a. What kind of xray needed (e.g. chest xray, flat plate of abdomen)
b. What type of object is missing (e.g. raytex sponge, laparotomy pad, needle)
c. What are the correct views to obtain (e.g. AP and oblique)
d. Phone number of OR to call back results

4. Discuss appropriate timing of readback

5. Develop a plan for assessment of technologist performance
   a. Timeliness of response to call from OR
   b. Quality of films obtained

6. Review Radiology Multistakeholder section of Policy

7. Review actions to take in setting of an Incorrect Count

8. Develop a plan for assessment of radiologist performance
   a. Timeliness and quality of call back results
   b. Correct interpretations
   c. Education and review of radiographic appearance of surgical items
SURGEONS
SURGEONS:

**Action**

Use only radiographically detectable sponges or towels in the surgical wound. Don’t cut or alter them. Small sponges (peanuts, cottonoids) should be passed and returned attached to an instrument. Try to avoid the use of “free” (passed without an instrument) small sponges (raytex 4x4’s) in large spaces.

**Rationale**

All commercially available sponges and pads have a radiographic marker, tag or strip sewn into or woven within the interstices of the cotton gauze. Similarly, white surgical fine grade cotton towels that have a radiographic marker are available. Only radiopaque towels should be used for packing or retraction. These towels should be steriley packaged separately, added to the field on an as needed basis and included in the surgical count. All new technology sponges and towels have radiographic markers in addition to the matrix labels, radiofrequency tags or radiofrequency identification chips.

A “swish” or a “sweep” before closing is an inadequate examination. Look for the sponges and do your best to get them out so the nurses can do the count. Perform a thorough, methodical wound exploration trying to see and touch, before asking for closing suture for every wound, every time. See guidelines for *Methodical Wound Examination*

**Rationale**

Retained sponges have been reported in wounds of every size and in practically every place in the body. Bloody sponges can be difficult to recognize so looking must be an active process. Use two sensory modalities. The raytex 4x4 is the usual culprit in small wounds. The wound exam is performed to get all the sponges out so the nurses can put them in the sponge holders and account for them.

Call out “I think all the sponges are out” and take a “pauze for the gauze” allowing the nurses/scrub assistants to perform the closing count using two sensory modalities.

**Rationale**

There are three major counts – the in count(s), the closing count and the final count. The closing count is an important event to prevent a retained sponge. Nursing personnel are trained to count with each other and are supposed to “see, separate and say”. The “pauze for the gauze” allows focused performance of the task. The nurses should then respond back “the closing count is correct/incorrect”.

After skin closure before leaving the OR or during the debriefing, look at the hanging sponge holder(s) and verify that all the free sponges used in the case are in the pockets. This should take less than a minute and reassures the surgeon that all sponges have been accounted for.

**Rationale**

This is the final count “Show Me” step to make sure there is “NoThing Left Behind”

Dictate in the operative report “A thorough wound examination was performed and I saw that items were accounted for”
### ACTIONS TO TAKE IF THERE IS AN INCORRECT COUNT

<table>
<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the nurses respond back there is a missing sponge, STOP closing the</td>
<td>In cases where there has been a retained sponge in the setting of an incorrect count, the most frequent error is the surgeon has failed to stop closing the wound and do a thorough exploration. Surgeons often are sure the sponge is NOT in the wound and this perception affects their ability to actually find the sponge. Often the sponge is “right there” but the surgeon doesn’t feel it.</td>
</tr>
<tr>
<td>wound. If the body cavity has been closed, remove enough sutures and</td>
<td></td>
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<tr>
<td>use retractors to allow visual and tactile exploration.</td>
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</tr>
<tr>
<td>See Yield Poster Actions to Reconcile an Incorrect Count.</td>
<td></td>
</tr>
<tr>
<td>If the item is not immediately found, call for additional nursing</td>
<td>Having “new eyes” in the room to search for the missing sponge can reduce the time spent looking and provide more personpower to aid in the search.</td>
</tr>
<tr>
<td>personnel to come to the room and help.</td>
<td></td>
</tr>
<tr>
<td>Place a sterile drape or non-radiopaque towel over the wound and call</td>
<td>It should be mandatory OR policy, in the setting of an incorrect count, if the sponge is not found, an xray must be obtained. If the patient is clinically stable, the safe strategy is to obtain an xray. Sponges can be difficult to detect with intraoperative xray. They have been missed when they lie over the spine or are behind the heart. Tell the radiologist what kind of sponge is missing. If they know what to look for they have a better chance of seeing it.</td>
</tr>
<tr>
<td>Radiology to obtain an xray. Make sure the xray includes the entire</td>
<td></td>
</tr>
<tr>
<td>operative field. This may require more than one film. In the chest</td>
<td>Sponges do not have wings. The missing item must be found or confirmed not to be in the patient before the patient leaves the OR. If there is no radiologist available, the surgeon should read the film but expert radiologist review should be required within 12 hours.</td>
</tr>
<tr>
<td>consider taking an oblique film to detect sponges behind the heart. In</td>
<td></td>
</tr>
<tr>
<td>the abdomen be wary of abnormalities in the midline and take an oblique</td>
<td></td>
</tr>
<tr>
<td>if there are any questions. In obese patients, overpenetration while</td>
<td></td>
</tr>
<tr>
<td>taking the film is recommended.</td>
<td></td>
</tr>
<tr>
<td>Unless the object is found, wait to see the film before reclosing the</td>
<td></td>
</tr>
<tr>
<td>site. If there is any question that the object may still be within the</td>
<td></td>
</tr>
<tr>
<td>patient bring another set of hands and eyes to the field to explore the</td>
<td></td>
</tr>
<tr>
<td>wound. A new pair of hands may bring new perspective.</td>
<td></td>
</tr>
<tr>
<td>Dictate in the operative report what actions were taken in response to</td>
<td>If the item is found, the final count for the case is “correct”. If the item is not located the final count remains “incorrect” and an incident report should be filed through the OR quality improvement or incident reporting system. See Incorrect Count Report. These cases should be investigated the same day and efforts made to locate the item or rectify or explain the incorrect count.</td>
</tr>
<tr>
<td>the incorrect count, and if not found disclose to the patient that a</td>
<td></td>
</tr>
<tr>
<td>sponge is missing. It may be necessary to obtain more x-rays or a CT</td>
<td></td>
</tr>
<tr>
<td>scan to definitively rule out that there is NoThing Left Behind.</td>
<td></td>
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</tbody>
</table>
Don’t Just “Swish or Sweep”, perform a Methodical Wound Examination (MWE)
The goal is to get all the sponges OUT so they can be accounted for

1. A methodical exploration of the operative wound must be conducted prior to closure in every operation. The space to be closed must be carefully examined. Special focus should be given to closure of a cavity within a cavity (i.e., heart, major vessel, stomach, bladder, uterus, and vagina). Surgeons should strive to SEE and TOUCH during the exploration whenever possible; reliance on only one element of sensory perception is usually insufficient. Before closing, the surgeon should first make a best effort to remove all sponges, then the nurse and scrub person will count them and feedback to the surgeon if all have been accounted for.

2. The general process is to look and feel in the recesses of the wound and examine under fatty protuberances and soft-tissue appendages.
   Unless clinically contraindicated for a specific patient, the following steps should be taken for procedures performed in the abdomen or pelvis.
   a. Examine all four quadrants of the abdomen with attention to:
      i. Lifting the transverse colon
      ii. Checking above/around the liver and above/around the spleen
      iii. Examining within and between loops of bowel
      iv. Inspecting anywhere a retractor or retractor blades were placed
   b. Examine the pelvis
      i. Look behind the bladder, uterus (if present) and around the upper rectum.
   c. The vagina should be examined if it was entered or explored as part of the procedure.

3. Unless clinically contraindicated for a specific patient, the following general steps should be taken for procedures performed in the mediastinum or thorax.
   a. In a mediastinal procedure, if the mediastinal pleura were opened, examine the ipsilateral pleural cavity.
   b. 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.
   c. In a thoracic procedure, examine the thoracic cavity with attention to the thoracic apex and base of the lungs, paravertebral sulcus, and inferior recesses of the diaphragm. Place a hand or finger behind the lung and palpate from apex to base.
The Surgeons Role

Prevention of Retained Surgical Sponges

Verna C. Gibbs M.D.
Director, NoThing Left Behind
Staff Surgeon, SFVAMC
Professor of Surgery, UCSF

Easy as 1, 2, 3

1. Only use xray detectable sponges during an operation, don’t alter them
2. In every operation you perform, before closing the wound - do a methodical wound exam
3. Before leaving the OR say “show me” so the nurses can prove to you that all the sponges are accounted for

Elements of Causation

Applying Swiss Cheese Model of Sir James Reason

Communication

- It’s what is right not who is right
  – Between nurses and surgeons
    • “We’re missing a sponge”
    • “Again?! …OK, lets re-explore the wound!”
  – Between nurses
    • “Separate those raytex so we can make sure we have 10”
  – Between surgeons
    • “Let’s do our wound exam and get the sponges out so the nurses can account for them before we close”

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
- Radiologists/Technicians: film quality, timely review
- Administrators: risk management, resources, patient disclosure

Legal Intent

- The legal requirement is to make sure no surgical items are left in the patient
- The surgeon’s responsibility is to remove all objects not intended to remain in the patient
- The nurse’s responsibility is to corroborate the surgeon’s assessment and to account for all objects used during the surgical procedure
- Preventing retained sponges is a joint and shared responsibility
Individual commitment

- Doing it right, every time – getting to zero
- Following the rules – not blaming for errors and not tolerating misconduct
- Respecting everyone – setting the example and caring for the victims
- Maintaining vigilance and being personally responsible

Leape, Lucian ACS Safety Curriculum Mtg, 2005

Retained Sponge

- Most common retained surgical item that requires a re-operation
- Detection can be difficult and remote from the initial operation
- The sponge must be removed
- Primary problem is faulty OR practices

Practice of Counting

- Currently, most of the responsibility for preventing retained sponges resides with the nurse’s ability “to count”.
- Surgeons place undue reliance on the task
- Nurses place unjustified trust in the practice
  - Current counting practices ~10-15% error rate
- At the end of the case we ask “What is the count?”
- The answer “correct” is often meaningless because........

