

What are surgical site infections (SSI)?

Surgical site infections occur when harmful germs enter a patient's body through the surgical site (any cut the surgeon makes in the skin to perform the operation). Infections happen because germs are everywhere - on the skin, in the air and on things individuals touch. Most infections are caused by germs found on and in a patient's body.

For some surgeries, one of the ways to prevent surgical site infections (SSI) is by giving patients antibiotics 0 to 60 minutes (for usual antibiotics) or 0 to 120 minutes (vancomycin) before surgery.

What are the risk factors for SSI?

The risk of acquiring a surgical site infection is higher if you:

- Are an older adult
- Have a weakened immune system or other serious health problem such as diabetes
- Smoke
- Are malnourished (don't eat enough healthy foods)
- Are very overweight

What is surgical site infection prevention?

One of the ways to prevent surgical site infections is by giving patients an antibiotic within 60 minutes (for usual antibiotics) or within 120 minutes (for an antibiotic known as vancomycin) before they go into surgery. The SSI-prevention indicator will report the percentage of time the health care team gave patients antibiotics within the appropriate time period before the surgery. This will apply only to patients who are 18 years or older who are about to undergo primary hip or knee joint replacement surgery.

What determines the rate?

$$\begin{array}{l}
 \text{\% of Patients with} \\
 \text{Antibiotic} \\
 \text{Administration within} \\
 \text{the Appropriate Time} = \\
 \text{Prior to Surgery}
 \end{array}
 =
 \frac{
 \begin{array}{l}
 \text{\# of Hip/knee joint replacement} \\
 \text{surgeries who received usual} \\
 \text{antibiotics within 60 min of}
 \end{array}
 +
 \begin{array}{l}
 \text{\# of Hip/knee joint replacement} \\
 \text{surgeries who received vancomycin} \\
 \text{within 120 min of skin incision} \\
 \text{skin incision}
 \end{array}
 }{
 \begin{array}{l}
 \text{Total number of patients during the reporting period who had a primary knee/hip joint} \\
 \text{replacement surgical procedure}
 \end{array}
 }$$

For Niagara Health the most recent quarterly results, Q2 July -September 2019, of the combined percentage of hip/knee joint replacement surgical patients that received prophylactic antibiotic within the appropriate time prior to surgery was 99% (389 of 400 joint replacement cases).

**Surgical Site Infection Prevention
% of Patients with Timely Administration of Prophylactic Antibiotic
Prior to Joint Replacement Surgery**

