New trauma care pathway reduces delirium and likelihood of returning to the hospital

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A standardized interdisciplinary clinical pathway to identify and manage frailty in older patients has reduced the rate of one of the most debilitating complications for older patients—delirium—and kept patients from returning to the hospital within 30 days of treatment for traumatic injury. The pathway is being adapted for other surgical services as trauma surgeons from Brigham and Women's Hospital, Boston, focus attention on the specific needs of elderly surgical patients. A study describing the pathway and its effects on outcomes appears as an "article in press" on the *Journal of the American College of Surgeons* website in advance of print publication.

As the U.S. population continues to age, increasing numbers of elderly patients will have a need for trauma surgery. By 2050, 40 percent of all trauma patients will be over age 65.[1] While the elderly are at increased risk for morbidity and mortality after trauma, age itself is not the sole reason for poor outcomes.[2] Frailty is a major contributor. Frail patients are more likely to have complications and loss of function after hospital care and require readmission for repeat trauma than more robust patients.[3] As many as 50 percent of older trauma patients are frail, and 78 percent are functionally impaired.[4]

Interdisciplinary inpatient care protocols involving consultation with geriatricians have improved outcomes for elderly hospitalized patients.[5] However, there is a nationwide shortage of geriatricians.[6]

"It's just not feasible to have a geriatrician available for consultation all

the time. We needed to become better equipped to provide dedicated geriatric-focused care on our own. So we put some processes in place to screen elderly trauma patients for frailty and stratify and direct our resources to provide the best possible care for them," said Zara Cooper, MD, FACS, an associate professor of surgery, Harvard Medical School, and corresponding author of the study.

Since Brigham and Women's Hospital's trauma surgery service hired a geriatrician to consult on the care of elderly injury victims in 2014, it documented fewer complications, mortalities, readmissions and extended hospital stays.[7] However, the surgeons noticed gaps in care when the geriatrician was not available and lack of overall uniformity in the way recommendations from the geriatric team were instituted.

The pathway for frail elderly trauma patients was created in 2016 to standardize processes of care a geriatrician would typically recommend: early ambulation, bowel and pain regimens, non-pharmacological delirium prevention, nutrition, physical therapy, and geriatric assessments.

Surgeons at Brigham and Women's Hospital developed the Frailty Identification and Care Pathway over a six-month period with input from geriatrics, nursing, nutrition, physical and occupational therapy, speech and language pathology, social work, and care coordinators. The pathway makes use of the five-item FRAIL scale to identify vulnerable elderly trauma patients, a standardized set of orders for geriatric-focused care and consultations, family meetings, and fall prevention education.[7]

In the present study, researchers compared outcomes for frail elderly trauma patients before and six months after implementation of the pathway. In addition to overall mortality, the investigators analyzed whether the pathway could prevent or quickly recognize and treat delirium (one of the most common causes of increased hospital length of

stay), transfer to a nursing facility, and mortality within six months of hospital care.

In addition, the investigators tabulated the 30-day hospital readmission rate, which serves as an indicator of quality hospital care and effective use of resources.

Researchers reviewed the care of 125 patients who were treated before the pathway was implemented and 144 after it was in place for six months and found lower rates of delirium, in-hospital mortality, and readmission. Patients who were managed according to the pathway had a 9 percent less risk for delirium, 3 percent reduced risk for mortality, and 7 percent lower risk for readmission.

Interdisciplinary protocols represent a shift in perspective for trauma surgeons. "Trauma centers are primarily focused on hemorrhage and complications that are typical for young patients. The elderly, especially frail elderly, have very different needs. Innovative models for geriatric trauma patients are emerging in parts of the country that have a significant proportion of older adults," Dr. Cooper said.

The pathway at Brigham and Women's Hospital is fairly straightforward and makes use of resources that are readily available in other trauma centers and surgical services. The standardized approach is being expanded for pre- and post-operative elective operations for frail elderly patients. "We have to adapt the protocol here and there, but the basic framework relies on getting patients mobile and managing medications, nutrition, and communication with families," Dr. Cooper said. "This is the type of care that matters to patients and should be universal."

More information: Elizabeth A. Bryant et al. Frailty Identification and Care Pathway: An Interdisciplinary Approach to Care for Older Trauma Patients, *Journal of the American College of Surgeons* (2019).

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