Safety Action Series
Prevention of Surgical Site Infections Following Major Gynecologic Surgery Patient Safety Bundle
Speakers

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Disclosures

- Barbara Levy, MD, FACOG, FACS has no real or perceived conflicts of interest.

- Joseph Pellegrini, PhD, CRNA has no real or perceived conflicts of interest.
Objectives

- Provide an in-depth overview of the Prevention of Surgical Site Infections Following Major Gynecologic Surgery Patient Safety Bundle.
- Take a look at the processes, methods, and tools that were used to develop the bundle.
- Give suggestions for how to effectively implement and utilize the bundle within your organization.
- Identify resources to customize the bundle for use within your organization.
Surgical Site Infections

• Most common nosocomial infections
  – 500,000 infections annually

• Account for nearly 4 million excess hospital days

• Account for greater than 2 billion dollars in increased health costs
Risk Factors

• Preoperative risk factors
  – Diabetes
  – Nutritional Status
  – Obesity
  – Prolonged use of systemic steroids
  – Preexisting infection
  – Colonization with microorganisms
    • MRSA of skin, Bacterial Vaginosis
Risk Factors

• Postoperative risk factors
  – Surgical length > 180 minutes
  – Duration of surgical scrub
  – Preoperative shaving
  – Antibiotic prophylaxis
  – Operating room ventilation
  – Poor hemostasis
  – Hypothermia
Surgical Care Improvement Project

• Developed six infection prevention measures
  1) Antibiotic Timing
  2) Antibiotic Selection
  3) Discontinuation of prophylactic antibiotics w/in 24 hours postop
  4) Use of clippers for hair removal
  5) Maintenance of normothermia
  6) Normoglycemia
    – Cardiac patients

http://www.jointcommission.org/surgical_care_improvement_project/
Surgical Site Infection

• Antibiotic Timing
  – Prophylactic antibiotic administration within one hour before surgical incision (or within 2 hours if administering vancomycin or fluoroquinolones)
  – Multiple studies show that risk of SSI lowest if antibiotics administered w/in 1 hour
    • Recent study indicates further reduction if administered w/in 30 minutes of incision
Addressing the Problem

Development of a Patient Safety Bundle
Prevention of Surgical Site Infections Following Major Gynecologic Surgery Patient Safety Bundle Development

Multidisciplinary Team

– Barbara Levy, MD, FACOG, FACS
– Joseph Pellegrini, PhD, CRNA
– Bill Bradford, DO, FACOOG
– Erin DuPree, MD, FACOG
– Renee Edwards, MD, FACOG, FACS
– Ira Horowitz, MD, SM, FACOG, FACS
– Donna Ruth, MSN, RN
– David Soper, MD, FACOG
– Paloma Toledo, MD, MPH
4 Domains of Patient Safety Bundles

- Readiness
- Recognition
- Response
- Reporting/Systems Learning
READINESS

Every Facility

- Establish standard preoperative care instructions and education for women undergoing hysterectomy (major gynecologic surgery), including postoperative wound care instructions (written and verbal)
- Establish a system that delineates responsibility for every member of the surgical team
- Establish standards for temperature regulation with regards to:
  - Ambient operating room temperature
  - Patient normothermia
- Standardize the selection and timing of administration of prophylactic antibiotics, ideally using order sets and/or checklists
- Standardize the timing of discontinuation of prophylactic antibiotics, ideally using order sets and/or checklists
- Establish standard on appropriate skin preparation, both preoperatively and postoperatively
Readiness: Every Facility

- **Standard preoperative care instructions and education for women undergoing major gynecologic surgery**
  - Providing postoperative wound care instructions (written and verbal) during preoperative visit
  - Critical need to engage and educate patients on the reasons for the instructions
Readiness: Every Facility

• *System that delineates responsibility for every member of the surgical team*
  – Roles for anesthesia team, nursing team, and office-based team
Readiness: Every Facility

• *Establish standards for temperature regulation with regard to:*

  – *Ambient operating room temperature*
  – *Patient normothermia*
Readiness: Every Facility

• *Standardization of selection and timing of administration of prophylactic antibiotics*
  – *Use of order sets and/or checklists*
Readiness: Every Facility

• **Standardization of timing of discontinuation of prophylactic antibiotics**
  – *Use of order sets and/or checklists*
Readiness: Every Facility

