“Sometimes you get the best light from a burning bridge”
From the song “My Thanksgiving” by Don Henley

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With special recognition to
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Collaborative Tools and Strategies

- Brief teamwork training customized to OR
- Implementation of the NoCVA Surgical Safety Checklist or derivative
- Observational assessment of checklist use and teamwork behaviors
- **Defect analysis of events**
- Process for gathering issues from debriefing and using that info for improvement
- Executive safety rounding
- Safety culture assessment
Participants will be able to:
1. Define CUSP—Comprehensive Unit-based Safety Program.
2. Define defect analysis as applied in healthcare.
3. List the steps in the Learning from Defects (LfD) Process.
4. Describe the process of analyzing a surgical site infection (SSI) as a defect, including key adaptive and technical considerations.
5. Discuss the importance of group analysis and list the primary people that need to be involved.
Polling Question 1

How much do you know about CUSP?

1. Never heard of it before.
2. Have heard of it but don’t really know what it is.
3. Have implemented it on my unit and am familiar with it.
4. Know it well and teach it.
How do you find out about a SSI that occurs in your facility?

1. SSI data are not reported to staff.
2. Monthly graphs/rates are shared.
3. Quarterly graphs/rates are shared.
4. We are notified as soon as Infection Prevention finds one.
5. I don’t know.
Polling Question 3

Does your hospital conduct root cause analyses or learning-from-defects (LfD) or “deep dive” on SSIs?

1. Don’t know.
2. No.
3. Yes, our Infection Preventionist does it.
4. Yes, we have a team that does it.
5. Yes, we do it, but I don’t know the process.
Polling Question 4

Have you personally participated in a root cause analysis/LfD/deep dive process about a SSI?

1. Yes
2. No
CUSP is a strategic framework for safety improvement that integrates communication, teamwork, and leadership to create and support a culture of patient safety that can prevent harm, ON THE UNIT LEVEL.

It embraces, not replaces, familiar PI techniques such as Six Sigma, PDSA cycles, Lean, and other PI tools.

http://www.ahrq.gov/professionals/education/curriculum-tools/cusptoolkit/
1. Assemble the team
2. Engage the senior executive
3. Understand the science of safety
4. Identify defects through sense-making (learn from defects)
5. Implement teamwork and communication
**Definitions**

**Defect:** Any clinical or operational event or situation you do not want to happen again. May include events that actually caused harm or put people at risk for significant harm.


**Defect Analysis:** process of analyzing a defect to determine its root cause.

**Defect Prevention:** the process of addressing root causes of defects to prevent their future occurrence.

Basic steps in the LfD Process

1. What happened?

2. Why did it happen?

3. How will you reduce the likelihood of it happening again?

4. How will you know the risk is reduced?

5. With whom should you share the learning?
A few adaptive concepts to consider…
Or, “At-risk behaviors”

- Refers to a gradual process through which unacceptable practices or standards become acceptable. As the deviant behavior is repeated without catastrophic results, it becomes the social norm for the organization or individual.

- In situations of organizational deviance, individuals who challenge the norm – from within the organization or outside it – are considered nuisances or even threats.

- Allowed because we get away with it…most of the time…
We all practice these in some way...

- Individually:
  - Speeding
  - Not getting dryer vents cleaned out routinely
  - Hitting the snooze button too often
  - Not wearing seat belts

- Organizationally or in Groups:
  - Cutting corners on cleaning rooms between patients
  - Inadequate hand hygiene
  - Not following transmission-based precautions when patients go to OR

- NASA: http://history.nasa.gov/sts51l.html
What are they in your facility?

They may be hard, if not impossible, to detect if you are part of the group practicing them…
Errors in Complex Systems
Active failures

- Errors that occur at the point of contact between a human and some aspect of a larger system (e.g., a human-machine interface).
- Generally readily apparent (e.g., pushing an incorrect button, ignoring a warning light) and almost always involve someone at the frontline or “sharp end”.

Latent Failures

- Less apparent failures of an organization or system design that contribute to the occurrence of errors or allow them to cause harm to patients. Often the cause of an active error.

- Occurrences are at the “blunt end”

- AKA: “Accidents waiting to happen.”

“Rather than being the main instigators of an accident, operators tend to be the inheritors of system defects..... Their part is that of adding the final garnish to a *lethal brew* that has been long in the cooking.”

