

Rehospitalizations after surgical site infections add \$10-65 million to health-care costs

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Preventing further complications in patients who develop infections after surgery to replace a knee or hip could save the U.S. healthcare system as much as \$65 million annually, according to an analysis presented today at the 39th Annual Educational Conference and International Meeting of the Association for Professionals in Infection Control and Epidemiology (APIC).

The research team, led by Keith Kaye, MD, MPH, corporate director of [Infection Prevention](#), [Hospital](#) Epidemiology and Antimicrobial Stewardship at Detroit Medical Center/Wayne State University, analyzed data from health insurance claims for approximately 40 million insured individuals covered by employer-based health plans. Their goal was to uncover the rate of readmission and the [financial impact](#) of surgical site infections (SSI) beyond the initial hospitalization for that diagnosis.

The team chose to follow patients who had received artificial knees and hips because treatment for an infected joint can be prolonged, involving lengthy courses of antibiotics and additional surgeries.

Of the 174,425 patients in the database who underwent hip or [knee replacement](#) in 2007, 2,134 (1.2 percent) were hospitalized for a surgical site infection (SSI) within one year following their procedure (in 2008). Of those, 267 (12.5 percent) were subsequently re-hospitalized in the year after the initial SSI hospitalization (in 2009) specifically due to SSI-

related issues, for a total of 384 hospitalizations. The data also showed that 870 patients with SSI (40.8 percent) were hospitalized for other reasons labeled "all cause" during the year after their diagnosis, accounting for 1,770 readmissions.

Subsequent rehospitalizations for SSI were associated with an average hospital stay of 8.6 days, costing on average \$26,812. Additional all-cause hospital readmissions were associated with an average hospital stay of 6.2 days and a cost of \$31,046.

According to the [Centers for Disease Control and Prevention](#), infections develop in about 1 to 3 out of every 100 patients who have surgery.

"The prosthetic joint population was important to study because these patients are particularly vulnerable to adverse events following surgical site infections, leading to unnecessary pain, suffering and medical costs," said Kaye. "This analysis shows the devastation of these infections and probably underestimates the true extent of the problem. Given the government's focus on reducing [readmission](#) rates, such complications could likely be a future target for decreased reimbursement."

A goal of the national Partnership for Patients is to reduce hospital readmissions by 20 percent by the end of 2013, as compared to 2010.

"What's important about the analysis by Dr. Kaye and colleagues is the report on the human suffering and financial impact of potentially preventable readmissions associated with SSI and all cause readmissions," said APIC 2012 President Michelle Farber, RN, CIC. "Infection preventionists need to be familiar with healthcare quality incentive programs to demonstrate the value of the infection prevention program to the financial health of their organizations and patient experience."

Provided by Association for Professionals in Infection Control

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