ED Utilization and Self-Reported Symptoms in Community-Dwelling Older Adults

Authors: Gordana Dermody, PhD, RN, CNL, Patricia Sawyer, PhD, Richard Kennedy, MD, PhD, Courtney Williams, MPH, and Cynthia J. Brown, MD, MSPH, AGSF, Spokane, WA, Birmingham, AL

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Introduction: The rise in ED utilization among older adults is a nursing concern, because emergency nurses are uniquely positioned to have a positive impact on the care of older adults. Symptoms have been associated with ED utilization; however, it remains unclear whether symptoms are the primary reason for ED utilization. The purpose of this study was to describe the self-reported symptoms of community-dwelling older adults prior to accessing the emergency department and to examine the differences in self-reported symptoms among those who did and did not utilize the emergency department.

Methods: A prospective longitudinal design was used. The sample included 403 community-dwelling older adults aged 75 years and older. Baseline in-home interviews were conducted followed by monthly telephone interviews over 15 months.

Results: Commonly reported symptoms at baseline included pain, feeling tired, and having shortness of breath. In univariate analysis, pain, shortness of breath, fair/poor well-being, and feeling tired were significantly correlated with ED utilization. In multivariable models, problems with balance and fair/poor well-being were significantly associated with ED utilization.

Discussion: Several symptoms were common among this cohort of older adults. However, no significant differences were found in the types of symptoms reported by older adults who utilized the emergency department compared with those who did not utilize the emergency department. Based on these findings, it appears that symptoms among community-dwelling older adults may not be the primary reason for ED utilization.

Key words: Activities of daily living; Aged; Locomotion; Rural populations; Emergency service

The use of ED services is common among older adults. In 2011, older adults in the United States made 40.7 million ED visits, and approximately 43% of these ED visits resulted in hospitalization.[1] Among persons 65 years and older who utilized the emergency department in the US, 12.2% were white, 2.3% were black or African American, and 4.1% were classified as "other."[2] As the number of older adults with chronic illness and multi-morbidity increases, ED utilization is predicted to rise among this segment of the population.[3-6]

Geographic regions in the US seem to have an impact on the number of ED visits per 100 persons per year. The Southern region had the highest number of ED visits, with a rate of 48.7 per 100 persons per year. The Northeast had a rate of 44.3, the Midwest had a rate of 45.2, and the West had the lowest number of ED visits per 100 persons per year, with a rate of 37.2. In addition, many developed nations anticipate a steady rise of ED utilization, which may result in increased health care resource consumption.[7,8] Although the rise in ED utilization among older adults is a nursing concern, studies in nursing journals concerning ED utilization by community-dwelling older adults are limited, and more nurse-led interdisciplinary research needs to be conducted to fill this gap.

The rise in ED use is also concerning because ED use is associated with negative health outcomes, especially in older adults. The upward trend in ED utilization is particularly problematic because while they are in the emergency

Gordana Dermody is Clinical Assistant Professor, Washington State University College of Nursing, Spokane, WA.

Patricia Sawyer is Associate Professor, Comprehensive Center for Healthy Aging, University of Alabama at Birmingham, Birmingham, AL.

Richard Kennedy is Assistant Professor, Comprehensive Center for Healthy Aging, University of Alabama at Birmingham, Birmingham, AL.

Courtney Williams is Statistician 1, Comprehensive Center for Healthy Aging, University of Alabama at Birmingham, Birmingham, AL.

Cynthia J. Brown is Parrish Professor and Director, Division of Gerontology, Geriatrics, and Palliative Care, Comprehensive Center for Healthy Aging, University of Alabama at Birmingham, Birmingham, AL.

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For correspondence, write: Gordana Dermody, PhD, RN, CNL, Washington State University College of Nursing, Office 217 E, PO Box 1495, Spokane, WA 99210-1495; E-mail: gordana.dermody@wsu.edu.