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

Current Practice Problems

- Variable counting processes exist throughout an OR - no standardization, little transparency
- 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
- Retained sponge cases occur when low numbers of sponges (≤20 sponges) have been used
- Normalization of deviance

An Alternative

- We should be asking a different question at the end of the case: WHERE ARE THE SPONGES?
- Change the focus away from just counting towards a system that requires accounting so we can prove there are no sponges left in the patient.
- The system should be standardized, verifiable, low-cost, transparent and systemized.
**SPONGE ACCOUNTING SYSTEM (SAS)**

- **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.

---

**Terminology**

1. **IN COUNT(S)** a continuous process. Moment to discover packaging errors. All data is documented on the dry-erase board so everyone in the OR can see them.
2. **CLOSING COUNT** take a “pauze for the gauze”, information exchange between surgeon and nurse, critical phase to prevent retention, cooperative team opportunity.
3. **FINAL COUNT** - “show me” verification step, ideally between surgeon and nurse. Last chance to get it right before patient leaves the OR.

---

**Surgeons Easy 1,2,3**

- Only use x-ray detectable white cotton disposables in the wound
  - Order white x-ray detectable towels if you use in-wound towels
- Don’t cut or alter sponges
- Strive for a safe sponge: wound size ratio

---

**Retained Towel**

- Towels are drapes NOT dressings
  - Different grade & quality of cotton, blue dye
- No x-ray marker
- Not included in the count
- Change practice e.g. use a super-size sponge, EZ dash sponge
- or
- Purchase dressing quality white towels with an x-ray detectable marker
- Include in count when towels added to the field

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**SURGEONS EASY AS 1,2,3**

- Perform a methodical wound exam in every case
- **LOOK** for sponges—not just a “swish or sweep”
- **CALL OUT** “I think all the sponges are out”
- Then ask for closing suture

---

**Seeing vs Looking**

---

**Did you see a face or the word liar?**

---

**Seeing vs Looking**

---

**Did you find the arrow?**

---

**Can you find a man’s face?**

---

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Knowing what to look for

i.e. bloody sponge amongst bowel loops?

All Wounds
- Sponges have been retained in every type of incision
  - Size doesn’t matter
- Look and feel in the depths of the wound, under fatty protuberances and wherever you might have “stuffed” a sponge

Abdomen and Pelvis
- Examine the 4 quadrants of the abdomen
  - Lift the transverse colon
  - Check around liver and spleen
  - Look within and between bowel loops
  - Look where a retractor or a retractor blade was placed
- Look behind the bladder, uterus, rectum
- Examine the retroperitoneum
- If the vagina was entered, re-examine it

Chest
- Reflect the heart and examine the retrocardiac space
- Elevate the apex of the heart to look behind it, look in transverse sinus
- Examine the thoracic cavity with attention to the thoracic apex and base of lungs
Incorrect Count

- STOP CLOSING THE WOUND!
- Repeat the MWE
- Call for Xray early if sponge not immediately found
  - Take oblique view if the sponge is not found and not obvious on AP film
  - Call for another pair of hands to look and feel if sponge still not found

Verification Step

- If all the sponges (used and unused) are in the holders then sponges can’t be in the patient.
  - Total count on dry erase board
  - No empty pockets!
- Dual confirmation gets it done before the patient leaves the OR
- We know where the sponges are!

Goals

- Every case that uses sponges should have them accounted for, all “wounds” are at risk
  - Size doesn’t matter
  - Consider the vagina a wound
  - Retention has occurred with only 10 sponges!
- Adopt this standardized process and minimize deviations from practice
- Account for sponges don’t just count them
  and........ we need to Work Together

SAS Addresses the Roots of Causation

- COMMUNICATION
  - Closing count procedures: Call Out - “I think I’ve got all the sponges out.” Respond back - “I think the closing count is correct.”
  - Final count “Show Me”
- PROCESSES OF CARE
  - Methodical Wound Exam Guidelines
  - Sponge Accounting System with Sponge Holders and Dry Erase Board

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SAS evaluation

- Standardized Yes builds on existing nursing and surgeon practice
- Verifiable Yes final step requires visual verification of all sponges
- Low-cost Yes ~30 CENTS/holder
- Transparent Yes easy to see dry erase board and sponge holders
- Systemized Yes can be used anywhere

WHERE ARE THE SPONGES?

ALL SPONGES (used and unused) ARE HERE

Questions? drgibbs@nothingleftbehind.org
NURSES & SURGICAL TECHNOLOGISTS
NURSES AND SURGICAL TECHNOLOGISTS

Action

Develop a standardized counting method that must be used by all perioperative personnel in ALL operating rooms for ALL cases throughout the facility.

For lap pads and raytex 4x4’s or 4x8’s, manual sponge counting is usually performed using kick buckets/ring stands and plastic bags or hanging plastic sponge holders. We recommend the use of the plastic sponge holders because it is a verifiable, transparent, inexpensive system. See guidelines for Use of Hanging Sponge Holders.

Develop a standardized nomenclature, “a common language” for all the sponges used in the OR.

Rationale

Develop a standardized way to display the surgical count in each OR so all personnel can readily see it. Insure that the information displayed in each OR is standardized. All hospitals follow AORN guidelines in requiring surgical counts but most do not have specific standardized practices for HOW the sponges are accounted for. In addition, OR staff often follow the practices they were taught in the school they attended hence there can be a wide variety in actual practice depending on where the personnel trained. These differences are manifested by variable counting practices in different OR’s on different days in different cases depending upon the constellation of personnel.

Other techniques are usually used to track the miscellaneous other sponge types. Peanuts and twists are usually passed on a clamp or ring forceps. The use of the hanging holders is for sponges that are used “free”. That is they are passed back and forth between scrub and surgeon without the use of an instrument.

Different people call the same type of sponge by different names often depending upon where they were trained e.g. cottinoid vs pattie, kitner vs peanut. It is important for communication with surgeons that everyone agrees to the same terminology and most important for communicating with radiologists when an xray is obtained to look for a missing item. If radiologists “know” what they are looking for on an xray there is a greater chance they will be able to “see” it. The radiographic stripe of a lap pad is very different from that of a raytex 4x4 or a “peanut”. When calling for an xray in the OR to look for a missing surgical item, it is important to specify on the requisition what is being looked for. Radiologists can learn the terminology.
NoThing Left Behind®

Sponge ACCOUNTing Practice

Action

Write the count for sponges on the dry erase board in a superscript running total format written:

Laps: $10^0 20^0 30^0 40$
Raytex: $10^0 20^0 30$

Do not make extraneous marks or initials.

Alternatively use a vertical format:

10
10
20
10
30
10
40

All laps and raytex are added to the field in multiples of 10
The count is always in a multiple of 10
Laps and raytex are placed in the 10 pockets of separate holders

At the time of the final count all sponges must be in the hanging sponge holders. A holder will always have 10 sponges – no empty pockets. The surgeon can easily verify with the nurse that all sponges have been accounted for and we can be sure that there is “NoThing Left Behind”

Rationale

A readily visible display board or dry erase board in each OR is a transparent and widely used method to keep track of the surgical counts. The information on the board should be displayed in the same fashion in every OR so any personnel going from one room to another will look for the same information in the same place on each board. Consider making permanent notations and categories on the boards in each room.

The usual method of documenting the sponge count (e.g. 5+5+5 for laps) requires individuals to do arithmetic under stressful situations and isn’t transparent i.e. at any given time you don’t immediately know the total count. You have to add up the numbers to get the sum, rather than just looking at the last number and knowing how many sponges are out. This methodology for documenting the count is clear and familiar since needles have long been recorded in this manner. The dry erase boards should have clear labeling and differential positioning of the sponge, needle/sharp and miscellaneous item counts.

Sponges are placed in the pockets with the blue radiopaque markers facing forward (not dangling out of the pockets) which distinguishes surgical sponges from dressings.

