2015

SSI Committee in place. Infection Incidence rises.

Wi DHS HAI Prevention visit. Provides data analysis, recommendations and emphasizes on a broad approach to SSI reduction.

System-wide focus on implementing evidence based recommendations and best practices
Message was Loud & Clear

...Now, how do we accomplish this?
MULTI-DISCIPLINARY SSI Committee

Review Data & Feedback
Can you modify workflow to increase compliance?

Examine Best Practices:
- Review Literature
- Join Collaborative

Gap Analysis
Data, current state and brainstorm

Add Stakeholders:
- Front-line staff.
- Pharmacy, IT, EVS

Design & Implement:
- End user input
- Educate

Audits

Can you modify workflow to increase compliance?
Historical Trending & Starting Point

Quick (relative to other measures):
- IUSS reduction
- Changing gown/gloves

Slow:
- Research, education and implementation move slowly. 
  *CHG standardization, antimicrobial sutures*

In Progress:
- Agreement with the scientific evidence; but difficult to operationalize. 
  *Glucose control*
Reducing infections, including infections related to surgical procedures, requires collaboration, dedication and creativity.

Patient centered prevention i.e. every patient every time, takes a ________(fill in the blank)?
Our Patient, Jim

- 86 y.o. male with degenerative joint disease.
- Scheduled for elective Hip
- Age-Related comorbidities: cognitive, auditory
- Social, emotional comorbidities “things that make us unique”
  - Depression era ideology of no-waste, no-fuss
  - Independent & resourceful
  - Stubborn: To be more likely to comply, he needs to understand how this relates to him during this event. Stubborn is dangerous, as is “too nice”. Very easygoing, nice patients can be silent when they do not understand; and quiet if they identify a concern, i.e. “I didn’t want to be a bother.”

Infection prevention bundles can optimize outcomes for patients whose fantastically unique qualities also have the potential of contributing to an increased risk of infection.
First Stop: Outpatient Care

Bundle Development

• CHG Standardization:
  CHG kit developed and implemented, including education for providers.
  Audit opportunity: C-section team requests return of the bottle and records volume.

• Patient Optimization:
  Caregivers increase positive outcomes by performing a pre-op screen.
  Glucose control, weight management, sleep apnea, oral care.

• Education:
  ~ Clean linens & clothing, no shaving site
  ~ Discourage Muffy (Jim’s cat) from providing “in bed comfort” and ask that she sleep elsewhere temporarily.
  ~ Educate on SSIs and other healthcare associated infections

How does this affect Jim?

CHG Kits Increase Compliance

• Reinforce education: Jim heard about every 3rd word, but nodded in understanding the entire time. Written instructions & pictures reinforce understanding of critical directions.

• Patient Cost ‘upfront’: Sending Jim to the pharmacy to purchase what he calls “some soap”, is not a direction likely to be followed. Hand him a kit; and he won’t want to waste it.

• Ease of use: The items he needs are contained within the kit: CHG, timer, washcloth, and instructions. Historically, he didn’t allow for dwell time since he thinks its cold and doesn’t like to be on his feet long in the slippery shower. New dwell time recommendations address his concerns.

Optimization and Education

• Jim has options for classes (e.g. nutrition, weight management) designed to help him get his glucose under control, a task he thought was daunting.

• Not only will the pre-op screens prepare him for his surgery, the benefits expand to a healthier lifestyle overall.
Bundle Components

- Weight based dosing
  Collaboration:
  ~ SSI committee and Pharmacy provided literature to various committees: Antimicrobial Stewardship, Pharmacy and Therapeutics, and the Infectious Disease committees.
  ~ SSI surgical prophylaxis strategies successfully implemented

How does this affect Jim?

Jim doesn’t have a desire to learn about what antibiotics are used. “I’ve got some Penicillin in the cabinet, I’ll be fine”.