Standard to prevent harm

- **Standard**: an established norm
- **Standardize**: to cause to conform to a standard
- Develop, implement, and monitor compliance to standardized processes
“The ostensible failure of a standard has to be examined not so much from the focus of whether the standard or specification was written or even implemented (the usual metric), but rather from the viewpoint of whether the participants achieved their goals with the standardization...”

~Carl F. Cargill, “Why Standardization Efforts Fail”

http://quod.lib.umich.edu/j/jep/3336451.0014.103/---why-standardization-efforts-fail?rgn=main;view=fulltext
Create independent checks to prevent harm…

- Check lists
- Effective double checks:
  - Are *independent*
  - Include *cognitive assessment*
Confirmation bias - seeing what we are most familiar with instead of what is actually there; tendency people have to search for or interpret information in a way that confirms one’s preconceptions.

- E.g. “Please check this medication – I want to give 5,000 U of heparin SQ.”

Overuse – too many checkpoints dilute their effectiveness and may even cause error.

Perceiving check lists as plans of care.
Two important terms:

- **Gemba walk:** A Japanese term used in Lean methodology that means, “the real place.” “Place” is where value is created. The idea behind *gemba* is that **observation where the work is actually carried out, such as on the nursing unit, is where you learn both what the actual problems are and the best solutions for those problems.** A gemba walk is an activity that takes management to the point-of-care to find ground truth.

- **Ground truth:** Information that is collected on location and used to compare reality to perception.
Preparation for surgery includes:

- The patient: skin prep, hair removal, glucose management, normothermia, appropriate antibiotics, etc.
- The providers: skin prep, HH, attire, etc.
- The environment: air exchanges, minimize traffic, clean, etc.

A few technical concepts to remember…
ABX administration is timed to allow for peak tissue concentration at time of incision. (You may be highly compliant w/SCIP abx measures but are you really fulfilling intent of the science?)

- Correct Abx for procedure
- Dose is weight-based
- Prior to tourniquet application (where applicable)
- Process for re-dosing if surgery is over 3 hours
Prophylaxis: Too Early

INCISION

CLOSE

TIME

Optimal Drug Concentration To Kill Bacteria
Prophylaxis: Too Late

Optimal Drug Concentration
To Kill Bacteria

TIME

CLOSE

INCISION
Prophylaxis: Ideal Scenario

Optimal Drug Concentration To Kill Bacteria

INCISION

CLOSE

TIME
So, you learn about a SSI. What’s next?

- Defect analysis should occur as soon as possible after the defect is recognized. *Do you have a process in place to learn about SSIs as soon as they are recognized?*

- IP (?) communicates SSI to key people on the CUSP/PI Team:
  - Risk Mgr
  - Quality specialist
  - OR Mgr/Director
  - Post-op unit manager
  - Surgeon (if he or she is not already aware)

- Then, take next steps...
Who should be on your LfD/CUSP Team?

Include the right folks because teams make wiser decisions when there is diverse and independent input. For SSI LfD, consider:

- Surgical services staff
- Infection Preventionists & ID Docs (if a SSI. Other content experts if other type of harm is being investigated.)
- Surgeon(s) & their office staffs
- Anesthesia
- Administration
- Post-Op units
- Pharmacists
- Facility and maintenance services
- Quality, Safety, Risk representatives as appropriate
- Patient/Family as appropriate (tacit knowledge…)
- Who else? Think through who would make sense…
Step 1: What Happened?

- Make team assignments to do ground work:
  - Must establish a chronological order of events and data related to the event.
  - Requires some research and most likely, gemba walks.

- One person should not do all the research or gemba walks. (Science of Safety principle: Teams make wise decisions when there is diverse and independent input. You may not detect normalized deviances in your own area...)

- Use a standard event investigation format.

- Tool should be easy to use and tailored for the organization.
<table>
<thead>
<tr>
<th>Patient Identifier:</th>
<th>Surgeon:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date SSI identified:</td>
<td>Date of index surgery:</td>
</tr>
<tr>
<td># of days between surgery and first signs/sx of infection:</td>
<td></td>
</tr>
<tr>
<td>Was patient readmitted? YES NO</td>
<td>If yes, date:</td>
</tr>
</tbody>
</table>

**Signs/symptoms of infection at time of presentation:**

<table>
<thead>
<tr>
<th>Date of culture:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results:</td>
</tr>
<tr>
<td>?+MDRO? YES NO</td>
</tr>
</tbody>
</table>

**Type of SSI:**
- Superficial
- Deep
- Organ/Space

**Location of infection:**

**Risk Factors present pre-index procedure:**

- Diagnosis of diabetes mellitus (DM)
- Hyperglycemia w/o formal diagnosis of DM
- Immunosuppressive medication(s). Type:
- Immunosuppressive disorder. Type:
- Tobacco use (smoker, chewer, dipper, etc.)
- Untreated remote infection(s) pre-op. Type:
- Remote infection(s) post-op. Type:
- Positive pre-op MRSA screening or past history of MRSA?