Having the laps and raytex on the field in multiples of 10 means that at the final count, when all the sponges are off the field all pockets in the sponge holder will be full. Just looking at the full holder you will know you have 10. That is why we use the term sponge holders and not sponge counters. They are holding the sponges so you can see that all have been accounted for. It will be an easy visual to account for all the sponges. The count is kept in multiples of 10 and there needs to be a running total e.g. 40 laps means there should be 4 hanging holders full of sponges at the Final Count. Eventhough laps come in packs of 5 they should be kept on the field in multiples of 10. Miscounts have occurred and sponges have been retained because of confusion about whether there were 5 laps out or 5 laps in the patient or 5 laps were not recorded. The rule of 10 means no empty pockets!

At the end of the case discard the full sponge holders in red biohazard bags
**ACTIONS TO TAKE IF THERE IS AN INCORRECT COUNT**

<table>
<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the nurses respond back there is a missing sponge, STOP closing the wound. If the body cavity has been closed, remove enough sutures and use retractors to allow visual and tactile exploration.</td>
<td>In cases where there has been a retained sponge in the setting of an incorrect count, the most frequent error is the surgeon has failed to stop closing the wound and do a thorough exploration. Surgeons often are sure the sponge is NOT in the wound and this perception affects their ability to actually find the sponge. Often the sponge is “right there” but the surgeon doesn’t feel it.</td>
</tr>
<tr>
<td>See Yield Poster Actions to Reconcile an Incorrect Count.</td>
<td></td>
</tr>
<tr>
<td>If the item is not immediately found, call for additional nursing personnel to come to the room and help.</td>
<td>Having “new eyes” in the room to search for the missing sponge can reduce the time spent looking and provide more personpower to aid in the search.</td>
</tr>
<tr>
<td>Place a sterile drape or non-radiopaque towel over the wound and call Radiology to obtain an xray. Make sure the xray includes the entire operative field. This may require more than one film. In the chest consider taking an oblique film to detect sponges behind the heart. In the abdomen be wary of abnormalities in the midline and take an oblique if there are any questions. In obese patients, overpenetration while taking the film is recommended.</td>
<td>It should be mandatory OR policy, in the setting of an incorrect count, if the sponge is not found, an xray must be obtained. If the patient is clinically stable, the safe strategy is to obtain an xray. Sponges can be difficult to detect with intraoperative xray. They have been missed when they lie over the spine or are behind the heart. Tell the radiologist what kind of sponge is missing. If they know what to look for they have a better chance of seeing it. Sponges do not have wings. The missing item must be found or confirmed not to be in the patient before the patient leaves the OR. If there is no radiologist available, the surgeon should read the film but expert radiologist review should be required within 12 hours. If the item is found, the final count for the case is “correct”. If the item is not located the final count remains “incorrect” and an incident report should be filed through the OR quality improvement or incident reporting system. See Incorrect Count Report. These cases should be investigated the same day and efforts made to locate the item or rectify or explain the incorrect count.</td>
</tr>
<tr>
<td>Unless the object is found, wait to see the film before reclosing the site. If there is any question that the object may still be within the patient bring another set of hands and eyes to the field to explore the wound. A new pair of hands may bring new perspective.</td>
<td></td>
</tr>
<tr>
<td>Dictate in the operative report what actions were taken in response to the incorrect count, and if not found disclose to the patient that a sponge is missing. It may be necessary to obtain more xrays or a CT scan to definitively rule out that there is NoThing Left Behind.</td>
<td></td>
</tr>
</tbody>
</table>
NURSES

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 thin center-divider which separates each pouch into 2 pockets. One sponge per pocket 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 and different types of sponges should not be mixed within one holder. The sponge holders are held on racks mounted to IV poles. A wall-mounted dry erase board to record operative information and the IN 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 blue-backed sponge holders on all cases that use surgical sponges. Add laps and raytex in groups of 10. At the IN count "see, SEPARATE and say” individual sponges within each pack.
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. kick 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 holder.
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. Once a holder is full with 10 sponges, visual confirmation with the scrub person should occur before hanging the next empty holder.
6. Place the folded sponge inside the pocket with the blue tag or stripe visible but not dangling out. The blue stripe must be visible because this is what differentiates a sponge with a radiographic marker from a gauze dressing. 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. Keep the kick buckets empty.
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. There should be NO EMPTY POCKETS.
8. Keep a running total of the sponges added to the surgical field on the dry erase board using the same format that is used to count needles. The last number should always be the total number of sponges opened during the case.
9. At a permanent change of relief, 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 the OR.
10. Sponge holders should remain hanging in their racks from the IV poles. At the completion of the case the holders can be disposed of in a red biohazard bag thus removing all the sponges from the case so there will be "nothing left behind” to confound the counts on a subsequent case.

10 LAPS / 10 RAYTEX / 10 POCKETS / 10 STEPS...

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The Nurse/Surg Tech Role

Prevention of Retained Surgical Sponges

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Director, NoThing Left Behind
Staff Surgeon, SFVAMC
Professor of Surgery, UCSF

Easy as 1, 2, 3

1. Add “free” sponges [laps, raytex] to the field in groups of 10, count is only in multiples of 10, document running total on wall-mounted dry erase board
2. Use blue plastic hanging sponge holders, 1 sponge/pocket, xray marker faces forward. 10 sponges per holder
3. At final count all sponges (used and unused) in holders. Before surgeon leaves the OR “show” the full holders

Retained Sponge

- Most common retained surgical item that requires a re-operation
- Detection can be difficult and remote from the initial operation
- The sponge must be removed
- Primary problem is faulty OR practices

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

Problem With Counting

- Variable counting practices exist throughout an OR - no standardization
- The focus on counting leads to loss of situational awareness and missing events that occur outside the nurse’s locus of control
- Primary problem is confusion bias between nurses/surg techs and no transparency
- Multiple miscounts leading to confusion
- Retained sponge cases have occurred when low numbers of sponges (<20 sponges) have been used and also in small wound cases

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An Alternative

- We should be asking a different question at the end of the case: WHERE ARE THE SPONGES?
- Change the focus away from just counting towards a system that requires accounting so we can prove there are no sponges left in the patient.
- The system should be standardized, verifiable, low-cost, transparent and systemized.

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.

NURSES Easy As 1,2,3

- **Final Count**: Check on counts, final count is written in by nurse in red marker.
- **Where are the sponges?**: Easy As
  1. **WHERE ARE THE SPONGES?**
  2. **WHERE ARE THE SPONGES?**
  3. **WHERE ARE THE SPONGES?**

Structural Elements

- **Dry Erase Board**
- **Format on board is the same in all ORs**
- **Standardize how info will be written**
- **Rack, Sponge Holders**
- **Signage is IMPORTANT** (acts as memory joggers to help people do the right thing)

Easy As 1-2-3

- **WHERE ARE THE SPONGES?**
- **WHERE ARE THE SPONGES?**
- **WHERE ARE THE SPONGES?**

Blue-Backed Plastic Hanging Holders

- **Cheap – 30 cents each**
- **One sponge per pocket, Two sponges per pouch, Ten sponges per holder**
- **Blue radio-opaque marker visible**
- **One holder for each type of “free” sponge**
- **ALL sponges in the holder at final count**
- **MUST take final count from holders**

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Recording the Count

- **HORIZONTAL**
  - $10^0 20^{10} 30^{10} 40$

- **VERTICAL**
  - 10
  - 10
  - 20
  - 10
  - 30
  - Running total

YES!!!

All sponges used only in **MULTIPLES OF TEN**

WHERE ARE THE SPONGES?

EASY AS

1. IN COUNT(S) ALWAYS
2. CLOSING COUNT TAKE A
3. FINAL COUNT SAY

Three Operational Phases

Terminology

1. **IN COUNT(S)** a continuous process. Moment to discover packaging errors. Data is documented on the dry-erase board so everyone in the OR can see them.
2. **CLOSING COUNT** take a “pauze for the gauze”, information exchange between surgeon and nurse, critical phase to prevent retention, cooperative team opportunity.
3. **FINAL COUNT** “show me” verification step, ideally between surgeon and nurse. Last chance to get it right before patient leaves the OR.

NURSES EASY AS 1,2,3

- Add raytex and laps to field in multiples of 10
- **SEPARATE** the sponges
  - Confirm how many
  - Look for tag or marker
- Use audible and visual 2 person review, “see, separate and say”
- Document count on dry erase board in standardized format

At the IN Count:

- Most sponges in USA are manufactured in China
- The sponges are NOT counted.
- They are **WEIGHED**
- There are mistakes in the number of sponges in packs of raytex AND laps
Separate the sponges

NURSES EASY AS 1,2,3

- 2 person count of sponges on surgical field and in sponge holders.
  - All sponges out of kick bucket
- One sponge per pocket
- Blue stripe is visible
- RESPOND BACK to the surgeon the status of the count

At the FINAL Count:

- Look there are 10 laps
- This is what a “correct count” looks like
- All sponges accounted for
- No empty pockets!

No Empty Pockets!

