

Exploring The Unmet Needs of Medicare Frequent Users of Emergency Room Departments: A Theoretical Literature Review

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ABSTRACT: For over a decade now, healthcare reform has been front and center in public and political forums, largely driven by concerns about access, cost, quality, and the economic burden placed on patients, employers, and payers. Despite the significant improvement in Medicare spending in recent years, frequent emergency department use continues to be a recurring issue for many Medicare beneficiaries. This research will examine the literature on Medicare frequent users of emergency departments. While frequent users of emergency departments are a small proportion of all patients, they account for a disproportionate number of visits to the emergency department. The Centers for Medicare & Medicaid Services efforts focus on decreasing costs and improving the quality of care. It is important to understand the characteristics of Medicare frequent users of emergency departments to target this population more effectively through policy intervention. To understand this population, this review will focus on demographics, degree and type of illness, access to medical care, patterns of utilization, and challenges experienced by this population.

KEYWORDS: Medicare, Emergency Department (ED), Frequent Users of Emergency Departments (FUED), Sociodemographic, Minorities

Introduction

The emergency department (ED) is an important public service that provides immediate access and stabilization for patients with emergency conditions (Rasouli et al. 2019). Nonetheless, emergency department visits (both preventable and non-preventable) cost \$76.3 billion in the United States in 2017 alone (AHRQ 2017). Policymakers have long argued that the use of the emergency departments (ED) for conditions preventable through alternative high-quality outpatient care contributes to a high percentage of waste and inefficiency within the U.S. healthcare system and delays care for patients with emergent conditions (Balakrishnan et al. 2017). As such, the ED has been subject to policymaker scrutiny as momentum has grown to curb healthcare spending, and payers have moved towards delivery reforms and alternative payment models designed to improve the value of healthcare services more broadly (Burwell 2015).

Individuals who seek care at the ED often are referred to as frequent emergency department users (FUED). FUED users are typically identified as having four or more visits to the ED in a year. The issue of frequent ED use is relevant to the Medicare population. Medicare beneficiaries are nearly twice as likely as privately insured individuals to be frequent ED users (Hunt et al. 2006). Today, Medicare provides this coverage for over 64 million beneficiaries, most of whom are 65 years and older (Medicare n.d.). Frequent users aged 65 years or older represent as little as 6% of all ED patients but can account for up to 28% of its accesses (Dufour et al. 2019). Understanding the causes of frequent ED use and designing interventions to address driving factors has been the focus of an ever-growing body of literature (Brunner et al. 2021). The fact that patients from disadvantaged areas are more likely to rely on the ED for routine care, or even at times preventative care, only further reinforces the need for robust emergency care systems as an essential part of the fabric of the public health system (Carlson et al. 2021).

Medicare Population and Healthcare Reform

The U.S. Centers for Medicare and Medicaid Services (CMS) supports medical funding for the aged, low-income, disabled, and high-risk populations. Eligibility for Medicare is available for the following individuals:

- People who are 65 or older
- Certain younger people with disabilities
- People with End-Stage Renal Disease (permanent kidney failure requiring dialysis or a transplant, sometimes called ESRD) (Medicare n.d.).

Medicare is expected to experience the fastest spending growth (7.6 percent per year over 2019-2028), largely due to having the highest projected enrollment growth (CMS 2021). Meanwhile, the annual Medicare spending per beneficiary reportedly increased from \$7,172 to \$14,931 to \$32,498 when the beneficiary had one, two, and three or more chronic conditions, respectively (Ahn et al. 2020). The projected increase in enrollment, along with rapid growth in reported federal spending, is being addressed through healthcare reform initiatives that focus on proactive care coordination and improved quality of care in an effort to curve excess healthcare spending.

A reform implies sustained, purposeful, and fundamental changes (Marušič & Rupel 2016). The Affordable Care Act (ACA) reform introduced various programs to support access to care, quality of care, and expanded coverage for many Americans. The ACA also established the Center for Medicare & Medicaid Innovation (hereinafter, the Innovation Center) within CMS to develop and evaluate new reimbursement and incentive models in federally funded insurance programs, with the goal of improving the value of Medicare and Medicaid expenditures and population health (Buehler et al. 2017). The CMS initiatives include, but are not limited to, accountable care organizations (ACOs) and bundled payments that may promote better case management and care coordination for patients with complex diseases and reduce their reliance on emergency departments (Colligan et al. 2016).

