Draft CDC HICPAC Guideline for the Prevention of Surgical Site Infection, What’s New?

Polly Padgette, RN, BSN, CIC
Infection Preventionist
Duke Infection Control Outreach Network
What are HICPAC Guidelines?

• **Healthcare Infection Control Practices Advisory Committee**
  - Group of 14 IC Experts + Ex-officio members
  - Provide advice on updating of existing guidelines and developing new ones
  - Tedious process with rigorous review
HICPAC Recommendation Categories: Rating the Quality of Evidence

<table>
<thead>
<tr>
<th>Category</th>
<th>Recommendation</th>
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</thead>
<tbody>
<tr>
<td>Category IA</td>
<td>A strong recommendation supported by high to moderate quality evidence suggesting net clinical benefits or harms.</td>
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<tr>
<td>Category IB</td>
<td>A strong recommendation supported by low quality evidence suggesting net clinical benefits or harms, or an accepted practice (e.g., aseptic technique) supported by low to very low quality evidence.</td>
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<tr>
<td>Category IC</td>
<td>A strong recommendation required by state or federal regulation.</td>
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<tr>
<td>Category II</td>
<td>A weak recommendation supported by any quality evidence suggesting a trade off between clinical benefits and harms.</td>
</tr>
<tr>
<td>No</td>
<td>An unresolved issue for which there is low to very low quality evidence with uncertain trade offs between benefits and harms.</td>
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Reviewing the Prevention of SSI Guidelines

• Not as many Category 1 recommendations as anticipated
• Many HICPAC recommendations are not ranked as a Category 1, because the inability to perform or lack of randomized controlled trials required to prove the safety and effectiveness.

*It could still be “Best Practice” based on expert opinion and current publications*
General Recommendations
Parenteral Antimicrobial Prophylaxis (AMP)

- Administer preoperative AMP only when indicated, based on published clinical guidelines and timed such that a bactericidal concentration is established in serum and tissue PRIOR to the incision. **Category 1B (1B)**

- No further refinement of timing can be made based on clinical outcomes. **No recommendation/unresolved issue (NR/UI)**
Parenteral Antimicrobial Prophylaxis (AMP)

- Administer the recommended AMP prior to skin incision in ALL C sections. **Category 1A (1A)**
- No recommendation related to the safety and effectiveness of weight-adjusted dosing of AMP. **NR/UI**
- No recommendation of intraoperative redosing of AMP. **NR/UI**
Parenteral Antimicrobial Prophylaxis (AMP)

- In clean or clean-contaminated cases, **DO NOT** administer additional AMP once incision is closed, **even in the presence of a drain.** 1A
Non-Parenteral Antimicrobial Prophylaxis (AMP)

- No recommendation on intraoperative AMP irrigation. NR/UI
- No recommendation on soaking prosthetic device in AMP solutions prior to implantation. NR/UI
- Do not apply AMP agents (i.e., ointments, solutions, powders) to the incision. 1B
Non-Parenteral Antimicrobial Prophylaxis (AMP)

- Application of autologous platelet rich plasma is not necessary. **Category 2 (2)**
- Use of antimicrobial coated sutures is not necessary. **2**
- No recommendation of AMP dressings applied to surgical incisions following primary closure in the OR. **NR/UI**
Glycemic Control

• Implement perioperative glycemic control and use blood glucose target levels <200 mg/dl in both, diabetic and non-diabetic patients. 1A

• No recommendation of lower or narrower target levels, nor optimal timing, duration, or delivery method of perioperative glycemic control NR/UI
Glycemic Control

- No recommendation of optimal hemoglobin A1C target levels in diabetic or non-diabetic patients. NR/UI
Normothermia

- Maintain perioperative normothermia. 1A
- No recommendation of strategies to achieve/maintain normothermia, lower limit of normothermia, or the optimal timing and duration of normothermia. NR/UI
Oxygenation

- Patients with normal pulmonary function (PF) undergoing general anesthesia with endotracheal (ET) intubation,
  - administer increased FIO$_2$, both intraoperatively and post-extubation in the immediate postoperative period.
  - to optimize tissue oxygen, maintain perioperative normothermia and adequate volume replacement. 1A
Oxygenation

• No recommendation of administering perioperative increased FIO₂ with normal PF if undergoing anesthesia without ET intubation or neuraxial anesthesia.  **NR/UI**

• No recommendation of administering increased FIO₂ via face mask/nasal cannula only during postoperative period with normal PF.  **NR/UI**

• No recommendation for optimal target level, duration, or delivery method of FIO₂.  **NR/UI**
Antiseptic Prophylaxis

