



NICU Post-Operative Antibiotic Prophylaxis

- ▶ The NICU, Antimicrobial Stewardship Program, and General Surgery teams are working to reduce the inappropriate use of antibiotics in surgical patients in the NICU.
- ▶ Prolonged antibiotics contribute to:
 1. Antibiotic resistance for future infections
 2. Changes to the gut microbiome
- ▶ Post-op surgical prophylaxis has **not** been shown to reduce the risk of Surgical Site Infections (SSI) in 'Clean' or 'Clean-Contaminated' surgical procedures
- ▶ Only pre-op surgical prophylaxis given within 60 mins prior to surgery significantly decreases the risk of SSI
- ▶ **SickKids guidelines** recommend NO antibiotics given after the patient leaves the OR for 'Clean' or 'Clean-Contaminated' procedures. This is part of the Hospital's **Choosing Wisely Campaign**.

What can **you** do to prevent antibiotic resistance?

STOP prophylactic antibiotics after the patient leaves the OR within 24 hours.

- Include clear duration plans in post-operative notes
- Include stop dates/times on all post-op prophylaxis orders
- Discuss the rationale for longer durations in post-op huddle - e.g. 'Contaminated' or 'Dirty' surgeries

This recommendation applies to:

- GA: $\geq 35+0$ weeks (no weight restriction)
- Congenital GI conditions (ie, TEF +/-EA, intestinal atresia, anorectal malformations, omphalocele, gastroschisis, malrotation)
- Surgeries considered (i) 'clean' or (ii) 'clean-contaminated' (see below)
- Antibiotics prescribed for prophylaxis, not treatment of active infections

Wound Classification:

- ✓ **Clean:** uninfected operative wound; no inflammation encountered and respiratory, alimentary, genital, or uninfected urinary tracts are not entered. Clean wounds are primarily closed and drained with closed drainage. Operative incisional wound following non-penetrating (blunt) trauma included if they meet the criteria. (eg. Ladd's procedure if inversion appendectomy, inguinal hernia, fundoplication w/o gastrotomy).
- ✓ **Clean-Contaminated:** Operative wounds in which respiratory, alimentary, genital, or urinary tracts are entered under controlled conditions; without unusual contamination. Operations of biliary tract, appendix, vagina, and oropharynx are included, provided no evidence of infection or major break in technique. (eg. TEF, intestinal atresia, most gastroschisis w/ silo, gastrotomy).
- ✗ **Contaminated:** Open, fresh, accidental wounds. In addition, operations with major breaks in sterile technique (ex, open cardiac massage) or gross spillage from the GI tract, and incisions in which acute, non-purulent inflammation encountered including necrotic tissue without evidence of purulent drainage (ex, dry gangrene), are included in this category. (eg, stool spillage in OR).
- ✗ **Dirty or Infected:** Includes old traumatic wounds with retained devitalized tissue and those that involve existing clinical infection or perforated viscera. This definition suggests that the organisms causing postoperative infection were present in the operative field before the operation. (eg, NEC, perforated bowel).

Thank you for your cooperation! Feel free to direct questions/comments to any of the team members.

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February 18, 2019