Geriatric consultation with trauma surgeons improves outcomes for elderly accident victims

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CHICAGO (March 3, 2016): An immediate consultation between trauma surgeons and a geriatrician improves multidisciplinary care of elderly accident victims and the sensitivity of the family to the patient's ongoing health care needs. The process also demonstrates the role of the hospital's trauma surgery service as a foundation for creating comprehensive clinical pathways for acute and follow-up care of vulnerable elderly patients, according to a study published online in the *Journal of the American College of Surgeons* in advance of print publication.

Researchers compared processes of care and clinical outcomes before and after a trauma surgery program that began in September 2013 and automatically referred patients age 70 years and older for geriatric consultation. The study included 406 patients; 191 patients had a geriatric consultation between October 2013 and September 2014. The remaining 215 patients were treated before the program began and served as historical controls.

Elderly patients account for an increasing proportion of trauma care admissions to U.S. hospitals. Many of these patients are frail and cognitively impaired, and they are at high risk for death, disability, and loss of independence.

"Elderly patients who have fallen or been involved in a motor vehicle or pedestrian accident can very often trace the etiology of their accident to frailty or other geriatric syndromes in some respect," said lead study author and trauma surgeon Zara Cooper, MD, FACS, assistant professor of surgery at Brigham and Women's Hospital, Boston. "These patients have decreased response time or severe curvature of the spine that makes it difficult for them to cross the street in time. Many also are cognitively impaired so they don't look both ways before they step into the street. The trauma surgeons in our hospital began to realize that we weren't caring for elderly patients in the most comprehensive and thoughtful way if we didn't involve geriatric expertise in managing these types of problems," Dr. Cooper said.

Departments of trauma surgery in other institutions have a geriatrician as part of the trauma surgery team, or they include aspects of a comprehensive geriatric assessment in the trauma surgery evaluation. The approach used in this study triggered a consultation with a geriatrician whenever an elderly patient was sent for trauma surgery. "Rather than have a geriatrician automatically manage the medical aspects of care, we opted for a consultative model that would foster collaboration and conversation between the trauma surgeons and the geriatric specialist. This model also allowed us to develop a relationship between our trauma surgery residents and a geriatrician and incorporate geriatric expertise in their education," she added.

The geriatric consultation program assigned a full-time, board-certified geriatrician to the trauma service for consults on weekdays. Elderly trauma patients were assessed by the geriatrician within 24 hours of admission Monday through Friday or at the beginning of the following week if they were admitted on a weekend. The geriatrician assessed the patient's cognition, function, nutritional status, and social circumstances, reviewed organ systems for common geriatric syndromes as well as sensory impairments and factors that may lead to delirium, and managed medication use and dosages.

Before the program was inaugurated, only 3.26 percent of geriatric trauma patients were referred to a geriatrician. In the first year of the program, that number rose to 100 percent. The geriatric
consultation program increased referrals for cognitive evaluation from 2.33 percent to 14.21 percent and the use of advanced directives from 10.23 percent to 38.22 percent. Reductions in 30-day mortality and admission to the intensive care unit were clinically meaningful. Short-term mortality fell from 9.30 percent to 5.24 percent, and ICU readmissions dropped from 8.26 percent to 1.96 percent. These differences were not statistically significant because the number of patients in the study was not large enough for a statistically significant analysis.

On the basis of the findings from this study, trauma surgeons at Brigham and Women's Hospital are developing clinical pathways that flag frail elderly individuals as soon as they arrive in the emergency department, identify a health care proxy who can assist the patients within 24 hours, obtain a complete geriatric assessment as well as a bedside nursing follow-up evaluation, and arrange for discharge planning within five days.

"Elderly patients do receive these aspects of care today but often in isolation. Trauma surgery is a great place to begin putting together a comprehensive care plan because most trauma surgeons are also board certified in critical care medicine and have an in-depth understanding of medical management and physiology as well as multidisciplinary systems and algorithms that can be adapted for geriatric patients," Dr. Cooper said.

Trauma surgeons also are in a unique position to offer guidance for patients' families. "A traumatic admission for an older patient is often a sentinel event that signifies a change in the patient's trajectory. It is an important time to educate families about frailty, home safety, and advanced care planning," she concluded.