Biohazard Waste Disposal

- Hanging sponge holder full of bloody sponges can be disposed of in RED biohazard bags
- This removes sponges from the room so they can’t confound subsequent cases

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### Every Case End Checklist

- All plastic bags used for sponge accounting are clear.
- Blue-backed sponge holders are on a rack, mounted to an IV pole that doesn’t tip.
- Count is recorded in standardized format on dry erase board as a running total.
- During IN count(s) surg tech and circ “see, separate and say” ten (10) sponges.
- Every CLOSING count has a surgeon perform a methodical wound exam.
- Full sponge holder(s) [used and unused sponges] at FINAL count had a visual team verification.

### Nursing Pushback

- **Why do we have to use only multiples of 10?**
  - Same numbers for laps and raytex so there is a single system and there are NO empty pockets.
- **Why do I have to write it down with a running total instead of the unit of issue?**
  - Obvious arithmetic so everyone in the OR can see and understand easily the total numbers.
- **Why do all the sponges have to be in the holder at the final count?**
  - So you can prove they are NOT in the patient.
- I don’t need a holder to count sponges.

### Yes you do.....Even if there are only 10 sponges!

- All sponges - used and unused - are in a holder at the final count. NO empty pockets!
- We know you know how to count 10 raytex. You are using the holders to PROVE where the sponges are, not to count them!

### Secondary Gains

- In addition to preventing retained sponges, the adoption of Sponge ACCOUNTing may also:
  - Reduce miscasts.
  - Change practice in how surg techs/circs communicate and organize their work.
  - Engage surgeons.
  - Improve teamwork and OR culture.

### Goals

- Every case that uses sponges should have them accounted for, all “wounds” are at risk:
  - Size doesn’t matter.
  - Consider the vagina a wound.
  - Retention has occurred with only 10 sponges!
- Adopt this standardized process and minimize deviations from practice.
- Account for sponges don’t just count them and........ we need to Work Together.
SAS evaluation

- Standardized  Yes  builds on existing nursing and surgeon practice
- Verifiable   Yes  final step requires visual verification of all sponges
- Low-cost     Yes  ~30 CENTS/holder
- Transparent  Yes  easy to see dry erase board and sponge holders
- Systemized  Yes  can be used anywhere

Did you find the missing raytex?

Where are the sponges?

Questions?  drgibbs@nothingleftbehind.org

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SPONGE ACCOUNTing SYSTEM
QUIZ

Name: ________________________________

1. The primary cause of retained sponges is?
   a. Communication problems between the nurse and the surgeon
   b. Errors in OR sponge counting practices
   c. Interruptions from anesthesiologists during the count
   d. Faulty equipment and beepers
   e. Obesity and emergency operations

2. In retained sponge cases, what is the most common sponge count documentation?
   a. Incorrect count
   b. Correct count
   c. No count
   d. Miscount
   e. Undercount

3. What should happen at the closing count?
   a. All used sponges off the field should be in the sponge holders
   b. The surgeon should perform a methodical wound exam (MWE)
   c. The nurses and the surgeons should take a “pause for the gauze”
   d. All of the above
   e. None of the above

4. All sponges (used and unused) must be in the sponge holder for the final count.
   a. True
   b. False

5. Kick buckets should be lined with?
   a. Clear bags
   b. Red biohazard bags
   c. White bags
   d. Blue bags
   e. Yellow bags

6. How many laps and raytex sponges should be added to the field each time?
   a. 9
   b. 1
   c. 5
   d. 10
   e. 4
7. The essential elements of the IN count(s) are:
   a. Sponges should be bundled to count them accurately
   b. This is the step to discover manufacturer’s errors
   c. The count should be written on the circulators scrub pants
   d. The surgeon is expected to say “Show Me please”
   e. The most important step is to speak quietly so as not to disturb anyone

8. The most dangerous error nurses make with regards to the sponge holders is:
   a. They break the little dividers between the pockets
   b. They think they don’t need them to account for the sponges
   c. They put used and unused sponges in the pockets
   d. They put bloody sponges in with the blue stripe forward
   e. They let them hang on the IV poles so everyone can see the sponges

9. What question should we be asking about sponges?
   a. How many are there out?
   b. What is the count?
   c. Where are the sponges?
   d. What do sponges cost?
   e. Who left the sponge in the patient?

10. A dry erase board
    a. Makes it easy for everyone to see the counts
    b. Can be erased between cases
    c. Has to be standardized so it’s the same in all rooms
    d. All of the above
    e. None of the above

11. The safest way to load the sponge holders is to
    a. Start at a bottom pocket, then go up one side and down the other
    b. Start at a top pocket and load across the top and work your way down
    c. Start at a bottom pocket and load across the bottom and work your way up
    d. Start at a top pocket, then go down one side and up the other
    e. It doesn’t matter just put the sponges in the holder

12. At the end of the case, the skin has been closed and all the raytex are in the holder. There is an empty pocket. You are the circulating nurse. You should
    a. Tell the surgeon everything’s ok and start looking in the trash
    b. Tell the surgeon to call for xrays right away
    c. Tell the surgeon there is a problem and walk out of the OR to get help
    d. Tell the surgeon there is an incorrect count and what kind of sponge is missing
    e. Tell the surgeon there is a correct count and to “show me”
13. When loading the sponge holders
   a. Let the blue tags on laps dangle outside the pockets
   b. It’s important to make sure you have 5 laps in each pouch
   c. Make sure the blue tags are visible inside each pocket
   d. Just put the used sponges in the pockets
   e. Use clear backed holders for greater transparency

14. The count should be recorded on the dry erase board
   a. for laps as $5 + 5 + 5$ because that’s how they are packaged
   b. as a running total in the unit of issue
   c. in multiples of ten with an X crossing out each group of ten
   d. with permanent markers so they will always be there
   e. as a running total in multiples of ten

15. A raytex is missing, the surgeon has been notified and the MWE has been repeated but no sponge has been found. You and the scrub tech have looked in the surgical field and in the trash. Radiology has been called and the tech took a film and the radiologist called and said it was negative. The patient is completely stable. Next steps are:
   a. Since the film is negative the sponge can’t be in the patient so finish up the case
   b. Look in the sponge holder pockets since two raytexas could stick together
   c. It’s not necessary to take two views since the one view is negative
   d. Assume the sponge is in the trash like it was last week and finish up the case
   e. Keep your mouth shut and don’t tell anyone that two views on xray are safer
ANESTHESIA PROVIDERS
<table>
<thead>
<tr>
<th><strong>ANESTHESIA PROVIDERS</strong></th>
<th><strong>Rationale</strong></th>
</tr>
</thead>
</table>
| **Action**               | **Use a trash receptacle that is visually distinct from any used for the surgical field.**  
| Separate surgical and anesthesia-related trash and equipment. | **Do not discard anesthesia-related equipment into “kick buckets” or other surgical receptacles.**  
| | **Do not allow surgical equipment to be discarded into the anesthesia trash.**  
| | **Do not borrow equipment such as scissors or sponges from the surgical field.**  
| | **Be sure to remove any equipment used for anesthesia procedures (such as clamps and needles used for central line placement and dressing sponges) from the operating table before surgery starts.**  
| **Be careful when adding or removing items from surgical field or tables.** | **If items fall from the surgical field, be sure to inform the surgical team, including the circulator, immediately.**  
| | **Dropped items need to be appropriately managed to ensure that they are properly counted.**  
| | **If you assist the scrub team by retrieving items such as extra sutures or sponges for the instrument table, inform the circulator promptly of exactly what was opened. Opening extra equipment without properly adding items to the count will lead to discrepancy at the end of the procedure.**  
| **Don’t distract the nurses during counting procedures.** | **During team accounting procedures, try not to disturb or distract unless absolutely necessary.**  
| | **When performing milestone actions such as reversal of neuromuscular blockade or extubation, be aware whether or not the final count is completed. If the count is incorrect, plan the patient’s emergence from anesthesia accordingly. In most cases it is desirable to keep the patient anesthetized until all items have been accounted for.**  
| | **If the patient’s medical condition is such that prolonged anesthesia or further delay is in your opinion inappropriate, discuss this directly with the surgical team so that a joint decision can be made which weighs the relative risks of a possible retained item versus the risks of continuing anesthesia and surgery.**  
| **Plan anesthetic milestone actions so that these actions don’t pressure the surgical team to do a less than diligent accounting or wound exam.** | **Make sure that throat packs, bite blocks, and other such devices are removed from the oropharynx at the appropriate time**

