

## Quality of Emergency Department Care for Elderly

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With the aging of the population and the demographic shift of elderly in the healthcare system, the emergency departments will be increasingly challenged with complexities of providing care to geriatric patients. Major consumers of emergency health care in the U.S. hospitals are over 65 years old [1]. In 2009, 25% of adults aged 65 years or older had at least one emergency department visit in the past year, and 8% had multiple visits [1]. Rate of emergency room visits by the elderly grew 34 percent during the decade 1993 to 2006, faster than any other group [2]. Projections are that if this trend continues, visits by the elderly could nearly double by 2013 to 11.7 million, up from 6.4 million in 2003 [2]. Another dimension to the emergency department care is the presence of racial differences in usage. Visits for black elderly during the 10-year time period studied increased 93 percent to 77 visits per 100 population, whereas the increase was just 26 percent for whites, or 36 visits per 100 population. The rapid increase in emergency department visits by the elderly is fueling fears that demand by the elderly will overwhelm an overcrowded system that is already on the verge of collapse. While reasons for the higher demand are less clear, they may include more elderly surviving with chronic medical issues, as well as problems in accessing primary care doctors. Elderly typically present with complex medical conditions, stay longer for more-extensive diagnostic testing and treatment regimens, and have special needs during their visit. Currently, the physical design and care rendered to the elderly is not aligned with their special needs. Rapid triage and diagnosis may not be feasible in the elderly with multiple comorbidities, polypharmacy, functional and cognitive impairments and presenting with atypical clinical signs and symptoms.

Hospitals nationwide are trying to redefine the emergency department experience for the elderly by building facilities dedicated solely to their needs. Elderly patients experience an increase in adverse outcomes as a result of failure to meet their needs during hospitalization [2]. At the same time, increased pressure on hospitals to reduce the length of stay and restrain the resources has led to an increase in re-admission of elderly patients [2-5]. Multiple re-admissions and frequent emergency department visits affect the physical, physiological and social factors of patients and their caregivers [2-5]. This has implications for the cost and health resource utilization. In order to minimize the adverse outcomes, studies have addressed various geriatric based emergency department interventions such as: (a) discharge planning and geriatric assessment, (b) nutrition interventions, (c) geriatric evaluation, (d) nurse interventions, and (e) geriatric consultation. Geriatric based emergency department is a medical unit where increased attention to the patient's functional level, improved treatments of geriatric syndromes and an integrated discharge planning, combined with a thorough pharmaceutical review are employed to maximize the clinical outcomes among elderly. The interactions between patients and their environment (clinical, social and physical) are the basis for the geriatric emergency department intervention that satisfies the needs of elderly. Though limited, the literature on specialized geriatric based emergency department is promising [6,7].

Quality of care is a widely discussed topic in healthcare and is defined as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" [5]. The Institute of Medicine report, 'Crossing the quality Chasm: A new health system

for the 21<sup>st</sup> century' states that "care for the chronically ill needs to be a collaborative, multi-disciplinary process [5]. Effective methods of communication among caregivers and patients are critical to providing high quality of care"[5]. The conceptual model of quality of care consists of three main components, structure, process and outcomes [8]. The structural component comprises of characteristics of hospitals and physicians and is defined as the "resource used by providers or organizations to support the delivery of care to patients." The process of care component includes the way physician and patients interact, appropriateness and timeliness of treatment, interventions, and other non-clinical factors associated with care process. Finally, the outcome is a derivative of structure and process and includes changes in patients' mortality, health status, satisfaction with care, health related quality of life and functional status. Visits by the elderly represent a large burden, the extent of which is poorly understood. Because the stereotype of the psychiatric, drug-seeking, or non-urgent frequent user pervades, it would be enlightening to know the significance of this subgroup in terms of size, resource consumption, and effect on emergency department care and usage [7,9,10]. Elderly patients often present with complex care needs that demand continuum of care process to enhance quality of care. Hospitals can play an important role in this continuum of care process for elderly and should focus on the potentially avoidable readmissions.

A major concern of policymakers in the US is the escalating cost of healthcare and an unacceptable variation in quality of care. The first step in eliminating these variations is to identify their determinants and minimize the overuse, under-use and misuse of health resources. Identifying and maximizing use of high-value interventions and minimizing no-value or low-value interventions may lead to improvements in the quality and efficiency of emergency care for elderly. The objective of any restructuring of emergency department should incorporate unique needs of elderly in order to reduce readmissions and improve overall care [7,9,10]. Improving efficiency and quality of care is also crucial for reducing disparity in care among the aging population. Analyzing the interaction between the hospital and physician system, socioeconomic system and environmental system may help us identify factors associated with variation in healthcare and aid the development of micro and macro level incentive policies to address cost and quality of emergency department care for elderly. This will be an important step towards the goal of providing high quality healthcare while minimizing health resource utilization and cost for elderly. Future research in the arena of geriatric emergency department care should focus on: (1) systematic assessment that identifies components and outcome measures integral to effective care

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management models for elderly, in the context of an index emergency department visit; (2) identifying important differences in the models and their associated outcomes to support the future development of an evidence-based normative and effective geriatric emergency management practice model designed to address the special care needs of elderly; and (3) exploring the wide heterogeneity among patients, including insurance status and frequent emergency department users. As interventions will undoubtedly use large, systems-based approaches, understanding this heterogeneity and care coordination will be crucial. Elderly are frequent users of emergency department services and are a heterogeneous group with many dimensions to their service need. This group has not yet been sufficiently defined to allow clear policy direction. Many elderly present with true medical needs, which may explain why existing attempts to address the special needs of elderly have had mixed success at best. This also emphasizes the need for comprehensive care models that incorporate multiple dimensions of the care needs of elderly.

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