• Establish standard on appropriate skin preparation, both preoperatively and postoperatively
  – Engage patients as part of the team
  • Preoperative
    – Hair removal
    – Skin washing
  • Postoperative
    – Wound care
    – Recognizing signs of infection
Every Patient

- Assess patient risk preoperatively for surgical site infection using the following criterion:
  - Blood glucose level
  - Body mass index (BMI)
  - Immunodeficiency
  - MRSA status
  - Nutritional status
  - Smoking status
Recognition: Every Patient

• Assess patient risk preoperatively for surgical site infection related to: blood glucose level
  – Rapid change in A1c level not supported in literature
Recognition: Every Patient

- Assess patient risk preoperatively for surgical site infection related to: body mass index (BMI)
  - Risk assessment based on body fat distribution
  - Incision planning based on body fat distribution
Recognition: Every Patient

• Assess patient risk preoperatively for surgical site infection related to: immunodeficiency
Recognition: Every Patient

• Assess patient risk preoperatively for surgical site infection related to: MRSA Status
Recognition: Every Patient

• Assess patient risk preoperatively for surgical site infection related to: nutritional status
Recognition: Every Patient

• Assess patient risk preoperatively for surgical site infection related to: smoking status
Every Case

- Develop intraoperative “Time Outs” to address antibiotic dosage, timing, prophylaxis issues, and patient-specific issues
- Establish standard on intraoperative skin preparation by surgical team
- Reassess patient risk for surgical site infection based on length of surgery, potential bowel incision, vaginal contamination, and amount of blood loss
- Provide postoperative care instructions and education to women undergoing hysterectomy (major gynecologic surgery) and family members or other support persons
Response: Every Case

• Develop intraoperative “Time Outs” to address antibiotic dosage, timing, prophylaxis issues, patient specific issues
  – Effective tracking of length of surgery and blood loss is critical
Response: Every Case

• Establish standard on intraoperative skin preparation by surgical team
Response: Every Case

- Reassess patient risk for surgical site infection based on length of surgery, potential bowel incision, vaginal contamination, and amount of blood loss
  - Anesthesia reminders to surgeon regarding potential contamination
  - Development of standard questions to remind surgeon
Response: Every Case

• **EMPOWER THE PATIENT - Provide postoperative care instructions and education to women undergoing hysterectomy (major gynecologic surgery) and family members or other support persons**

  – Effective discharge management
    • Provide postoperative care instructions prior to discharge
    • Consider giving prescriptions in advance of surgery
    • Clear up any discrepancies between hospital and surgeon instructions
    • Provide contact instructions to help patients overcome barriers when following up with surgical team
REPORTING/SYSTEMS LEARNING

Every Facility
- Establish a culture of huddles for high risk patients
- Create system to analyze and report surgical site infection data
- Monitor outcomes and process metrics
- Actively collect and share physician specific surgical site infection data with all surgeons as part of their ongoing professional practice evaluation
- Standardize a process to actively monitor and collect surgical site infection data with post-discharge follow-up
Reporting/Systems Learning: Every Facility

• Establish a culture of huddles for high risk patients
Reporting/Systems Learning: Every Facility

- Create system to analyze and report surgical infection data
  - Need to query providers to understand infection rates in patients who are not readmitted
Reporting/Systems Learning: Every Facility

• *Monitor outcomes and process metrics*
Reporting/Systems Learning: Every Facility

• Actively collect and share physician specific surgical site infection data with all surgeons as part of their ongoing professional practice evaluation
Reporting/Systems Learning: Every Facility

- Standardize a process to actively monitor and collect surgical site infection data with post-discharge follow-up
Key Points

• Anticipatory management is critical
  – Identifying adverse events that might occur is necessary when planning
  – Once adverse events can be identified, what can we do to prevent poor outcomes?
Q&A Session
Press *1 to ask a question

You will enter the question queue
Your line will be unmuted by the operator for your turn

A recording of this presentation will be made available on our website:
www.safehealthcareforeverywoman.org
Next Safety Action Series

Maternal Mental Health: Perinatal Depression and Anxiety Patient Safety Bundle
February 23, 2016
1:00 p.m. Eastern

John Keats, MD, CPE, FACOG
Market Medical Executive, Cigna Health Care of Arizona

Susan Kendig, JD, WHNP-BC, FAANP
Director of Policy, National Association of Nurse Practitioners in Women’s Health

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