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### ACTIONS TO TAKE IF THERE IS AN INCORRECT COUNT

<table>
<thead>
<tr>
<th>Action</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the nurses respond back there is a missing sponge, STOP closing the wound. If the body cavity has been closed, remove enough sutures and use retractors to allow visual <strong>and</strong> tactile exploration.</td>
<td>In cases where there has been a retained sponge in the setting of an incorrect count, the most frequent error is the surgeon has failed to stop closing the wound and do a thorough exploration. Surgeons often are sure the sponge is <strong>NOT</strong> in the wound and this perception affects their ability to actually find the sponge. Often the sponge is “right there” but the surgeon doesn’t feel it.</td>
</tr>
<tr>
<td>See Yield Poster Actions to Reconcile an Incorrect Count.</td>
<td></td>
</tr>
<tr>
<td>If the item is not immediately found, call for additional nursing personnel to come to the room and help.</td>
<td>Having “new eyes” in the room to search for the missing sponge can reduce the time spent looking and provide more personpower to aid in the search.</td>
</tr>
<tr>
<td>Place a sterile drape or non-radiopaque towel over the wound and call Radiology to obtain an xray. Make sure the xray includes the entire operative field. This may require more than one film. In the chest consider taking an oblique film to detect sponges behind the heart. In the abdomen be wary of abnormalities in the midline and take an oblique if there are any questions. In obese patients, overpenetration while taking the film is recommended.</td>
<td>It should be mandatory OR policy, in the setting of an incorrect count, if the sponge is not found, an xray must be obtained. If the patient is clinically stable, the safe strategy is to obtain an xray. Sponges can be difficult to detect with intraoperative xray. They have been missed when they lie over the spine or are behind the heart. Tell the radiologist what kind of sponge is missing. If they know what to look for they have a better chance of seeing it.</td>
</tr>
<tr>
<td>Unless the object is found, wait to see the film before reclosing the site. If there is any question that the object may still be within the patient bring another set of hands and eyes to the field to explore the wound. A new pair of hands may bring new perspective.</td>
<td>Sponges do not have wings. The missing item must be found or confirmed not to be in the patient before the patient leaves the OR. If there is no radiologist available, the surgeon should read the film but expert radiologist review should be required within 12 hours.</td>
</tr>
<tr>
<td>Dictate in the operative report what actions were taken in response to the incorrect count, and if not found disclose to the patient that a sponge is missing. It may be necessary to obtain more xrays or a CT scan to definitively rule out that there is NoThing Left Behind.</td>
<td>If the item is found, the final count for the case is “correct”. If the item is not located the final count remains “incorrect” and an incident report should be filed through the OR quality improvement or incident reporting system. See Incorrect Count Report. These cases should be investigated the same day and efforts made to locate the item or rectify or explain the incorrect count.</td>
</tr>
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</table>
RADIOLOGISTS
&
RADIOLOGY TECHNOLOGISTS
RADIOLOGY

Action

Require that an xray of the operative field be taken in the event of an incorrect count. Call for Xray early, do not argue.

Develop a standardized process for requesting intraoperative xrays to look for missing surgical items (MSI).

Develop a standardized process for radiologist read-back of requested intraoperative films

See Guidelines for Intraoperative Radiographs and MSI Exams

Ensure radiology technician training in performance of intraoperative portable xray especially with attention to obtaining films of the entire region of interest, adequate films in obese patients and lateral/oblique films on the OR table.

See Guidelines for NSI

Rationale

If the patient is stable, OR policy should make it mandatory to take an xray when the closing count is called incorrect and the object is not immediately found. It should not be “surgeons choice” to take an xray in the setting of an incorrect count. Nurses want the xray to demonstrate that the missing object is not in the patient. Surgeons have voiced concern that if there is a mandatory xray policy nurses won’t count diligently and won’t look for missing items and always express concern about the delay in case progression if an xray has to be taken. Clear communication and a trustful working environment is necessary to maintain. Quick response times and good service can minimize the delays for xrays.

Xray technicians should be available 24/7 if the OR is available during those times and technician response times to the OR should be <20 mins. Radiologist read-back confirmation to the OR should be able to be obtained within 20 mins.

If no radiologist is immediately available for xray review, the films should be read by the surgeon but reviewed within 12 hours by a radiologist.

Recognition of various surgical items and their radiographic appearance should be a part of residency training in radiology and part of radiologist annual competency training, education and review

Mandatory xrays in special circumstances – e.g. unplanned procedures or obese patients, are unlikely to be cost or time effective especially if the xrays are obtained for detecting sponges. Sponges are often difficult to detect with intraoperative portable xray especially when a specific object is not being sought. Plain radiography is very effective for locating instruments, hence the value in having a mandatory xray policy in lieu of instrument counts when an xray is already planned. Also, in trauma cases or high sponge count cases (>100 sponges) some centers require a mandatory xray of the operative field in the immediate post/op care setting which of course will not prevent retention but hopes to allow for early detection should a retained object occur.
ACTIONS TO TAKE IF THERE IS AN INCORRECT COUNT

**Action**

If the nurses respond back there is a missing sponge, STOP closing the wound. If the body cavity has been closed, remove enough sutures and use retractors to allow visual and tactile exploration.

See Yield Poster Actions to Reconcile an Incorrect Count.

If the item is not immediately found, call for additional nursing personnel to come to the room and help.

Place a sterile drape or non-radiopaque towel over the wound and call Radiology to obtain an xray. Make sure the xray includes the entire operative field. This may require more than one film. In the chest consider taking an oblique film to detect sponges behind the heart. In the abdomen be wary of abnormalities in the midline and take an oblique if there are any questions. In obese patients, overpenetration while taking the film is recommended.

Unless the object is found, wait to see the film before reclosing the site. If there is any question that the object may still be within the patient bring another set of hands and eyes to the field to explore the wound. A new pair of hands may bring new perspective.

Dictate in the operative report what actions were taken in response to the incorrect count, and if not found disclose to the patient that a sponge is missing. It may be necessary to obtain more xrays or a CT scan to definitively rule out that there is NoThing Left Behind.

**Rationale**

In cases where there has been a retained sponge in the setting of an incorrect count, the most frequent error is the surgeon has failed to stop closing the wound and do a thorough exploration. Surgeons often are sure the sponge is NOT in the wound and this perception affects their ability to actually find the sponge. Often the sponge is “right there” but the surgeon doesn’t feel it.

Having “new eyes” in the room to search for the missing sponge can reduce the time spent looking and provide more personpower to aid in the search.

It should be mandatory OR policy, in the setting of an incorrect count, if the sponge is not found, an xray must be obtained. If the patient is clinically stable, the safe strategy is to obtain an xray. Sponges can be difficult to detect with intraoperative xray. They have been missed when they lie over the spine or are behind the heart. Tell the radiologist what kind of sponge is missing. If they know what to look for they have a better chance of seeing it.

Sponges do not have wings. The missing item must be found or confirmed not to be in the patient before the patient leaves the OR. If there is no radiologist available, the surgeon should read the film but expert radiologist review should be required within 12 hours.

If the item is found, the final count for the case is “correct”. If the item is not located the final count remains “incorrect” and an incident report should be filed through the OR quality improvement or incident reporting system. See Incorrect Count Report. These cases should be investigated the same day and efforts made to locate the item or rectify or explain the incorrect count.
<table>
<thead>
<tr>
<th>GUIDELINES FOR INTRA-OPERATIVE RADIOGRAPHS</th>
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<tbody>
<tr>
<td>On occasion, an incorrect count is obtained and under these circumstances or when indicated by OR policy an intra-operative radiograph is required. If a surgical item is missing this is an MSI.</td>
<td></td>
</tr>
<tr>
<td>1. A written request for a “STAT intraoperative image” will be generated by the circulating nurse in a specific operating room under the name of the surgeon listed in the operation record. The request will specify:</td>
<td>4. The technologist will take radiographs that encompass the entire region of interest (ROI) and is expected to meet the standards for each ROI. Consideration should be given to obtain two views – AP and oblique. If there are questions about appropriate images or quality a radiologist should be immediately consulted.</td>
</tr>
<tr>
<td>1. The name of the surgeon,</td>
<td></td>
</tr>
<tr>
<td>2. The region of interest being requested</td>
<td>5. The technologist will notify the radiologist when imaging is completed and return to the OR to take a hard-copy film to the OR if requested by the peri-operative care personnel in the OR or if requested to take additional views.</td>
</tr>
<tr>
<td>3. The kind or type of surgical item being looked for. Sponge, needle, name of instrument, other item.</td>
<td>6. The radiologist on duty will review the film or the digital images of the radiographs and will call the specified OR with the results of their examination or with a request for additional views to be obtained. This should be accomplished expeditiously. The elapsed time should not be greater than twenty minutes.</td>
</tr>
<tr>
<td>4. If a sponge is the missing item specify the type e.g. lap pad, raytex, towel</td>
<td>7. In the event that the radiologist on duty should require additional assistance or consultation to establish a diagnosis, the OR should be notified that such a secondary review is underway.</td>
</tr>
<tr>
<td>5. The OR room number and the telephone number for that room</td>
<td>8. The person who answers the phone in the operating room and receives the results must be a member of the operating team – nurse, surgeon or anesthesiologist. It is preferred that the radiologist speak directly with the surgeon. The results must have “read back” confirmation and the findings documented in the operative record.</td>
</tr>
<tr>
<td>6. The name of the circulating nurse or designated person in room to receive call back information</td>
<td>9. The radiologist will dictate the report following verbal transmission of the findings. The name and identifying number of the individual to whom the information was provided must be on the report or if “read back” was provided, indicate as such. The radiologist will note the time the information was transmitted.</td>
</tr>
<tr>
<td>7. If the radiograph is being obtained “in lieu of an instrument count” this information should be conveyed to the radiologist</td>
<td>10. Performance audits can be conducted to determine if timeliness and image quality guidelines have been met.</td>
</tr>
<tr>
<td>2. Upon receiving the request a radiology technologist will take a radiograph of the appropriate site as outlined in the MSI radiographic exam guidelines. This should be accomplished expeditiously. More than one film may be required to cover the surgical field so multiple cassettes should be available.</td>
<td></td>
</tr>
</tbody>
</table>
RADIOLOGY TECHNOLOGIST  
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 guideline 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 xray 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.

