Welcome & Housekeeping

• Today’s webinar is being recorded and the link along with the slide deck will be sent to attendees within a few days.

• Utilizing the chat feature, please type your name, title and organization.

• Polling questions are included with the presentation. If unable to use the voting feature, please utilize the chat to respond.

• All lines are open for comment HOWEVER, when not speaking, please place telephone line on mute and do NOT place your line on hold as this will disrupt the audio.
Our Mission

• Engage and inspire health care providers
• Create safe cultures
• Create reliable systems of care
• Prevent patient harm in Indiana

We partner under the key principle that we don’t compete on patient safety

A State of Mind
Painting created by Regina Holliday during the 2018 Indiana Patient Safety Summit
Program Intent

Advance the conversation among Indiana hospitals around surgical safety and preventative measures to avoid surgical site infections (SSI)
Polling Question #1

Who is with us today?

- OR
- Pre-op
- PACU
- Nursing (non surgery team)
- Infection Prevention
- Environmental Services
- Central Processing/Central Sterile
- Pharmacy
- Other — utilize the chat box with your role/discipline, if not listed above
Surgical Site Infections – Colon
Indiana Impact

- **Baseline Rate per 100 discharge**: 5.33
- **Current project to date rate per 100 discharge**: 5.41
- **Total cost to Indiana**: $1,039,149
- **Total infections to date**: 704

Data retrieved from the HRET Comprehensive Data System with impact calculations from the HRET Improvement Calculator
Surgical Site Infection: Abdominal Hysterectomy
Indiana Impact

- **Baseline Rate per 100 discharge:** 1.45
- **Current project to date rate per 100 discharge:** 1.54
- **Total cost to Indiana is $214,709**
- **Total infections to date:** 194

Data retrieved from the HRET Comprehensive Data System with impact calculations from the HRET Improvement Calculator
Surgical Site Infection: Hips
Indiana Impact

• Baseline Rate per 100 discharge: 1.6
• Current project to date rate per 100 discharge: 1.44
• Total savings to Indiana is $508,896
• Total infections to date: 235

Data retrieved from the HRET Comprehensive Data System with impact calculations from the HRET Improvement Calculator
Surgical Site Infection: Knees
Indiana Impact

• Baseline Rate per 100 discharge: 0.64
• Current project to date rate per 100 discharge: 0.72
• Total cost to Indiana is $837,055
• Total infections to date: 192

Data retrieved from the HRET Comprehensive Data System with impact calculations from the HRET Improvement Calculator
Collective Impact to Indiana

- **Total Cost to Indiana** due to Surgical Site Infections from the HIIN since October of 2016 to December of 2018: $1,582,017
- **Total Surgical Site Infections** for procedures of colons, abdominal hysterectomies, knees, and hips: 1,325
Welcome Barb DeBaun

Barbara DeBaun, RN, MSN, CIC
Improvement Advisor
Cynosure Health
## SSI Event #1 Polling Recap

<table>
<thead>
<tr>
<th>Question</th>
<th>Percentage</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who from our team is responsible for assigning wound classification for surgical cases?</td>
<td>57%</td>
<td>Nursing</td>
</tr>
<tr>
<td></td>
<td>40%</td>
<td>Surgeon</td>
</tr>
<tr>
<td></td>
<td>3%</td>
<td>Other</td>
</tr>
<tr>
<td>We have hardwired practices to ensure administration of the right antibiotic, weight based and re-administered, if indicated?</td>
<td>72%</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>28%</td>
<td>No</td>
</tr>
</tbody>
</table>
SSI Event #1 Polling Recap

How are you communicating your hospital’s SSI activity and outcomes?

56% Collect data & share in committee meetings

44% Collect data & share with all stakeholders including surgeons

Our colorectal surgery team:

45% Changes gloves and uses instruments that have not been used during surgery for closing

14% Does not change gloves but uses instruments that have not been used during surgery for closing

3% Does not use “new” instruments for closing but changes gloves

38% I’m not sure what they do
Call to Action

• Conduct gap analysis – where are your opportunities?
• Evaluate your wound classification process
  Is it working well?
  Have you validated the process accuracy?
• Does your antibiotic administration practice follow evidence-based practice?
• Does your bowel prep include mechanical, oral antibiotic or both?
• Are there opportunities to better communicate among your team not only SSI outcomes but process improvement opportunities?
• Prepare to share your findings during our next SSI Prevention event
What did you do?