He trusts that his caregivers are providing him with what he needs i.e. antibiotics most likely to achieve a tissue concentration that yields the best outcomes.
Surgical services
**Sterile Processing & Decontamination**
- Bioburden cleaning at “point of use”. Education on concept and expectations
- Enzymatic cleansers
- Quality Control
- Quarterly Environment of Care Rounds

**Work Practice**
- Gown/Glove change
- Surgical Attire
- Isolation technique
- Surgical site barriers; skin/surface

**Operating Room Culture & Communication**

**Physical Environment**
- Specialized “ORA”s, Operating Room Assistants trained in unique cleaning & disinfecting needs. Quarterly rounds, with IPC, facilities, surgical staff and EOC
- Audits of cleaning process & QC verification provided to IPC medical staff committee
- Air pressure & quality monitoring

**Collaborative Effort!**
Intra-Op
Culture and Communication

Recipe for Respectful Collaboration!

Surgical Services

Ingredients:

- 2# Trust
- 3 c. Honesty
- ¼ c. Fun
- 2 tbl Talking
- 1 bunch Kindness
- 3 tbl Listening

- 4 tbl Freedom
- 3 c. Caring
- 3 bushels Respect
- 1 pinch Encouragement
- 1 ounce Sharing
- 1 gallon Equality
Intraoperative Measures

SSI Prevention Focus

- Traffic Control: Team members who are needed in OR – are present & use of mid-room
- Supply Management: use CDS modules
- Day Surgery performs hair clipping & skin cleansing with sage wipe
- Antibiotic re-dose administered. Warm IV fluids & active forced air warming
- Surgical site prepped with an alcohol containing agent
- Airway management for adequate tissue perfusion
- Team members double glove
- Antimicrobial suture used

How does this affect Jim?

- All the necessary supplies & equipment are present for Jim’s optimal outcome.
- Team wide efforts are occurring during his procedure to prevent deep or superficial infection.
- Efforts to promote healing of his surgical wound are initiated.
- Concerns for bundle compliance are addressed real time to increase his safety. All staff expected to “stop the line” or to reinforce bundle practices.
Inpatient Caregivers

SSI Prevention Focus

- Date and Time written on the dressing
- Hand Hygiene: Caregiver AND patient
- Communication between RN staff and MDs when issues arise. Documentation of communication in EHR.

* For cases that involve taking an inpatient to surgery, the CHG bathing process and timing have been clarified. *(Issues identified in case reviews)*

How does this affect Jim?

Inpatient hospital stays make him feel disoriented. Hand Hygiene may not be performed consistently. Reminders help keep him safe if he forgets. Staff hand hygiene is essential to his safety.

Concerns he expresses are addressed in a timely manner when there is open communication between caregivers.

* Patients requiring CHG baths on the inpatient unit will have the same effective CHG bath, as is expected in the bundle for elective procedures.
**Continuum of Care**

- **Home Care Service:**
  
  Visits with skilled nursing, physical therapists and other providers as needed

  **Accountability:**
  
  ~ Home Health quality Infection Prevention group developed case criteria for infections, e.g. CAUTI. Case reviews for improvement efforts. Metrics presented to various committees

  ~ Audits of Hand Hygiene

- **Not on a Home Care Service:**
  
  ~ Office visits

  ~ Phone calls from case managers and caregivers

  ~ Transportation assistance

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**How does this affect Jim?**

- When Jim isn’t sure of what “normal” healing is, he has a partner to answer his questions and address his needs.

- Early identification of adverse change in conditions can address health concerns before they cause additional health problems.

- The team members sent to his home have further education in infection preventative measures, allowing Jim to get back to his life as soon as possible.
Do bundles, implemented with collaboration, work?

Good News
They do!
Preventing Surgical Site Infections is a team EFFORT!

“We will celebrate ourselves because the patients whose lives we save cannot join us, because their names can never be known.”

Our contribution will be what did not happen to them. And, though they are unknown, we will know that mothers and fathers are at graduations and weddings they would have missed, and that grandchildren will know grandparents they might never have known, and holidays will be taken and work completed, and books read, and symphonies heard, and gardens tended that, without our work, would never have been.