The literature surrounding the success of the ACA demonstrates a need for continued assessment of the barriers that persist among healthcare delivery models today. A study by McWilliams et al. (2017) revealed that widespread efforts to improve the management of chronic conditions for ACO patients had not been associated with program-wide reductions in hospitalizations for chronic conditions, even though they have probably enhanced access and patients' experiences. Another study found an increase in the probability of having ≥ 1 emergency department (ED) visit by 4.3 percentage points in the post-Affordable Care Act (ACA) period among older Medicare beneficiaries with two or more multiple chronic conditions (Ahn et al., 2020). Frequent ED use increases the risk of adverse effects such as hospitalizations, functional decline, complications related to treatment and procedures, and suboptimal follow-up (Calder et al. 2014).

Additionally, seniors present more vulnerability factors, as well as more chronic conditions and complex medical needs (Calder et al. 2015). According to Thomas-Henkel and Schulman (2017) people who have unmet social needs are more likely to be frequent ED users, to have repeat “no-shows” for medical appointments, and to have poorer glycemic and cholesterol control than those who are able to meet their needs.

Frequent Users of Emergency Departments

Frequent users of emergency department visitors account for a disproportionate number of ED visits. The quality and sustainability of the U.S. healthcare system depend on achieving improved population health, reduced per capita costs, and improved patient experience, yet the challenge experienced by the system includes the number of ED visits, specifically by patients that could be served by primary care. A study by LaCalle and Rabin (2010) found that ED overutilization

contributes to overcrowding and poorer patient outcomes, rising healthcare costs, and low-value care. LaCalle et al. (2010) found that frequent ED users ranged in age between 25 to 44 and 65 years or older. FUEDs have been found to have a high chronic illness burden or poor health as compared to infrequent users of ED services.

A qualitative study by Arroliga (2005) focused on the relationship between FUEDs and Primary Care physicians. The results of this study showed that FUEDs were more likely to agree that ED care was more accessible than primary care. The reasons given by the study participants were childhood instability or trauma and difficult relationships with healthcare providers.

Mautner et al. (2016) further investigated frequent ED visitors' primary care utilization and perceptions of primary care access and compared perceptions from frequent and infrequent users of ED. This study found that FUEDs had a significant chronic illness burden, reported poor or fair health, and were more likely to be African American.

A study by Colligan et al. (2016) used a multinomial logistic regression model to compare frequent ED use with infrequent use. The goal of the investigation was to investigate whether frequent ED users in one year remained frequent users in subsequent years. This study found that sociodemographic, clinical, and health-system-level factors contribute to the frequent use of ED. The sociodemographic characteristics included minority race, low educational attainment, poor physical and mental health, low income, and public insurance. The results of his study showed that only 1.1% of fee-for-service Medicare beneficiaries were persistent ED users compared to 54.7% nonusers, 36.1% infrequent users, and 4.2% episodic frequent users.

Many studies of frequent users of EDs have used the Andersen Model (1968), shown in figure 1, which posits that an individual's use of health services is linked to their predisposition to seek care, the factors that affect access to care, and underlying needs that precipitate seeking healthcare. This model reflects on predisposing, enabling, and need factors influencing health services use.

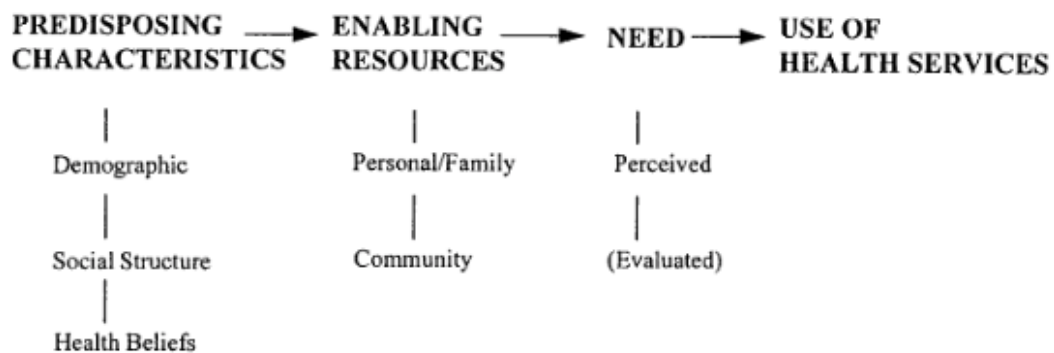


Figure 1. Andersen's behavioral model of health services use (1960s)

In Andersen's attempt to revisit his original work and behavioral model, phase 4 emerged as his final proposal to the theory. Figure 2 reflects this model, which portrays the multiple influences on health services use and, subsequently, on health status and feedback loops showing that outcome, in turn, affects subsequent predisposing factors and perceived need for services as well as health behavior (Andersen 1995).