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XRAYS OF SPONGES

Radiopaque cotton gauze soft goods labeled with the nomenclature used in the OR or L&D area e.g. cottonoid vs pattie; raytex vs RP; T-lami vs appy tape. The sponges can be placed in a sponge holder and sent to the radiology department for an xray to be taken. The xray images should be uploaded to files that are available at the Point of Service for the radiologists when they are reviewing images.

Laparotomy sponge

(a) Photograph of a typical laparotomy sponge. The attached strip of material (arrow) is radio-opaque.

(b) In vitro radiograph of a laparotomy sponge. The body of the sponge is only faintly radio-opaque but the marker is easily seen.

(c) Abdominal radiograph performed because of prolonged ileus in a 10 year old boy with spina bifida 5 days after surgical formation of an antegrade continence enema mechanism (ACE Malone). The radio-opaque marker (arrow) of a laparotomy sponge is visible in the right lower quadrant. The sponge was successfully removed laparoscopically.

4x4 in surgical sponge
Surgical Towel

(a) A standard surgical towel.

(b) In vitro radiograph of the surgical towel in (a). Note the lack of a distinct radio-opaque marker.

1 x 3 in surgical sponge
(a) A 1 x 3 inch surgical sponge.

(b) In vitro radiograph of a 1 x 3 inch sponge.

1/2 x 3 in surgical sponge

(a) A 1/2 x 3 inch surgical sponge.

(b) In vitro radiograph of a 1/2 x 3 inch sponge.

1 x 1 in surgical sponge

(a) A 1 x 1 inch surgical sponge.

(b) In vitro radiograph of a 1 x 1 inch sponge.
1/2 x 1/2 in surgical sponge

(a) A 1/2 x 1/2 inch surgical sponge.
(b) In vitro radiograph of a 1/2 x 1/2 inch sponge.

Peanut sponge

(a) A typical peanut sponge.
(b) In vitro radiograph of a peanut sponge.

Rolled sponge
(a) *A rolled sponge.*

(b) *In vitro radiograph of a rolled sponge.*

Needles:-in vitro radiograph

*Mayo 1/2 circle taper point needle.*

*Retained needle in vivo*
Plain film demonstrates a retained needle in the right flank (arrow).

CT scanning localises the needle to the subcutaneous tissues (arrow).

Oxidized absorbable cellulose (Surgicel®)

CT scan performed for fever 8 days after total abdominal hysterectomy and debulking of ovarian carcinoma in a 43 year old woman. A mixed gas, fluid and soft tissue density mass is noted adjacent to the right pelvic side wall (arrow). Surgicel® packing had been used intraoperatively. Appearances are similar to adjacent bowel but no communication with bowel could be established on contiguous images. In view of the history of fever the collection was aspirated yielding a small volume of serosanguinous fluid which was sterile on culture.

Gelatin sponge (Surgifoam®, Gelfoam®)
(a) Gelfoam® (gelatin sponge) packing.

(b) CT scan performed of pain 5 days after total abdominal hysterectomy for leiomyomata in a 35 year old woman. A mixed gas, fluid and soft tissue density mass is noted in the pelvis (arrows). Absorbable hemostatic sponge (Gelfoam®) had been used to control bleeding. The mass was considered to represent hemostatic sponge and was not visible on follow-up CT 6 weeks later (not shown).

Last updated: Wed Dec 18 11:58:01 PST 2002


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OBSTETRICS / GYNECOLOGY

LABOR & DELIVERY
SPONGE ACCOUNTING FOR LABOR AND DELIVERY

1. X-ray detectable 4”x8” sponges, baby laps (4”x18”) or laparotomy sponges are recommended for use as sponges during vaginal deliveries. [see comments below]
2. There should be a movable pole to hang the rack and a box of plastic blue-backed sponge holders in each labor room and the pole should remain in the room at all times. The pole does not have to be high nor contain rungs for IV bags to hang from. It can be discreetly placed near the foot of the delivery bed.
3. An easily visible small dry-erase board should be wall-mounted in each delivery room.
4. Sponges are always opened and used in groups of ten. The sponges should not be opened on the delivery table until the delivery is activated.
5. Once the delivery has started the sponges are opened, separated and two people count them (“see, separate and say”). The number of sponges is documented on the dry-erase board
   - An alternative is to have the sponges added to the delivery table and counted by two people at the time the delivery table is set up. If the sponges are placed on the delivery table at the time of set up, this should occur in the delivery room. The table is covered with a sterile drape until needed. The number of sponges must be documented on the dry-erase board and the delivery table must not be moved from the original delivery room.
6. As soon as the obstetrician or nurse midwife can, sponges should be removed from the vagina and deposited:
   - to the end of the delivery table or
   - into a container on the delivery table or
   - into a kick bucket lined with a clear plastic bag or
   - directly into the hanging blue-backed sponge holder
7. The circulating RN is responsible for ensuring that all of the used and unused sponges are placed in the hanging plastic blue-backed sponge holders. The sponges are added to the holders as they are used and it is better not to wait until the end of the case but to continuously move the sponges out of the kick bucket or container or delivery table area into the holder.
8. The pockets in the holder should be filled horizontally from the bottom pockets to the top “bottoms up”. This is so an empty pocket will be easy to see in the top of the holder.
9. At the final count, the obstetrician and/or second staff person must verify with the circulating RN that all pockets are filled and the number of sponges in the holder agrees with the number of sponges documented on the dry-erase board.
10. If there is evidence of bleeding after the delivery sponges have been accounted for, a vaginal pack with a radiopaque marker should be opened and used in the vagina as a pack or dressing. Follow the instructions below for guidance in prevention of a retained vaginal pack.
11. The full sponge holder(s) can be discarded in a red biohazard bag.
PREVENTION OF A RETAINED VAGINAL PACK

1. A vaginal pack is considered a dressing and just like other dressings it is not to be included with the surgical sponges.
2. Use a cotton gauze vaginal pack that contains a radiopaque marker. Keep an unopened pack in the delivery area.
3. If the obstetrician determines that a vaginal pack is needed, the circulating nurse should open a package and give to the physician an x-ray detectable vaginal pack.
4. The obstetrician should place the pack and then must write an order in the medical record that vaginal packing was placed and when it is to be removed.
5. The L&D nurses should perform a verbal handoff to subsequent caregivers involved in the postpartum care documenting that a pack has been placed in the vagina and when it is expected to be removed.
6. The new mother is told that she has a vaginal pack in her vagina and that it will be taken out sometime before she leaves the hospital. The patient should be actively engaged in making sure the pack is removed.
COMMENTS:

Labor and Delivery Practices

Consider using sponges in the vagina other than raytex 4x4’s. Small 4”x4”’s can be difficult to feel within a post-gravid vagina as they often ball up once they become saturated with blood. They have been extricated from the uterus since the cervix is open and because of their small size the new mother often doesn’t have good discrimination that something remains within the vaginal vault. Baby laps also called T-laps (4”x18”) are a nice option as they are narrow and not too large and during a perineal repair the blue marker can be hung outside of the introitus making it easy to see the sponge and then to remove it.

Vaginal Pack Practice

Various institutions have rules on who can remove vaginal packing. If nurses are to remove the pack there must be a physicians order to do so. Often in retained vaginal sponge cases at the end of the delivery if there is some bleeding, the obstetrician has used a sponge from the delivery table and put it in the vagina without any specific order for how the sponge is to be removed. The obstetrician mentions to the nurse “don’t forget to take this out” but doesn’t write an order. There is no transmittal of the information to the next level of care by the nurses and the patient goes home with the sponge retained and returns later to the ER or office with a fever and foul discharge. This is a common scenario and the process outlined here makes the insertion of a vaginal pack an active, intentional action that requires two people rather than an after thought or passive action.
SPONGE ACCOUNTing SYSTEM For LABOR & DELIVERY

Nurses use a standardized process to put sponges in hanging plastic holders and document the counts on a wall-mounted dry-erase board in each 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.

