

# Hip fracture deaths higher in small- and medium-sized hospitals than in teaching hospitals

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The risk of death after hip fracture is higher for patients in small- and medium-sized hospitals than in teaching hospitals in Canada, found a study published in *CMAJ (Canadian Medical Association Journal)*.

There are 30,000 hip fractures reported in Canada every year, and about 1 of 10 [patients](#) die in hospital. Little is known about how changes to patient care could improve survival. In this study, researchers examined whether the location where patients undergo treatment for hip fractures may influence their chance of survival.

Canadian researchers looked at data on all patients aged 65 years or older who were hospitalized for a first hip fracture (168,340) between January 2004 and December 2012. They used data from the Canadian Institute for Health Information (CIHI) (data did not exclude Quebec) to see whether there were more deaths on discharge codes at different treatment settings. Members of the Association of Canadian Academic Healthcare Organizations were classified as teaching hospitals; all other hospitals were [community hospitals](#) grouped by the number of beds. Large hospitals had 200 or more beds; medium, 50 to 199 beds) and small, less than 50 beds.

The researchers found that for every 1000 patients admitted to hospital with hip fracture, 14 more die at medium community hospitals and 43 more at small community hospitals than those admitted to teaching

hospitals. For every 1000 patients who undergo surgery to repair their hip fracture, 11 more die at medium community hospitals than at teaching hospitals.

"In the elderly, hip fractures occur as frequently as common cancers but with severely worse outcomes," states Dr. Katie Sheehan, School of Population and Public Health, University of British Columbia (UBC), Vancouver, BC. "Even after treatment, 30% die within a year, 25% never walk again and 22% never live independently. These figures have not changed in the past 15 years, and qualify hip fractures as a major health care issue in Canada."

These findings support previous research that found a higher risk of death after hip fracture for patients treated at community hospitals and those with fewer available beds.

Most patients undergo surgery to repair their hip fracture. The risk of death after surgery was higher at medium community hospitals than at teaching hospitals. The higher risk may be a result of less timely care owing to fewer beds or staff or available equipment at medium community hospitals. Whether additional resources for medium community hospitals may improve survival in these vulnerable patients requires further investigation.

A small proportion of patients did not undergo surgery. These patients were also at higher risk of death when admitted to medium and small community hospitals than those admitted to [teaching hospitals](#), perhaps because of a need to transfer them for surgery.

Whether time to surgery, resource availability or organization of care accounts for differences in survival requires further investigation.

The study was conducted by the Canadian Collaborative Study of Hip

Fractures (@HFstudy). CIHR (Canadian Institutes of Health Research) funded this pan-Canadian team of orthopedic surgeons, clinicians, health services researchers, analysts, decision-makers, and experts in knowledge translation and patient engagement to study access, delivery and outcomes of care after [hip fracture](#). The team is led by UBC's Professor Sobolev (UBC, School of Population and Public Health; Centre for Clinical Epidemiology and Evaluation, Vancouver Coastal Health Research Institute) and Associate Professor Pierre Guy (UBC, Department of Orthopaedics; Centre for Hip Health and Mobility, Vancouver Coastal Health Research Institute).

Provided by Canadian Medical Association Journal

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