**Did patient develop any infections other than SSI post-operatively? YES NO**

**If so, describe:**

**NOTES:**

**To whom reported:**

<table>
<thead>
<tr>
<th>OR</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-Op 1</td>
<td></td>
</tr>
<tr>
<td>Post-Op 2</td>
<td></td>
</tr>
<tr>
<td>Surgeon</td>
<td></td>
</tr>
<tr>
<td>Risk Management</td>
<td></td>
</tr>
</tbody>
</table>

**Person completing this information:**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Phone #:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## SSI Defect Analysis Tool: Section 2 Pre-Op Phase

**Complete and return to Infection Prevention and Control**

<table>
<thead>
<tr>
<th>Patient Identifier:</th>
<th>Gender: M F</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOB:</td>
<td>Date of Admission:</td>
</tr>
</tbody>
</table>

### Pre-Op Diagnosis:

<table>
<thead>
<tr>
<th>Weight in lbs:</th>
<th>Height in inches:</th>
</tr>
</thead>
</table>

Where was patient living prior to admission? 

**Location & date pre-op teaching done:** 

<table>
<thead>
<tr>
<th>Was patient instructed on the following?:</th>
<th>YES</th>
<th>NO</th>
<th>If hospital policy not followed, why?:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Special pre-op shower/bath?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Not to shave operative area for 72 hours prior to surgery?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. To avoid smoking/tobacco use as far in advance of surgery as possible?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. To report any signs/symptoms of infections pre-op to surgeon? (E.g. UTI, skin boils, URI, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. How to properly use CHG cloths?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. If diabetic, importance of glucose control perioperatively?</td>
<td>YES</td>
<td>NO</td>
<td>N/A</td>
</tr>
<tr>
<td>7. Importance of hand hygiene for self, visitors, and hospital staff?</td>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
</tbody>
</table>

**Were the following assessed pre-op?**

<table>
<thead>
<tr>
<th>Were the following assessed pre-op?</th>
<th>YES</th>
<th>NO</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Was pre-op MRSA surveillance testing performed per protocol?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Was skin assessed pre-op for boils or other skin lesions/rashes?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Were there any remote infections present? (UTI, URI, etc.)</td>
<td>YES</td>
<td>NO</td>
<td>N/A</td>
</tr>
<tr>
<td>4. Were abnormal pre-op assessments/labs reported to surgeon before surgery?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Was site-signing completed with sterile, individual marking pen?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Pre-Op Medications: (List)**

<table>
<thead>
<tr>
<th>Pre-Op Medications: (List)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Pre-Op A1c if diabetic:**

<table>
<thead>
<tr>
<th>N/A as patient not diabetic</th>
</tr>
</thead>
</table>
**SSI Defect Analysis Tool: Section 3 OR and PACU**

Complete and return to Infection Prevention and Control

<table>
<thead>
<tr>
<th>Patient Identifier:</th>
<th>Surgeon(s): 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Surgery:</td>
<td>Day of Week: 2</td>
</tr>
</tbody>
</table>

**Type of Surgery:**

<table>
<thead>
<tr>
<th>Was surgery:</th>
<th>EMERGENT</th>
<th>URGENT</th>
<th>ELECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(circle most appropriate one)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Was a Foley inserted in OR for surgery?**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>If so, by whom?</th>
</tr>
</thead>
</table>

**ASA Score:**

**Wound Class:**

### Incision cut times:

- (note: this is skin-to-skin time, not time in the OR)

<table>
<thead>
<tr>
<th>Start</th>
<th>Close</th>
</tr>
</thead>
</table>

### Pre-op Antibiotics:

- 1
- (Include dose) 2
- Time Given
- Time Given

- If cut time ≥ 3 hours, was antibiotic re-dosed? YES NO
- If not, why?