EXTERNAL AUDIT TOOL
<table>
<thead>
<tr>
<th><strong>Sponge ACCOUNTing Audit Tool for Labor and Delivery: OR and Delivery Rooms</strong></th>
<th>Room:</th>
<th>1</th>
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<th>10</th>
<th>11</th>
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<tbody>
<tr>
<td><strong>Equipment:</strong></td>
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<td>1</td>
<td>5. Clear Bags in Kick Buckets (also check delivery rooms if applicable)</td>
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<td>2</td>
<td>6. IV pole with rack or hooks for sponge-holders</td>
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<td>3</td>
<td>7. Rack Sign</td>
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<td>4</td>
<td>8. Wall Poster</td>
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| 5 | **Signage in Room:**  
*Question:* why are the rack signs important to keep up on the sponge racks?  
*Answer:* they serve as memory joggers and unifiers for ALL stakeholders (surgeons, nurses, scrub techs, maintenance personnel, nurse travelers, registry recruits, anesthesiologists) to remind everyone to get the sponges into one place so they can be accounted for and then disposed of | | | | | | | | | | | |
| 6 | **Observe (O)** | | | | | | | | | | | |
| (O) **White Board:** | | | | | | | | | | | |
| 6 | d) Mounted dry erase board | | | | | | | | | | | |
| 7 | e) Note position of Sponge counts on the White Board (e.g. RU, LU, LL) | | | | | | | | | | | |
| 8 | f) Recording of Count  
*• Format (horizontal – H or vertical - V)* | | | | | | | | | | | |
| 9 | *• Multiple of 10 for free sponges - 10, 20, 30, 40*  
Free sponges are those handed back and forth without an instrument. Usually laps, raytex, mini laps, appy tapes etc. Does not include RadioOpaque towels if they are used in the wound. RO Towels should be recorded separately in unit of issue. | | | | | | | | | | | |
| 10 | *• Running total (RT) 10\\textsuperscript{H}20\\textsuperscript{H}30\\textsuperscript{H}40; you shouldn’t see unit of issue (UI) 10+10+10+10 for free sponges* | | | | | | | | | | | |
| 11 | **Rationale for recording the count:**  
Sponge counts should be recorded the same as the needle count so there aren’t two separate systems being used. Last number of the running total shows everyone in the room how many sponges are out which will tell us how many holders should be full of sponges at the end of the case. No one has to do arithmetic to reach a sum under complex, busy conditions. Counts should be easy to read, simple to understand. No secret codes, strange markings, initials or cross-outs. | | | | | | | | | | | |
<table>
<thead>
<tr>
<th></th>
<th>(O) Sponge Management in the OR</th>
<th></th>
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<tbody>
<tr>
<td>12</td>
<td>1. Circulator loads bottom pocket first moves horizontally to top  Yes/No</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>2. Blue markers face forward inside the pocket (not dangling out)  Yes/No</td>
<td></td>
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<tr>
<td>14</td>
<td>3. Moves sponges out of kick bucket into holder, e.g. no sponges remain in kick buckets for &gt; 5-10 mins  Yes/No</td>
<td></td>
</tr>
</tbody>
</table>
| 15| (O) Watch circulator and scrub person for an “IN” count  
Do they “See, separate and say”?  Yes/No                                            |   |
| 16| (O) Did the surgeon perform a wound exam?  Yes/No                                               |   |
| 17| (O) Did the surgeon at the end of the case look at the holders or perform a “show me” step?  Yes/No |   |

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<tbody>
<tr>
<td></td>
<td>Ask if you can’t observe actual practice:</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Show me please how you would record a sponge count for 40 laps or raytex. If wrong, show and tell the person what is the correct way.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>How would you put laps in the sponge holder? Please describe.</td>
<td></td>
</tr>
</tbody>
</table>
| 21| What would you do if the rack was full of holders filled of sponges and couldn’t accommodate another holder?  
Move the pole and rack with all the sponges hanging to a corner of the room and get another pole and rack and holders and keep going. If there was no other pole and rack set available then place the full holders in a clear plastic bag so the sponges can be seen during the final count and “show me” steps. |   |
| 22| Tell me what you do when new sponges are added to the field.  
2 person count. Look at the sponges, separate each one, call out the count, circulator writes the count on the dry erase board |   |
| 23| Get an unopened pack of laps or raytex and ask:  
How many sponges are in this pack? (black box question)  
If the person answers with a number 5 or 10 this is an incorrect answer. The correct answer is “I don’t know, I have to count them to find out” |   |
<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>Have you ever had a “bad” pack (wrong# of sponges in a package)?</td>
<td>- What kind of sponges?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- What did you do?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- What would you do if this happened to you?</td>
</tr>
<tr>
<td></td>
<td><em>If the person says “throw it in the garbage” this is an incorrect answer.</em></td>
<td>The sponges should be removed from the OR so they won’t confound the accounting of the sponges actually used for the case. They should also report the bad pack and tell the nurse manager who should notify purchasing.</td>
</tr>
<tr>
<td>25</td>
<td>What is meant by the “IN” count(s)?</td>
<td>Initial count of sponges in the custom packs. Count of sponges which are added “in” to the field during the case</td>
</tr>
<tr>
<td>26</td>
<td>Why do we do an IN count?</td>
<td>To identify manufacturing or packaging error, to establish a baseline, to know how many sponges are being used in the case</td>
</tr>
<tr>
<td>27</td>
<td>What is the “Closing” count?</td>
<td>Count performed just before closure of the wound begins. Also referred to as the second count, but closing count is the preferred terminology</td>
</tr>
<tr>
<td>28</td>
<td>What is supposed to happen at the “Closing” count?</td>
<td>Everyone takes a pause for the gauze. Surgeon performs a methodical wound exam to get the sponges out so the circulator and scrub person can do a two person count of the sponges on the field, back table and in the holders. Goal is to minimize places where there are sponges. Scrub person should pass off sponges that are unlikely to need to be used. All sponges should be out of kick buckets</td>
</tr>
<tr>
<td>29</td>
<td>What is the “Final” count?</td>
<td>When the skin of the wound is closed, a dressing is applied and all used and unused sponges are in the sponge holders the nurse shows the surgeon that all sponges have been accounted for.</td>
</tr>
<tr>
<td>30</td>
<td>What are the two possibilities for the FINAL count?</td>
<td>Correct and Incorrect</td>
</tr>
<tr>
<td>31</td>
<td>What is an incorrect FINAL count?</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
<td></td>
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<td>--------------------------------------------------------------------------</td>
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</table>
| When the number of sponges in the holders does not match the number on  | There is an empty pocket(s).  
| the dry erase board. There is an empty pocket(s).                         |  
|   • What actions should be performed for an incorrect final count?         | Surgeon should be notified  
| Search room and area, people, items brought in or taken out of room       | Call for X-rays  
| Call for X-rays  
| Patient (if stable) can’t leave room until sponge found                   | Notify nurse manager, report filed, disclosure to patient if sponge not found.                                                                                                                           |
| 32 What do you tell radiology when ordering an X-ray from the OR?         | 1. type of sponge that is missing  
| 2. give phone number for direct call back of results to OR                | 3. bring two plates so can get 2 views (AP and oblique) if sponge not seen on first view  
| 3. bring two plates so can get 2 views (AP and oblique) if sponge not seen | 4. tech needs to get an image that covers entire surgical field.                                                                                                                                       |
| 43 In Sponge ACCOUNTing what is a correct FINAL count?                   | When the number of sponges in the holders agrees with the number on the dry erase board. A team verification of the holders has taken place “show me” step. By saying that count is correct you are saying that there were no empty pockets and all sponges were accounted for. |
| 34 Why do you need to have all of the sponges in the holder?              | If all the sponges are in the holder then there can’t be any in the patient. Also all the sponges can be disposed of at one time in a biohazard bag and won’t be available to confound a count in a subsequent case.         |
| 35 What is a miscount?                                                   | A mistake during an interim count or when there are too many sponges or a sponge is missing during an interim count.                                                                                     |
|   • How is a miscount different from an incorrect count?                 | A miscount is a type of incorrect count but a miscount is rectified. A miscount implies a mistake that is fixed. Either a recount is performed and corrected or an xray is taken or search performed and the missing sponge(s) is found. An incorrect count is only used for the final count. |
| 36 Why is standard terminology important?                                |                                                                                                                                                                                                       |
### Communication is one of the key elements of success. We all have to speak the same language and know what we are talking about.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td><strong>37</strong> Do the obstetricians perform a wound exam before asking for closing suture?</td>
<td></td>
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<tr>
<td><strong>38</strong> Do the obstetricians ask to see the holders or do you show them the holders at the end of the case? If the surgeon doesn’t do this, who does do it?</td>
<td></td>
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<tr>
<td><strong>39</strong> All employees are trained and have documentation on file? Review minimum of 10 files, look at what competency assessment was performed for each individual employee rather than group training (e.g. quiz results, proof of skills assessment, - loading holders, dry erase board marking</td>
<td></td>
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<tr>
<td><strong>40</strong> How are new employees trained? Documentation of some program, plan, organized training for travelers, registry, temporary employees (surgeons, nurses, scrub techs)</td>
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</tr>
<tr>
<td><strong>41</strong> Is there vaginal packing in the vaginal delivery packs? Yes/No The answer should be no. Vaginal packing is considered a dressing and is not to be included as part of the vaginal delivery pack.</td>
<td></td>
</tr>
<tr>
<td><strong>42</strong> Does the vaginal packing that is available in L&amp;D have a radiopaque marker? Yes/No The answer should be yes.</td>
<td></td>
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<tr>
<td><strong>43</strong> What type of sponge is used for vaginal deliveries?</td>
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</table>
| **44** When are sponges added to the vaginal delivery table?  
1. Sponges should be separate from the vaginal delivery pack and not placed on the delivery table until the physician/CNM is present in the room. As soon as the sponges are opened and two people count them (see, separate, and say) the count should be documented on the dry-erase board.  
2. An alternative is that the sponges are added to the delivery table |        |
and counted by two people at the time that the delivery table is set up. If the sponges are placed on the delivery table at the time of set up this should occur in the delivery room and the number of sponges should be documented on the dry-erase board. The delivery table is then not moved from the delivery room.