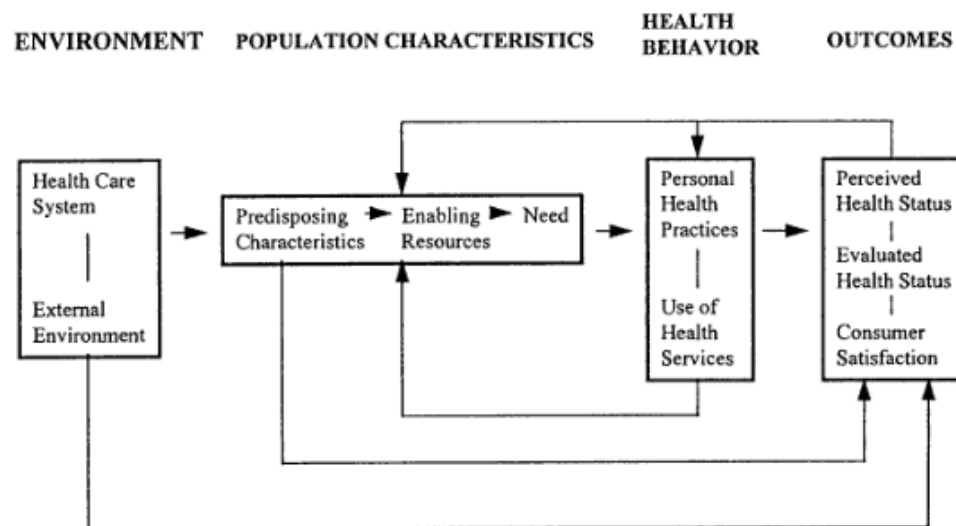


Figure 2. Phase 4 of the Andersen behavioral model of health services use (1995)

The emerging model- phase 4 of Andersen's behavioral model of health services use differs from the original model by adding additional evidence from environmental and health behaviors that influence outcomes to the framework.

Determinants of Health

Health is influenced by many factors, which may generally be organized into five broad categories known as determinants of health: genetics, behavior, environmental and physical influences, medical care, and social factors (CDC n.d.). Genetics refers to the biological and genetic factors that affect individuals more than others based on medical conditions, age, and sex, among other characteristics. Individual behaviors, such as diet, exercise, and smoking, may also influence health status as certain behaviors are known to reduce the risk of disease. In contrast, other behaviors place the individual's health at risk. Environmental and physical influences include environment, housing, and other physical barriers, while social factors refer to the economic and social conditions that influence the health of people and communities shaped by socioeconomic position, which is the amount of money, power, and resources that people have, all of which are influenced by socioeconomic and political factors (e.g., policies, culture, and societal values) (CDC n.d.).

The key domains of social determinants of health (SDOH) identified by the Center for Disease Control and Prevention (CDC) in Healthy People 2020 are economics, education, social and community context of living, neighborhoods and the built environment and their relationship to health (Baah et al. 2018). These domains reflect the fact that health outcomes are impacted by both the experience of individuals in their environment and the environment's effects on the individuals (Havranek et al. 2015). Baah et al. (2018) noted that the current conceptualization of SDH lacks a critical focus on the personal experience that results from an individual's interaction with society and the environment.

Long-term systemic inequities have been addressed extensively, which have led to the implementation of various programs and policies that help narrow the gaps in health inequity in the US. Unfortunately, standardization of policies and criteria within healthcare programs has limitations, and many individuals continue to be challenged by one or more determinants of health. Despite ongoing interest in addressing social determinants of health to improve patient outcomes, little progress has been made in integrating social services with medical care (Murray et al. 2020). According to a 2018 Physicians Foundation Survey of America's

Physicians, nearly 90% of U.S physicians reported having patients with a social condition that affects their health, whether it be unemployment, lack of education, or drug addiction (Houlihan & Leffler 2019).

Social and Demographic Characteristics

With diversification, the barriers to health for minority groups will also impact more people over time. The U.S. Census Bureau recently published its last batch of race-ethnic population estimates in advance of the 2020 census. The new estimates showed that nearly four of 10 Americans identified with a race or ethnic group other than white, suggesting that the 2010 to 2020 decade was the first in the nation's history in which the white population declined in numbers (Frey 2020).

Hastings et al. (2005) described the development of effective interventions to reduce ED visits among older patients as challenging. Age, along with other characteristics, have been reported to be factors that contribute to vulnerability. There are a number of groups that are considered vulnerable populations, including racial and ethnic minorities, the economically disadvantaged, and those with chronic health conditions (Joszt 2018). Hanchate et al. (2019) found that emergency department (ED) services were shown to be consistently higher among racial/ethnic minorities than among non-Hispanic whites. CMS (n.d.) identified that certain populations – including racial and ethnic minorities, gender minorities, people with disabilities, and individuals living in rural areas – are more likely to experience worse health outcomes. Lower socioeconomic status may lead to a higher risk of disease and poor management of chronic conditions.

