

Surgeons associate preoperative falls with worse postoperative outcomes in older adults

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An answer to the simple question—"Have you recently taken a fall?"—can tell a surgeon how well an older adult may recover from a major operation according to researchers from the University of Colorado, Denver. New study findings, reported today at the 2012 Annual Clinical Congress of the American College of Surgeons (ACS), indicate that preoperative falls in older surgical patients are a powerful predictor of complications, prolonged hospital stays, and higher rates of disability.

"It has been shown in previous studies that a history of falls predicts poor long-term outcomes but we have never looked at immediate preop assessment related to postop outcomes," explained Teresa Jones, MD, lead study author and surgical resident at the University of Colorado. "This is the first time that falls as a stand-alone risk marker have been used for predicting outcomes in older adults."

Falls—a marker of physical frailty—are a risk factor unique to the geriatric population and increase the chance of hospitalization and even death in older adults. In fact, 47 percent of [hospital admissions](#) of individuals age 65 and older are the result of fall-related injuries, according to the National Trauma Databank of the American College of Surgeons.*

The study included 208 patients, average age 74, who were undergoing colorectal or cardiac surgical procedures at the Denver Veterans Affairs Medical Center. Dr. Jones and colleagues asked the patients, of whom

were mostly male, if they had fallen in the six months prior to their scheduled operation. Preoperative falls occurred in 34 percent of the patients.

Researchers found that adverse outcomes occurred more frequently in patients who had reported one or more falls in that timeframe. For patients undergoing colorectal operations, 58 percent of those who fell sometime prior to their operations experienced more than one postoperative complication versus only 27 percent of those who did not fall. Those complications included [cardiac events](#); stroke; reoperation; and pulmonary, renal, thrombotic, and infectious complications.

In addition, patients who reported a postoperative fall spent nearly three times as many days in the hospital as their fall-free counterparts.

Further, 59 percent of those who fell before surgery, as opposed to only 4.2 percent of those who did not, needed institutional care following their operations. Likewise, significant differences were seen in [patients](#) undergoing cardiac surgical procedures.

"Our goal is to help with preoperative and postoperative planning," Dr. Jones explained. "If it's likely that a patient will need to enter a nursing home for several weeks after an operation, the patient and family can evaluate various facilities beforehand to see which one would best address their specific needs. "It's important for a patient to be at a place that they've chosen and know what to expect after surgery," Dr. Jones said.

More than one-third of all operations in the United States are now performed on people 65 and older, and the fastest growing segment of the population undergoing various surgical procedures is adults in their 80s, the researchers said. "This assessment is very novel in the sense that older adults have unique risk factors that we can look for that suggest

that they will do poorly after an operation, but these markers are not readily recognized by the wider surgical community," said study coauthor Thomas Robinson, MD, FACS, associate professor of surgery at the University of Colorado.

Thus the ultimate aim, the study authors said, is to develop simple tests that will enable the average surgeon to forecast who is going to fare best following an operation. "I think this study is going to improve care by changing how we counsel [older adults](#) prior to these major operations," Dr. Robinson said. "We want to tailor the patient's health care plan based upon what will be the best possible outcome. We shouldn't settle for putting people in institutional care facilities for the last six months of their life."

Daniel Wu, MD, chief surgical resident, department of surgery, Denver Veteran's Affairs Medical Center also contributed to this study.

More information: *Source: American College of Surgeons Committee on Trauma. "Incidents by Selected Mechanism of Injury and Age (Table 17)." 2011 Annual Report of the National Trauma Data Bank. Available at [www.facs.org/trauma/ntdb/pdf/n ... annualreport2011.pdf](http://www.facs.org/trauma/ntdb/pdf/n...annualreport2011.pdf). Accessed September 14, 2012.

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