Lessons learned
Centers for Disease Control and Prevention Guideline for the Prevention of Surgical Site Infection, 2017

Sandra I. Berríos-Torres, MD; Craig A. Umscheid, MD, MSCE; Dale W. Bratzler, DO, MPH; Brian Lea, MA, MS;
Erin C. Stone, MA; Rachel R. Kelz, MD, MSCE; Caroline E. Reinhke, MD, MSHP; Sherry Morgan, RN, MLS, PhD;
Joseph S. Solomkin, MD; John E. Mazuski, MD, PhD; E. Fetched Dellinger, MD; Kamal M. F. Itani, MD;
Elie F. Barbari, MD; John Segreti, MD; Javad Parvizi, MD; Joan Blanchard, MSS, BSN, RN, CNOR, CIC;
George Allen, PhD, CIC, CNOR; Jan A. W. Kuytkmans, MD; Rodney Conlan, PhD; William P. Schacter, MD;
for the Healthcare Infection Control Practices Advisory Committee
Interventions for All Procedures

- Antimicrobial prophylaxis (AMP)
- Glycemic control
- Normothermia
- Oxygenation
- Antiseptic prophylaxis
Today’s Conversation Partner

Columbus Regional Hospital
Columbus, Indiana

160 bed acute care hospital

Kim Reed, RN MSN FNP-C
Nurse Practitioner
Nurse Manager Surgical Services Quality Outcomes
Polling Question #2

I am fully confident that we provide the right antibiotic, at the right time, in the right dose/frequency for our surgical patients.

• Yes
• No
• Not sure
Antimicrobial Prophylaxis

- Only when indicated
- Selection
- Time
- Weight based
- No re-dosing after incision is closed, even in presence of a drain (clean and clean-contaminated)
### Preoperative Antimicrobial Agents

**HICPAC SSI Prevention Guidelines**
- No recommendation for weight based dosing
- No recommendation for intraoperative redosing

**WDPH SSI Prevention Guidance**
- Follow the 2013 American Society of Health-System Pharmacists (ASHP) guidelines
- Give based on BMI or weight in kilograms
- Base re-dosing on drug half-life and duration of surgery
Discussion
Polling Question #3

We have a system in place to measure glucose levels for ALL surgical patients.

• Yes
• No
• Not sure
Glycemic Control

- Maintain perioperative blood glucose levels <200mg/dl in **ALL** surgical patients

**NOT ONLY DIABETICS**
## Glycemic Control

<table>
<thead>
<tr>
<th>HICPAC SSI Prevention Guidelines</th>
<th>WDPH SSI Prevention Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• No recommendation regarding the safety and effectiveness of lower or narrower BG target levels and SSI</td>
<td>• Avoid increased risk of hypoglycemic events and increased mortality associated with tight glycemic control</td>
</tr>
<tr>
<td>• No recommendation for hemoglobin A1C target levels and risk of SSI</td>
<td>• Maintain hemoglobin A1C level &lt;6.7</td>
</tr>
</tbody>
</table>
Discussion
Polling Question #4

We have a process in place to assure normothermia for all surgical patients.

• Yes
• No
• Not sure
Normothermia

- 35.5 C or more
- Mild degrees of hypothermia can increase SSI risk
- Impacts circulation, coagulation, medication metabolism and wound healing
## Normothermia

*HICPAC SSI Prevention Guidelines*

- No recommendation regarding safety or efficacy of normothermia strategies, ranges or duration

*WDPH SSI Prevention Guidance*

- Consider use of forced-air warming to reduce incidence of SSI’s
Discussion
Polling Question #5

We utilize oxygen supplementation for our colon surgery patients.

• Yes
• No
• Not sure
Oxygenation

- Pre/intra/post operatively
- Optimizes tissue oxygenation and reduces SSI risk
- Low cost and simple
## Oxygenation

<table>
<thead>
<tr>
<th>HICPAC SSI Prevention Guidelines</th>
<th>WDPH SSI Prevention Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• No recommendation for high oxygen supplementation</td>
<td>• Consider use of high oxygen supplementation as an SSI risk reduction strategy during colorectal procedures</td>
</tr>
</tbody>
</table>
Discussion
Polling Question #6

We have a reliable process in place to provide pre-operative skin antisepsis to our surgical patients.

• Yes
• No
• Not sure
Antiseptic Prophylaxis

Pre-op and Perioperatively
Antiseptic Prophylaxis

**HICPAC SSI Prevention Guidelines**

- Advise patients to shower or bathe (full body) with either soap (antimicrobial or non-antimicrobial) or an antiseptic agent on at least the night before the operative day.