**EBL:**

**Any blood/blood products received in OR?**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>Tourniquet not used</th>
</tr>
</thead>
</table>

### OR Room Information:

- OR Room #

**Date last room air exchange measured prior to date of surgery:**

- # of air exchanges measured at that time:

**Were there any problems with maintaining appropriate humidity and temperature in the OR room on the date of surgery?**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

- If yes, describe:

### Procedure Events:

- ?Any glove puncture? YES NO
- ?Any issues with equipment? YES NO
- ?Any breaches in sterile field/protocol? YES NO
- ?Any technical difficulties during case? YES NO
- ?Anything flashed sterilized for case? YES NO
- ?Any issues with CS sterilizers pre-op? YES NO

### Patient Events:

<table>
<thead>
<tr>
<th>Lowest temperature</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest SaO2:</td>
<td>PACU</td>
</tr>
<tr>
<td>Highest glucose level:</td>
<td></td>
</tr>
<tr>
<td>What was skin prep solution prior to surgery?</td>
<td></td>
</tr>
</tbody>
</table>
## SSI Defect Analysis Tool: Section 4 - Post-Op Area(s)

Complete and return to Infection Prevention and Control

<table>
<thead>
<tr>
<th>Patient Identifier:</th>
<th>Surgeon:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date of Surgery:</th>
<th>Date of Discharge:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location #1 (Unit)</td>
<td>Date Tx in:</td>
</tr>
<tr>
<td>Location #2 (Unit)</td>
<td>Date Tx in:</td>
</tr>
<tr>
<td>Location #3 (Unit)</td>
<td>Date Tx in:</td>
</tr>
<tr>
<td>Location #4 (Unit)</td>
<td>Date Tx in:</td>
</tr>
</tbody>
</table>

### Any antibiotics given post-op?

If yes, describe type, dose and why given:

<table>
<thead>
<tr>
<th>Date antibiotics stopped:</th>
<th>Date of 1st dressing change:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st dressing changed by: RN MD PA NP Other:</td>
<td>YES NO</td>
</tr>
</tbody>
</table>

Was sterile technique used to change dressing? YES NO

Type of dressing applied with first dressing change:

Was Foley catheter in after leaving PACU? YES NO If so, date discontinued:

Any wound drains post-op? YES NO

If yes, describe:

Date drains removed: YES NO or N/A

Lowest temperature for 1st 24 hours post-PACU:

Lowest SaO2 for 1st 24 hours post-PACU:

Highest glucose level for 1st 24 hours post-PACU (POD 1):

Highest glucose level for POD 2:

Highest glucose level for POD 3:

Did patient return to OR during index procedure admission? YES NO

If so, when and why:

Hand hygiene compliance for this unit for past 3 months is ________________.

### Any social or language barriers identified:

(e.g. could not speak English, personal or mental health problems such as Alzheimer's, post-op dementia, etc.)

Any post-operative events that were out of the ordinary? YES NO

If yes, describe:
Assess for latent failures: go “upstream” from the defect to identify issues in the blunt realm of care delivery.

- Staffing at time of event?
- Emotional/psychological aspects of the team when the surgery occurred?
- Environmental conditions at time of event (consider environment in room/unit, facility, and weather outside)?
- Do gembas to find normalized deviances

Build questions into event tool to “get at” latent failures.

Dig deeper…Remember the Chain of Infection
Focused literature review may be needed to assess quality of policies/protocols

Review of chart by different people to see through a different set of “lenses”

Interview EVS/people who clean the rooms between patients, review cleaning policies with them, invite them to join the team

Interview patient (if able) and visitors to learn what they were taught (or remember) about infection prevention
Bring team together to share findings from event report and begin fleshing out what happened.

Use common PI strategies such as flow charting, fish bone diagrams, etc. to identify all of the gaps (contributing factors).

Be aware that it is rare to find a single “smoking gun” root cause with HAIs. They typically result from multiple contributing factors, culminating in the infection.

Don’t be surprised if there are more questions than answers at the end of that meeting and more research may be needed.

Goal of meeting is to begin list of contributing factors (root causes).

**TIPS:** If possible, have chart in room during meeting/laptop to access EMR, labs, etc. Don’t be afraid to really challenge practice and traditional ways of thinking. Environment of psychological safety is critical to learn from defect.
In step 2, the group

a. Processes through each contributing factor to prioritize which one(s) was the most proximate cause of the defect.
b. Determines which contributing factors they need to focus on.
c. For each of the top 3 to 5 contributing factors, ask why it happened, asking “Why” at least five times.