• Advise to shower/bathe (full body) with either soap (Antimicrobial or non-Antimicrobial) or an antiseptic agent on at least the night before the operative day. 1B

• No recommendation on optimal timing of pre-op shower/bath, the total number of soap/antiseptic agent applications, or the use of CHG washcloths. NR/UI
Antiseptic Prophylaxis

- Perform intraoperative skin prep with an alcohol-based antiseptic agent, unless contraindicated. 1A
- Application of antimicrobial sealant immediately following skin prep is not necessary. 2
- Use of plastic adhesive drapes with or without antimicrobial properties, is not necessary. 2
Antiseptic Prophylaxis

• Consider intraoperative irrigation of deep or subcutaneous tissues with aqueous iodophor solution (AIS). Intra-peritoneal lavage with AIS in contaminated or dirty abdominal cases is not necessary. 2

• No recommendation of soaking prosthetic devices in antiseptic solution prior to implantation. NR/UI
Antiseptic Prophylaxis

• No recommendation of repeating application of antiseptic agent to skin immediately prior to skin closure. NR/UI
So....any questions related to the general recommendations?
PROSTHETIC JOINT ARTHROPLASTY
Blood Transfusion

- No recommendation for perioperative management of blood transfusion for the prevention of SSI. **NR/UI**
- Do not withhold transfusion of necessary blood products from surgical patients as a means to prevent SSI. **1B**
Systemic Immunosuppressive Therapy

- No recommendation of perioperative management of systemic corticosteroid or other immunosuppressive therapy. NR/UI
- For patients on systemic corticosteroid or other immunosuppressive therapy, the previous general recommendation applies: In clean or clean-contaminated cases do not give additional AMP after incision close, even with drain. 1A
Intra-Articular corticosteroid Injection

• No recommendation regarding management of preoperative intra-articular corticosteroid injection for SSI prevention. **NR/UI**
Anticoagulation

- No recommendation regarding the perioperative management of VTE prophylaxis for SSI prevention. NR/UI
Orthopaedic Space Suit

- No recommendation regarding the safety and effectiveness of Orthopaedic space suits or the healthcare personnel who should wear them. NR/UI
Postoperative ATX Duration with Drain Use

- In prosthetic joint arthroplasty, previous recommendation applies: In clean and clean-contaminated cases, **DO NOT** administer additional AMP agent after the surgical incision is closed in the OR, **even** in the presence of drain. 1A
  - Do you think they feel strongly about this recommendation???????
Biofilm

• No recommendation for cement modifications and the prevention of biofilm formation or SSI. NR/UI

• No recommendation for prosthesis modifications for the prevention of biofilm formation or SSI. NR/UI

• No recommendation for vaccines for the prevention of biofilm or SSI. NR/UI
Key Points


• Do not administer additional AMP doses after incision closed for clean/clean contaminated, including with drain
Key Points

• Do not use antimicrobial agents such as ointments, powders, solutions on the incision
• Implement glycemic control with target <200 for all patients
• Maintain perioperative normothermia
• Increased FIO$_2$ with intubated patients
• Shower/bath at least night prior to surgery
Key Points

• Utilize an alcohol based skin prep
• Antimicrobial sealant after prep isn’t necessary
• Plastic adhesive drapes are not necessary
• Consider intraop. irrigation with aqueous iodophor for subq. and deep tissue but not for intra-peritoneal
• Prosthetic joints, don’t withhold blood transfusions if needed and follow general AMP guidelines
Remember when you get back to the office...

• This is a DRAFT guideline, subject to final approval. Normally, only minor changes occur after the draft.

• Just because it is not a 1A, B or C recommendation, does not mean you do not need to consider implementation depending on your facility performance.
So as you implement your SUSP,

• REMEMBER -

Best Practice and Guideline Adherence Do Make a Difference in Outcomes!
What else is new in 2014?

- NHSN reporting includes primary and other than primary closures for their numerator and denominator but other than primary closure will not be submitted to CMS
- Include height, weight, diabetes and closure technique when entering NHSN procedures
- New organ space SSI category: Periprosthetic Joint Infection (HPRO and KPRO only)
What else is new in 2014?

- Physician diagnosis for SSI only applies to superficial infections as of Jan. 2014
- NHSN diabetes definition: Diabetes managed with insulin or non-insulin agent even if noncompliant with meds. Excludes diet controlled only patients
- Removed exclusion of post op accident, falls, inappropriate pt. practices, or other occurrences for SSI reporting
More Guidelines to Come?...
I’m sure
Which direction will you go?
Will you lead change or resist it?

Contact Information:
Polly Padgette
919-801-0769
polly.padgette@duke.edu