Donald M. Berwick, MD, MPP, Former President and CEO, Institute for Healthcare Improvement

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<th># Infections</th>
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SIR = Standardized Incidence Rate; Expected # HAIs (Health-Associated Infections)
What this means to Jim

Spring of 2018:
Jim was able to attend a veteran Honor Flight to Washington D.C. and put his new hip to good use!
Infection Prevention & Control

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Thank You
Bundle Evolution

- **GRIP 2016**
- 2/2016 6 bundle components; Hygiene & skin preparation, Antimicrobial prophylaxis & scheduled re-dosing, Normothermia, oxygenation, traffic control, then subcategories of surgical specialties
- 4/2016 Weight based dosing adjusted
- 4/2017 Weight based pre-op dosing readjusted & GYN barrier removed
- 1/2018 Added Antimicrobial Suture + C-section
- 4/2018 Pre-operative Oral Antibiotics with mechanical bowel prep
- 6/2018 Added Antimicrobial Suture + Colon / Hysterectomy
Examples of bundle audits, performed real time

1. Per the patient, how much CHG soap was **LEFT OVER** in the bottles after they completed both showers?
   - None
   - 1/4 bottle
   - 1/2 bottle
   - 1 Bottle
   - 2 Bottles (didn't use any)
   - NA – unscheduled CS

2. Did staff perform CHG wipes?  Y  No

3. Warm IV fluids used pre-op?  Y  No

4. Forced Air Warming ( Bair hugger) used pre-op?  Y  No
   - Remember to document PreOp Warming interventions
   - NA, patient was >99 degrees

**TO BE COMPLETED BY OR RN / ST: C-Section Technique Observational Audit**

**Antibiotic**: Was Ancl/ Antibiotic started within (30) minutes of cut time?  Y  No

**Prep**: Chlorhexidine (CHG) containing product; compliance to application instructions?  Y  No

Was surgical attire policy followed (see back for key components)?  Y  No

Personnel enter through mid-room doors?  Y  No (if no indicator in comment field at bottom)

**Clean Technique**

**Was a wound protector used (O-Ring)?**  Y  No

**Prothracst ST double glove?**  Y  N

**Prothracst SA double glove?**  Y  N

Prior to closing the fascia, did the Surgeon:  Y  N

**Prior to closing of the fascia, did Assisting Surgeon:**  Y  N

**‘Clean’ Mayo Stand surface?**  Y  N

**Redrape incision site with utility drapes?**  Y  N

**Details for any NO Responses:**

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**Hysterectomy Technique Observational Audit**

**Staff**

- Double Glove?
  - Y  N

- Don Clean Surgical Attire/ exchange
  - Y  N

**Gown**

- Y  N

**Gloves**

- Y  N

**SA**

- Y  N

**Vaginal Manipulator**

- Y  N

**Surgeon**

- Y  N

**ST**

- Y  N

**Assistant Surgeon/Resident**

- Y  N

**Student**

- Y  N

**Any NO answers below please explain in comments section at the bottom—Thank you**

**Prep**: Chlorhexidine (CHG) containing product;  Y  N

**Traffic Control**: Personnel enter through mid-room doors?  Y  No

**Surgical Attire**: Adhering to the Surgical Attire Policy?  Y  No

**Isolation Technique**

- Was there a designated vaginal manipulator?  Y  No

**Vaginal/Rectal instrumentation & Supply Set-up Isolated from “Clean set-up”**  Y  No

**‘Clean’ surgical supplies transported at surgical site, Bowie, suction, light handles exchanged?  Y  No

**GYN** specimen was isolated from “clean set-up”  Y  No

**Was Wound Protection Used?**  Y  No

**Antimicrobial Plus Suture Use**

- Y  N

**Surgical Site Irrigation**

- Irrigation
  - Y  No

- Amount (no recommendation)
  - Sub-Q Cavity Incision
    - Y  N

- **Laparoscopic/Robotic procedures excluded**
  - Y  N

- **Bowel not needed**
  - Y  N

**Comments for variances/NO answers in bottom section please**

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