Infection Prevention

Reducing the Risk Of Patient Infection

Reducing the Risk Of Patient Infection
Judene M. Bartley, MS, MPH, CIC and Gina Pugliese RN, MS

As many as 780,000 surgery-related infections occur each year. And you may be able to prevent many of them. Although much of the research on reducing surgical site infections (SSI) has been done in inpatient settings, the risk to patients is similar and lessons learned elsewhere can be applied in the outpatient setting with similar success. n D, Pearce P, McKenzie M, et al. Surgical wound infections occurring in day surgery patients. Am J Infect Control 1990; 18:277-82.

JCAHO’s new HAI focus
Increasing attention on healthcare-acquired infections (HAI) has prompted JCAHO to review infection reports related to its sentinel event database. Since the database’s 1996 implementation, JCAHO has received only 10 infection-related reports for review. Believing that HAI sentinel events are underreported, JCAHO released a national patient safety goal for 2004 that addresses HAI risk.

In addition to requiring hospitals to comply with the CDC’s hand-hygiene guidelines, the goal requires hospitals to manage as sentinel events all identified cases of unanticipated death or major permanent loss of function associated with an HAI.1 Note that JCAHO has clarified its interpretive language in the FAQs for reporting such HAI sentinel events to better distinguish patients who suffer an event “with” an HAI from those “from” an HAI. This change increases the focus on adherence to CDC hand-hygiene guidelines that include recommendations for the OR.2

OR managers and infection control professionals (ICPs) have deliberated how to determine whether an SSI or other surgical complication that results in severe morbidity or mortality is a sentinel event. To assist the process, the Association of Professionals in Infection Control and Epidemiology (APIC) has published a suggested root-cause analysis template, available at www.apic.org, that includes an example of when a surgical complication or infection may or may not fit the JCAHO definition of a sentinel event.3

Although only 17 percent of all HAIs among hospitalized patients are SSIs, 40 percent to 60 percent of them are estimated to be preventable.4,5 Long-standing evidence shows prophylactic antibiotics, for example, given within one hour of surgery can significantly reduce the risk of an SSI. Yet recent studies show that, in 25 percent to 50 percent of operations, doctors aren’t following this recommendation. Although most such studies have been conducted in acute-care settings, it’s likely that the less-than-adequate compliance is comparable in outpatient surgical settings.

Monitoring your HAIs is important to prevention, too. The different methods of identifying and collecting infection rates make precise outpatient infection rates hard to come by, but many studies suggest outpatient SSI rates are around 1 percent to 5 percent.7 OR managers should collaborate with ICPs to determine the best way to identify patients who develop SSIs so infection rates can be monitored to identify trends, potential clusters or outbreaks that need further investigation and to collaborate on strategies to reduce patient risks.7-9
Setting guidelines

Several special initiatives have been successful in changing system and staff behaviors to improve compliance with the recommendation that you administer prophylactic antibiotics to patients within one hour of surgery.

One such innovation is the Surgical Infection Prevention (SIP) Project, a joint CDC and Centers for Medicaid and Medicare Services (CMS) project. Started in August 2002 to reduce the risk of post-op infection, the project focuses on improving the selection and timing of administration of prophylactic antibiotics. Studies have shown that failure to administer the first dose of antimicrobial prophylaxis within two hours before incision is associated with a twofold to sixfold increase in rates of SSIs.

The CDC-CMS project found that of about 250,000 colorectal surgeries annually, about 15,075 SSIs contribute to 11,500 deaths. Between 40 percent and 60 percent of SSIs are preventable if doctors and hospitals follow the guidelines in the new prevention program, the agency says. The guidelines at the CDC-CMS Web site (www.medqic.org) provide the recommended timing and types of antibiotics for most major surgeries.

Multiple guidelines addressing HAI and SSI are published by the CDC and the Agency for Healthcare Research Quality (AHRO). Download them at the Premier Safety Institute’s Web site (www.premiersafetyinstitute.org) under the link to Safety and Infection Control Guidelines. These guidelines recommend that, for procedures routinely involving antimicrobial prophylaxis, staff work with surgeons, anesthesiologists, nursing and pharmacy to identify how the orders are written, whether standing orders can be used, and how medications are delivered to the OR to ensure the right antimicrobial at the right time. Efforts to identify the who, when, where and how long for each step of each procedure will better enable standardization and reduce variability in the process.

All the SIP resources provide information and tools to consider for each general step:

- select appropriate medications,
- administer medications in a timely manner,
- discontinue medications in a timely manner, and
- evaluate the process of care to improve care.

Keep abreast

As outpatient facilities continue to see increases in the volume and complexity of surgery, more patients at higher risk of infection because of underlying medical conditions, and as more procedures move from inpatient to outpatient, it’s imperative you keep up with emerging evidence-based practices to reduce the risk of surgical-site infections. OSM

References


9. Zoutma

Ms. Bartley (judene_bartley@premierinc.com) is a clinical consultant for the Premier Safety Institute. Gina Pugliese (gina_pugliese@premierinc.com), RN, MS, is the vice president of the Premier Safety Institute.