**WDPH SSI Prevention Guidance**

- Ensure that all patients undergoing elective surgical procedures involving skin incisions undergo a standardized preadmission shower/cleansing with 4% aqueous or 2% (cloth coated) CHG.
Patient Family Engagement
Barriers: How to get over them
Enhanced Recovery After Surgery

**Pre-surgery**
- Goal-directed fluid management
- Judicious use of opioid pain medications
- Shorter incisions and use of laparoscopic approach when possible
- Careful consideration of blood transfusions
- Patient education and pre-surgery counseling
- Meeting with a surgeon or nurse
- Carbohydrate drink prior to surgery
- Use of epidurals for pain control

**During Surgery**

**Post-Surgery**
- Early post procedure mobilization
- Early removal of tubes and drains
- Early transition to oral pain medications
- Early allowance of food intake

**Better Outcomes**
- Increased patient satisfaction with care
- Decreased perioperative complications
- Decreased length of hospital stay
- Improved use of hospital resources

UNC School of Medicine, UNC Chapel Hill

IHAnet.org/Quality-Patient-Safety
Polling Question #7

Traffic in our surgical suites is:

• Totally under control
• Totally out of control
• Could be better
Red Cap
Surgical Care Bundle

Table II. Selective elements of the surgical care bundle from the evidence-based literature⁸³⁻⁹¹

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate antimicrobial prophylaxis</td>
<td>Antimicrobial (triclosan) sutures</td>
</tr>
<tr>
<td>Weight-based dosing</td>
<td>Smoking cessation</td>
</tr>
<tr>
<td>Glycemic control</td>
<td>Staphylococcal surveillance (cardiothoracic and orthopedic procedures)</td>
</tr>
<tr>
<td>Normothermia</td>
<td>Oral antibiotics plus mechanical bowel preparation (colorectal)</td>
</tr>
<tr>
<td>Appropriate hair removal</td>
<td>Minimally invasive surgery</td>
</tr>
<tr>
<td>Supplemental O₂ (colorectal procedures)</td>
<td>Short duration of surgery</td>
</tr>
<tr>
<td>Use of wound edge protectors</td>
<td>Glove change prior to fascia and skin closure</td>
</tr>
<tr>
<td>Dedicated wound closure tray for fascia and skin</td>
<td>Limit traffic in the operating room</td>
</tr>
<tr>
<td>Pre-operative 4% CHG shower or 2% CHG cleansing</td>
<td>CHG cleansing of surgical wound</td>
</tr>
<tr>
<td>70% alcohol with 2% CHG perioperative skin preparation</td>
<td>Keep sterile dressing intact for first 48 hours</td>
</tr>
</tbody>
</table>
Surgical Site Infections (SSI) Top Ten Checklist

- Develop and follow standardized order sets for each surgical procedure to include antibiotic name, timing of administration, weight-based dose, re-dosing (for longer procedures) and discontinuation.
- Ensure pre-operative skin antisepsis (e.g., basic soap and water shower; antiseptic agent).
- Develop standardized pre-operative skin antisepsis practices utilizing the most appropriate skin antisepsic for the type of surgery performed.
- Develop a standardized procedure to ensure normothermia by warming all surgical patients.
- Develop and implement protocols to optimize glucose control in all surgical patients.
- Administer supplemental oxygen during the pre-operative, intra-operative and post-operative periods.
- Devise a protocol to screen and/or educate selected patients with Diabetic Neuropathy.
- Advise to established guidelines (e.g. CDC, WHO) to ensure basic aseptic techniques (e.g., traffic control, attire) are adhered to uniformly.
- Utilize a Safe Surgery Checklist to drive development of a culture of safety that provides an environment of open and safe communication among the surgical team.
- Establish a system where surgical site infection data is analyzed and shared.
SSI Prevention Podcasts

• Focus on the important role that patient and family engagement has in reducing SSI harms
• Practical tips for how to promote practices designed to prevent Surgical Site Infections

SSI Prevention: We Can't Do It Without the Patient and Family

SSI Prevention: A Simple Way to Measure Process

SSI Prevention: Making the Right Thing the Easy Thing To Do
APIC Indiana

Process for Keeping the Bugs at Bay

APIC Indiana Spring Preconference and Conference
April 25 and 26 2019 Immi Conference Center
Westfield, Indiana
Click here for registration

Region Map and Directors

Regional meetings provide an opportunity to meet and network with other infection preventionists in our areas of the state. Meeting schedules vary by region.

Maintaining contact with our regional representatives also provides a way for state and national information to reach our members. It also is a way information gets back to the board of directors. In order to be included on your region’s e-mail list, receive updates and current information, please contact your region’s representative and make sure you are on their regional roster.

When contacting your regional representative, you can also let them know:
- If you have internet access
- And your e-mail address if you have one.
- Any information or service that APIC Indiana can do to make the practice of infection prevention better for you and your fellow APIC members.

Regional Directors listed on the Board of Directors Page

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