Goal of this step is to prioritize gaps and understand why the most proximate contributing gap occurred.
A team is doing a LfD analysis on a SSI case and discovers the following contributing factors:

- Patient was a 78 yo male undergoing an urgent hip pinning for fx after a fall.
- Patient’s BMI was 36.7.
- Patient was diabetic w/A1c on admission of 9.
- Patient was 30 minutes late in arriving to pre-op area and pre-op process was rushed.
- Patient’s glucose was elevated on admission and no one caught it until he arrived for surgery.
- Pre-op antibiotic not weight-based.
- Skin prep most likely not correctly applied in OR, based on gembas.
- Pre-op antibiotic (Ancef) given 5 minutes before incision made.
<table>
<thead>
<tr>
<th>Contributing Factors</th>
<th>Importance to current event, 1 (low) to 5 (high)</th>
<th>Importance to future events 1 (low) to 5 (high)</th>
<th>Ease of Resolution 3 =easy, 2 = fairly easy 1=hard, 0=not likely</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient’s BMI was 36.7</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>=10</td>
</tr>
<tr>
<td>Patient was diabetic w/A1c of 9 on admission</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>=11</td>
</tr>
<tr>
<td>Patient was 30 minutes late in arriving to pre-op area and pre-op process was</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>=8</td>
</tr>
<tr>
<td>rushed.</td>
<td></td>
<td></td>
<td></td>
<td>= 12</td>
</tr>
<tr>
<td>Patient’s glucose was elevated on admission and no one caught it until he</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>= 12</td>
</tr>
<tr>
<td>arrived for surgery.</td>
<td></td>
<td></td>
<td></td>
<td>= 13</td>
</tr>
<tr>
<td>Pre-op antibiotic not weight-based.</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>= 13</td>
</tr>
<tr>
<td>Skin prep not correctly applied in OR</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>= 13</td>
</tr>
<tr>
<td>Pre-op antibiotic (Ancef) given 5 minutes before incision made.</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>= 12</td>
</tr>
</tbody>
</table>
Gap: Pre-op antibiotic not weight-based.

1. Why? No protocol to weight-dose pre-op antibiotics.
2. Why? Have not reviewed protocol in 2 years and this has not surfaced as an issue.
3. Why? Typical review cycle for protocols is every 3 years, by hospital policy.
5. Why? Large volume of P&Ps.
6. Why? Number of clinical P&Ps required for clinical services to be offered.

Conclusion: Current P&P review inadequate to ensure most current up-to-date evidence is incorporated into hospital’s P&Ps.

Team questions:
1. How does new evidence get incorporated into our P&Ps inbetween review cycles?
2. Who is responsible for surfacing new evidence that may need to be incorporated into P&Ps between review cycles?
3. Do we need to shorten our P&P review cycle time?
**Step 3: How can we reduce the chances of it happening again?**

1. Develop interventions (countermeasures) to defend against the most important contributing factors, aiming at their root causes.

1. Then, rate each countermeasure on its ability to mitigate the root cause and on the team’s belief that the countermeasure will be executed.

1. Make an action plan for 2-5 of the highest scoring countermeasure.

   - *Must have many different perspectives.*
   - *Must engage leadership.*
Consider safe design principles:

• Standardize – eliminate steps when possible
• Create independent checklists

Safe designs apply to technical and team work.

Brainstorm strategies and consider:

• Ability to mitigate error.
• Strength of countermeasures to prevent error.
• Ease of implementation. (Resources and will necessary to implement.)
1. Instructions to be more careful, vigilant.
Admonitions to be more careful to prevent error. This is very traditional in the mental model where individuals have total control of their actions. Example: Management counsels an individual to “be more careful” after staff member has made a med error.

2. Education/Information
Education and sharing of information Example: Staff education on proper surgical prep technique.

3. Rules and policies
Sets standards and expectations. Helps define what defects are. Example: Policy prohibiting artificial finger nails and nails >1/4 inch in length in direct care providers.

4. Checklists and double-check systems
Creates redundancies in system to look for errors Example: Pick lists in OR; Pre-op checklists; Time out in surgery.