<table>
<thead>
<tr>
<th>45. Where does the physician/CNM place used sponges?</th>
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<tbody>
<tr>
<td>• on the delivery table</td>
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<tr>
<td>• container on the delivery table</td>
</tr>
<tr>
<td>• kick bucket</td>
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NON-OR AREAS:

CATH LAB, EP UNITS,

ANY AREA WHERE SPONGES ARE USED AND AN INCISION IS MADE
SPONGE ACCOUNTING FOR NON-OR AREAS

1. X-ray detectable 4”x4” surgical sponges (raytex) are usually used.
2. There should be a movable pole to hang the rack and a box of plastic blue-backed sponge holders in each room. The pole should remain in the room at all times. The pole should not contain rungs for IV bags to hang from.
   • Alternatively two hooks can be screwed into a wall on which a single plastic sponge holder can be hung during the procedure, however a separate space will then be required to store the box of sponge holders. The holder hung on the wall must be easily visible.
3. An easily visible small dry-erase board should be mounted in each procedure room.
4. Sponges are always opened and used in groups of ten.
5. The sponges are steriley opened on the procedure table when the procedure starts. The sponges in each package should be separated and counted by two people (“see, separate and say”). The number of sponges is documented on the dry-erase board.
6. As sponges are used they should be deposited back on the procedure table
7. The procedural RN is responsible for ensuring that all of the used and unused sponges are placed in the hanging plastic blue-backed sponge holders at the end of the procedure. Even if only a few of the 10 sponges in the package are used, ALL of the sponges must go into the holders at the end of the procedure.
8. The pockets in the holder should be filled horizontally from the bottom pockets to the top “bottoms up”. This is so an empty pocket will be easy to see in the top of the holder.
9. At the end of the procedure, the proceduralist and/or second staff person must verify with the RN that all pockets are filled and the number of sponges in the holder agrees with the number of sponges documented on the dry-erase board. There should be “no empty pockets”.
10. Open a package of dressing sponges to cover the wound. Do not use surgical sponges as dressings. [The radiopaque markers may confound any subsequent post-procedure xrays]
11. The full sponge holder should be taken down at the end of every case, discarded in a red biohazard bag and a new sponge holder put up for the next procedure.
REPORTING &

SHARED LEARNINGS
ESSENTIAL QUESTIONS TO REPORT AN RSI CASE
Examples here are illustrated with a retained sponge.

1. What kind of sponge?
2. When was the sponge discovered?
3. How was it discovered?
4. When was it removed?
5. How was it removed?
6. Where in the patient was the sponge found?
7. What was the operation or procedure where the sponge was left in?
8. When was that procedure performed?
9. Where was that performed?
10. What was the final sponge count at that original procedure?

The quality of event reporting has been very poor. When I have reviewed short descriptors in reports it has been very hard to figure out what happened and in many instances I can’t even tell what was retained. I am not sure if this is a function of the means of reporting (fact that hospitals have to report in the first place and hospitals don’t want to report or the information form to collect the information is insufficiently exact or doesn’t exist) or the reporters themselves (the people filing the report don’t really know or understand what happened or lack the skill to complete the report).

We need to know some essential details to understand the event. These details usually have little or nothing to do with “the who” but needed information is on “the what when and why” yet a large amount of the information supplied in the reports focuses on who said what to whom and are overly defensive. What we need to know is detail about when and how the errors occurred and information about the environmental context so we can provide remedy to prevent from happening again.

For a retained sponge case as an example the essential elements for the beginning of the report, the event descriptor should have:

**What kind of sponge was retained?**
Specifically what kind/type of sponge e.g. laparotomy pad, raytex 4x4, raytex 4x8, baby lap, pattie. This is important because it sets the context for how the sponge was likely being used in the case and will provide insight into practice patterns of the surgeons and whether changes in the type of sponge to be used will be relevant. Do not use general words like: retained foreign object, the object, the sponge, the cotton gauze material, the item.

**How long after the procedure in which the sponge was left behind was the sponge discovered?**
The answer to this question requires a time calculation…… 2 years, 3 months after the index procedure, 2 days later, the next morning, 2 hours later in the ICU.
How was it discovered?
This refers to the means by which the retained sponge was identified. An abdominal series, a KUB obtained to evaluate abdominal pain. On a routine chest xray, When the patient was seen in the ER for fever and abdominal mass a CT scan showed

When was it removed?
This is a date.

How was it removed?
This is usually a procedure. Sponge was removed in the physicians office, a second operation was performed, the sponge was removed with colonoscopy, interventional radiology was able to remove the raytex through a drain tract

Where was the sponge found?
This is referring to a part of the patient. The lap pad was removed from the left lower quadrant of the abdomen, the raytex was found in the mediastinum behind the heart, the pattie was found in the left posterior nares

What was the operation or procedure where the sponge was left in?
This is the name and descriptor of the specific operation performed. Takedown colostomy with primary anastomosis, exploratory laparotomy with small bowel resection and lysis of adhesions, left thoracotomy, CABG with AVR, AAA repair.

When was that procedure performed?
This is a date

Where was that performed?
This is a place – a hospital or a procedure room or center if in the same hospital

What was the final sponge count at that original procedure?
This is the final count that was recorded at the procedure NOT what the review now surmises was the final count. The choices in the NoThing Left Behind vernacular are: Correct – at the final count of the index procedure the nurses recorded the counts as correct. Incorrect – at the final count of the index procedure they recorded the counts as incorrect or documented that there was a problem with the counts and they were NOT correct. No Count performed – for some reason either documented or not, no surgical count was performed. Unknown what the count status was. Note: Unknown is NOT the same as No Count. Unknown means the reviewer doesn’t have the information and cannot get it to ascertain what the final count was. No Count means the hospital staff did not perform a surgical count on the case.
Pacemaker wound on right chest wall noted to have yellow stringy material draining through skin. X-ray ordered and retained sponge identified. Two sponges found and removed.

As written this description lacks essential information to help us understand what went wrong and how we might provide remedy. Let's look at the 8 questions and see if we can't improve on this story.

1. What kind of sponge? In this cath lab raytex 4x4’s are routinely used in pacemaker cases.

2/3. When and how discovered? 2.5 months after insertion patient had infected wound. X-ray ordered and retained sponge identified. Wound opened by surgeon, TWO raytex found.

4. Sponges were found underneath and behind pacemaker suggesting that sponges were put in first and pacemaker placed on top of the balled up sponges.

5/6/7. Pacemaker insertion performed 2.5 months previously at the same facility. There was one intercurrent hospitalization for unrelated medical problem however a PA and lateral CXR had been taken which reportedly showed the pacemaker and wires but no other abnormalities.

8. No sponge counts were performed and it has not been the practice in the cath lab to do so.

**IMPROVED SYNOPSIS**

A patient underwent an uncomplicated pacemaker insertion on right chest wall in the cardiac cath lab. Ten raytex 4x4 sponges were used during the procedure. In the middle of the procedure the cardiologist was called away to help with an arrest in the adjoining suite and quickly stuffed two raytex in the pacemaker pocket for hemostasis. Upon his return he resumed placement of the pacemaker which was perfectly placed and functioned well. 1 month later the patient returned for w/u of a pneumonia. A CXR showed a LLL effusion. 1.5 months later the patient returned with an obviously infected pacemaker site. CT surgery was called, the wound was opened and two sponges were removed. The pacemaker was moved to the left side and the patient was put on antibiotics and dressing changes to the infected pocket.

**ANALYSIS**

It would be tempting to jump on the distraction that occurred as a root cause of the retention event, but that would be a shallow root. The distraction just demonstrates that there are unreliable practices in place. In the NoThing Left Behind vernacular this would be considered a “no-count” case of retention. Multistakeholder approaches are necessary to prevent these events and we can see there were errors made on multiple fronts. One problem is the absence of a reliable practice in the cath lab to account for surgical items. Another is that the cardiologist didn’t perform a wound exam before closing the wound. Last, on re-review of the CXR the retained sponges are present but were visible only on the lateral view and mistaken by the radiologist as wires related to the pacemaker. This is a common problem with raytex markers. The sponges aren’t seen on the PA or under fluoro because the pacemaker obscures the view. Discovery of the sponges 1 month after the procedure wouldn’t have prevented retention but would have lead to reduced patient morbidity. It might be tempting to add a step and make radiological assessment of pacemakers a mandatory process but there would likely be a higher preventative yield by keeping it simple and working with the two primary stakeholders and changing their practices first.

**ACTION PLANS**

Improved analysis of events leads to clearer understanding of faulty practices and helps to develop well defined action plans.

No matter where a procedure is performed; if an incision is made and surgical sponges are used a system must be in place for all the sponges to be accounted for at the end of the case. Just counting the sponges is not enough. Sponge ACCOUNTing provides a transparent, inexpensive, simple and reliable practice that can be used anywhere to make sure there is “NoThing Left Behind.”