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department, compared with their younger counterparts, older adults receive more diagnostic testing that could be harmful and may even be unnecessary.[9] Studies show a significant increase in the use of resources when older adults visit the emergency department, which includes doubling of intensive care services, an increased number of imaging tests and electrocardiograms, increased cardiac monitoring, and inappropriate medication for older adults.[8] Older adults are also 5.6 times more likely to be hospitalized from the emergency department, and the risk for repeat ED visits increases with age.[2,6,7]

Once they are admitted to the hospital, inadequate discharge planning for older adults with multifaceted co-morbidities is common.[7,10] This situation is further complicated by either a lack of home follow-up or by home follow-up that does not address chronic symptom self-management in older adults recently discharged from the hospital, potentially leading to repeat ED visits. However, multidisciplinary nurse-directed transitional care programs have been successful in reducing hospitalization and ED visits.[11,12] For example, a clinical nurse specialist (CNS)–directed transitional care program with a chronic disease self-management focus significantly reduced ED utilization.[12] This multifaceted transitional program included making the initial visit in the hospital and conducting a follow-up home visit within 24 to 48 hours after discharge. During the first visit in the hospital, the CNS completed a comprehensive physical assessment, reviewed medications, and assessed patient risk factors and the presence of social support. Importantly, this nurse-led program also included an identification of patients' self-management learning needs and a discussion of goals and a safe transition home.[12]

Transitional programs with a focus on chronic illness self-management may be instrumental to preventing ED utilization in older adults. However, studies show that community-dwelling older adults may utilize the emergency department for a number of reasons, and more research is needed to understand the underlying factors. As cited in the literature, the 10 most common reasons that bring older adults to the emergency department include chest pain, shortness of breath, abdominal pain, vertigo, back pain, accident, syncope, and dyspnea.[8] In addition, 29% of all ED visits by older adults are related to injuries such as falls, which are known to increase with age, a decline in activities of daily living (ADLs), and associated frailty.[3,13] Further, studies suggest that the frequency of physical and psychological symptoms, as well as the severity of these symptoms, may be one of the leading causes of ED utilization in the US.[8,14-16] In addition, palliative care patients may use the emergency department to address pain and symptom management rather than accessing primary care providers or hospice services.[16-18]

Further, differences may exist between rural and urban-dwelling older adults in regard to access to primary care providers and receiving age-appropriate care in rural emergency departments because of geographic barriers and poverty.[1,19] A recent report showed that the number of ED visits per 100 persons per year was slightly higher for non-metropolitan areas, with a rate of 45.2, compared with geographic regions considered metropolitan, with a rate of 44.3.[2] This situation could be problematic for vulnerable older adults, because studies show that few physicians in the rural setting have board certification for emergency medicine.[20] Although these study findings regarding the reasons older adults utilize the emergency department suggest that a convergence of factors may be responsible for the rise in ED utilization, acute or chronic illness symptoms have been viewed as the primary factors associated with ED utilization by older adults.

In spite of targeted approaches to assess and treat symptoms in older community-dwelling older adults,[17] unmanaged symptoms continue to be associated with increased overall health care utilization, including ED use, and mortality.[8,21] Unrelieved symptoms may lead to physical and cognitive decline, which could result in greater anxiety and increased suffering.[22] However, gaps exist in our understanding of the impact that illness-related symptoms may have on utilization of the emergency department by older adults. Previous studies have predominantly examined reasons for ED utilization retrospectively. In addition, studies retrospectively analyzing the symptoms that have led older adults to the ED visit have no comparison group of persons who have similar symptoms and yet did not utilize the emergency department.[6,8,22,23] Categorizing the symptoms for ED utilization based on diagnosis or conditions such as accidents, chronic or acute illness, and mental status changes[23] is problematic because they exclude the patients' self-perceived symptoms prior to the ED visit. Descriptions of symptoms from the patients' perspective that have resulted in the ED visit are important to the development of tailored multidisciplinary interventions to address the increase in ED utilization and decrease unnecessary ED visits. However, few studies describe self-perceived patient symptoms prior to visiting the emergency department.[8] It remains unclear if illness-related symptoms among community-dwelling older adults are the primary reason for ED utilization and which of the symptoms experienced are the most likely to lead to ED utilization. Therefore, the purpose of this current analysis is to describe the self-reported symptoms of community-dwelling older adults prior to accessing the emergency department. In addition, the differences in self-reported symptoms among 2 groups of