5. Standardization and Protocols
Standardizes processes/materials/resources to promote awareness of evidence-based practice and increase consistency between providers. It makes defect detection more possible also. Example: Standardized OR packs/kits; Foley insertion kits

6. Automation and Computerization
Lessons human fallibility by limiting reliance on memory. Example: Placing reminder or warning flags on computer screens when ordering labs/meds.

7. Forcing functions and constraints
Designed so that errors are virtually impossible or very difficult to make. Example: Standardizing connections on ventilators so O2 tubing will only fit O2 sources and air tubing will only fit air sources.
**Countermeasures (interventions to reduce the risk of the defect)**

**Contributing Factor and root cause:** Pre-op antibiotic not weight-dosed due to current protocol not including weight-dosing. Protocol was in between hospital review cycle and had not been updated with current evidence.

<table>
<thead>
<tr>
<th>Countermeasure</th>
<th>Ability to mitigate the contributing factor, 1 (low) to 5 (high)</th>
<th>Team believes countermeasure will be implemented and executed, 1 (low) to 5 (high)</th>
<th>Strength of Strategy, 1 (low) to 7 (high)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update pre-op antibiotic protocol to include weight-dosing scale.</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>=15</td>
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<tr>
<td>VP of Quality and Risk Manager will lead an assessment of P&amp;P review processes.</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>=10</td>
</tr>
<tr>
<td>Countermeasure &amp; Goal</td>
<td>Person Responsible</td>
<td>Action Plan steps</td>
<td>Status Report Due Dates</td>
<td>Target Date for Completion</td>
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| VP of Quality and Risk Manager will lead an assessment of P&P review processes. | Dr. James Kirk and Uhura Johnson | 1. Meet w/P&P Review Council to review SSI case and findings.  
2. Develop plan for P&P review assessment w/ this Council | Monthly in writing to the CEO | 12/31/13 |
Step 4: How will we know the risk is reduced?

- Assess data (SSI rates, other complications, culture of safety assessments)
- Ask staff and surgeons, “Do you feel perfectly comfortable having surgery here or letting the person you love most in the world have surgery here?”
- Talk to patients/families to get their perspectives.
- Do gemba walks for direct observation.
- Feedback from patient safety rounds.
Step 5: How do we communicate our findings and to whom?

- **Internal communications**
  - Other areas/people may be prone to this defect?
  - Who else needs to know for regulatory compliance, accreditation concerns, risk management?
  - Who needs to know for closure?
  - What other potential defects could occur related to root causes found in this analysis?
  - Nursing communications – story telling
  - Patient story telling

- **External communications**
  - PSOs
  - Others
  - Must include input/permission from Risk Management and Administration
Homework if you already perform LfD analysis on SSIs:

- Assess how soon you learn about an SSI.
- Compare your current event report tool to the one we sent to you:
  - How can either/both of them be improved?
  - Anything missing from either of them?
  - Do they both help assess latent as well as active failures?
  - What would you change in either/both of them?
- Compare your process to what you have heard today. How can they both be improved upon?
- Prepare to share at the 9/16/13 webinar on these points.
• Assess perceived barriers to performing a LfD analysis on a SSI: ?Time  ?Knowledge of process  ?Leadership involvement and commitment
• Take a look at the event report tool we sent you. Is it possible to obtain this information on a surgical case?
• Do two gemba walks between now and 9/16. What normalized deviances do you see?
• If not already in place, explore with your IP how you can learn about SSIs as soon as he/she knows about them.
• Discuss these points at your next SS Collab Team meeting. What can you do to take the next step towards doing LfD analysis on SSIs or other defects you find?


17. /nhsn/dataStat.html
21. The Surgical Care Improvement Project: Strategies for Perioperative leaders. OR Manager supplement. 2007.
25. For Event Report Tool template: http://www.ncqualitycenter.org/
## Next Steps

<table>
<thead>
<tr>
<th>Task</th>
<th>Date</th>
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<tbody>
<tr>
<td>Set goals and plans for culture survey results</td>
<td></td>
</tr>
<tr>
<td>Learning from Defects homework</td>
<td>September 16</td>
</tr>
<tr>
<td>Webinar: Prevent VTE</td>
<td>August 19 1:00</td>
</tr>
<tr>
<td>Webinar: Learning from Defects Case Study and Report Out</td>
<td>September 16 1:00</td>
</tr>
<tr>
<td>Continue implementing checklist and completing observations</td>
<td></td>
</tr>
<tr>
<td>Continue teamwork training</td>
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