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## **Study Finds Efficient Method to Improve Reporting of Surgical Site Infections in Hip and Knee Replacements**

Traditional methods of tracking surgical site infections and inconsistent surveillance resources in Alberta hospitals are likely leading to hip and knee replacement infection rates being under-reported – a problem that can be mitigated quickly and efficiently, a study has found.

Most surgical site infections develop after patients are discharged from hospital. These infections can have serious consequences, including pain, reoperation to remove the implanted joint, long-term disability and even death. Alberta Health Services (AHS), like many other public health agencies, monitors surgical site infections by tracking patients who return to the hospital to have their infection treated, and through investigations by AHS's Infection Prevention and Control (IPC) staff.

But many patients who have symptoms of infection don't go to the hospital where they had the surgery, especially if it is not a local hospital. These infection cases may inadvertently go unreported, and therefore, uninvestigated by IPC staff. Furthermore, hospital efforts and resources differ, resulting in hospitals with few resources possibly underreporting their infection rates and those with more resources appearing to have comparatively high rates.

The Alberta study demonstrated that provincial surveillance could be improved efficiently by scanning administrative data, which includes patient information from all acute care facilities, for codes that suggest infection. These files would be reviewed by IPC staff to determine whether a surgical site infection had occurred.

The researchers tested their new surveillance methodology on the files of 162 patients identified through codes in the administrative data suggesting infection. It found 30% more surgical site infections than the traditional surveillance methods. In addition, 43% of the additional infection cases had been identified at an acute care facility other than the hospital where the surgery had been performed. The findings are described in [Infection Control & Hospital Epidemiology](#).

The new surgical site infection surveillance methodology has been adopted as standard practice by AHS.

The study was a product of collaboration among AHS Analytics and IPC, Alberta Bone and Joint Health Institute, and the Cumming School of Medicine's Department of Community Health Sciences, University of Calgary.

"Having reliable data is the crucial first step in improving infection rates," said Christopher Smith, Alberta Bone and Joint Health Institute's Chief Operating Officer and research team member. "This is an efficient, practical and effective way to supplement traditional surveillance methods. Used as a standardized approach for all acute care facilities, it also eliminates some of the inconsistency in reporting that makes inter-hospital comparisons unreliable."

“Alberta is unique in Canada for having a single provincial IPC program with the ability to review every patient who has a hip or knee replacement for a surgical site infection using a standardized surveillance process,” said Kathryn Bush, an IPC epidemiologist with AHS and research team member. “Following the success of this study, now every patient with an infection is included in the reported surgical site infection rates, no matter where they are hospitalized.”

**Alberta Bone and Joint Health Institute** is Canada’s only independent institute for channeling knowledge into better bone and joint health care services and the nation’s leading organization for engaging stakeholders in adopting best practices. ABJHI is a not-for-profit institute and a registered charity. Visit [abjhi.com](http://abjhi.com) for more information or to make a donation. Stay up to date with news from ABJHI on Twitter @abjhi\_news.

**Alberta Health Services** is the provincial health authority responsible for planning and delivering health supports and services for more than four million adults and children living in Alberta. Its mission is to provide a patient-focused, quality health system that is accessible and sustainable for all Albertans. Visit [albertahealthservices.ca](http://albertahealthservices.ca) for more information.

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