

# Medicare data reveals differences in orthopedic surgical outcomes

February 15 2010

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The more specialized a hospital is in orthopedic surgical care, the better the outcomes appear to be for patients undergoing hip and knee replacement surgery, University of Iowa researchers report in a new study of Medicare patients.

Among more specialized hospitals, there were fewer serious post-surgical complications such as [blood clots](#), infections and [heart problems](#), as well as fewer deaths.

The findings, which were published online Feb. 11 by the [British Medical Journal](#), were based on data for nearly 1.3 million patients who received hip or knee replacement surgeries between 2001 and 2005 at 3,818 hospitals in the United States.

"The findings suggest that more specialized hospitals have better outcomes even after we account for the type of patients each hospital cares for and the number of hip and knee replacement surgeries that each hospital performs," said the study's lead author Tyson Hagen, M.D., fellow in [rheumatology](#) at the UI Roy J. and Lucille A. Carver College of Medicine and UI Hospitals and Clinics.

"While specialization appears to be an important indicator of quality, it is just one factor that patients might want to consider along with other important factors, such as how close the hospital is to home," Hagen added.

By using [Medicare data](#) from 2001 to 2005, the study was limited to the experience of patients age 65 and older. The study authors used Medicare data since it is available for almost all hospitals in the United States. While the study focused on people age 65 and older, the researchers said the findings indicate trends that could be relevant to the larger population.

The study adjusted for differences in the types of patient seen at each hospital, as well as the number of surgeries that each hospital performed. Compared to the least specialized hospitals, the more specialized hospitals treated a lower proportion of women and African-Americans. These hospitals also treated patients who had better health overall.

The results grouped hospitals into five levels of specialization. At the average hospital, orthopedic surgeries, which include back surgery and fracture repair in addition to joint replacements, represented 10.5 percent of admissions. The most specialized group in the current study included hospitals that had 14.5 percent or more admissions for orthopedic care. These hospitals had fewer complications or deaths within the first 90 days after a surgery than less specialized hospitals did.

For example, the rate of death for patients who had hip and knee replacements was twice as high at the least specialized hospitals compared to patients treated at the most specialized hospital -- 1.4 percent compared to .7 percent within the first 90 days after surgery.

In addition, the rate of post-surgery infection for patients who got hip and knee replacements decreased from 2.6 percent at the least specialized hospitals to 1.6 at the most specialized hospitals.

The study's senior author Peter Cram, M.D., UI associate professor of internal medicine, noted that larger hospitals might do a relatively high volume of orthopedic surgical cases but often were categorized as less

specialized because they do so many other types of surgeries besides orthopedics.

"Learning more about orthopedic specialization could help us to better understand how to organize care and take ideas from more specialized hospitals to less specialized hospitals, and result in better outcomes all around," Cram said.

**More information:** [www.bmj.com/cgi/content/full/b ...  
HWGYKUdi&keytype=ref](http://www.bmj.com/cgi/content/full/b...HWGYKUdi&keytype=ref)

Provided by University of Iowa

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