A study by Adekoya et al. (2022) described the characteristics associated with frequent user visits with referrals for follow-up medical care after emergency room discharge. The study found that referral rates were highest among females than among males; higher among Black patients than White patients; highest in the South, and highest for patients with Medicaid/Children's Health Insurance Program (CHIP) than those with Medicare or private insurance. Abnormal clinical findings and injuries triggered follow-up medical care.

Mayfield et al. (2021) conducted a study using a cross-sectional analysis of electronic health and billing records of 99,637 adults residing in an urban North Carolina County who visited an ED in 2017. The study highlighted the patient's characteristic predictors as insurance coverage (Medicaid, Medicare, private, uninsured), total visits to ambulatory care (0, 1, >1), and patient demographics: age, gender, race, ethnicity, and living in underprivileged communities. Results showed that having Medicare or Medicaid was positively associated with ED visits and that Black patients were found to have more ED visits compared to their White counterparts.

Access to Care

Ethnicity, language barriers, and insured status may also impact establishing care with a primary care provider. If diseases are not managed appropriately, then patients can be at risk of developing comorbidities, which is the presence of more than one disease in an individual. Issues relating to access to care prompted the primary care delivery system and incentivized providers for improved care outcomes in Medicare. Jacobs (2021) reviewed the impact of Medicare on access and affordability of care for newly enrolled Medicare beneficiaries once they turned 65 years old and found a positive relationship between eligibility and improvement in both, access to care and affordability of care across a range of measures.

However, previous studies suggest that simply focusing on primary care physician (PCP) access alone will not lead to lower emergency department (ED) utilization (Maeng 2017). While access to care is an ongoing challenge for minority groups, communities in

border towns, specifically South Texas, are impacted by physician shortages, which places Medicare beneficiaries at risk for limited access to primary care services. The Texas Physician Supply and Demand Projections report published by Texas Health and Human Services (2020) warned that general internal medicine, pediatrics, and psychiatry are projected to have critical shortages. Figure 3 illustrates the specific supply and demand projections of full-time equivalents (FTEs) reported in 2018 for South Texas.

Specialty	2018 Supply (FTEs)	2018 Demand (FTEs)	2018 Percent Demand Met	2032 Supply (FTEs)	2032 Demand (FTEs)	2032 Percent Demand Met
General Internal Medicine	579	724	79.9%	775	1,015	76.4%
Pediatrics	379	554	68.4%	471	688	68.4%
Psychiatry	257	327	78.5%	290	402	72.2%

Figure 3. Critical Shortages of Physician Specialties in Region-8 South Texas

In relation to the engagement of clinicians in patient outcomes, several studies have found similar results in perceived patient barriers from the perspective of healthcare providers. A study by Powell et al. (2016) of interprofessional perceptions among case managers, social workers, and community health workers found that participants identified barriers related to social determinants of health, a complex system organization, and patients' mistrust of the health system. While payment reforms could provide the funding mechanisms to support social determinants of health in primary care, there is currently insufficient evidence to support many of these practices (Kovach et al. 2019). Additional research into ACO's success at improving health equity and social barriers is needed to verify the effectiveness of current health policies that promotes provider engagement.

Discussion

With the significant health consequences seen secondary to COVID-19, healthcare disparities have been further exacerbated (Andraska et al., 2021). Despite healthcare delivery transformation through healthcare reform, literature has sharpened our eyes on the ongoing inequality, barriers, and challenges that Medicare beneficiaries continue to be affected by, which result in the frequent use of the emergency department (FUED). Finding a long-term solution for the variables that influence frequent and preventable emergency department use is part of the ongoing efforts to improve public policy.

Although the main goal of the healthcare reform was to improve access to healthcare, the Medicare population continues to be one of the most vulnerable groups of individuals that require a high degree of care coordination and an interdisciplinary approach to achieve positive health outcomes. Characteristics such as demographics, degree and type of illness, access to medical care, patterns of utilization, and challenges experienced by this population make quantitative metrics such as reductions in ED use difficult to meet without addressing the root cause of disparities in healthcare. While the 2022-2023 CMS framework for health equity is in the early stage, the future of healthcare delivery for all people, regardless of age, sex, gender, and socioeconomic status, will focus on the unmet needs of vulnerable

populations. The literature on the Medicare population will provide a foundation for key areas of improvement in the years to come.

Literature has also found that primary care practices should be the first point of access to the larger healthcare system. Yet, a number of obstacles, such as organizational and structural challenges, make PCPs question their ability to care for FUEDs. Frequent ED visitors have expressed dissatisfaction with care and limited accessibility to primary care as a reason to seek ED care instead. It has been found that to serve frequent ED users' needs better, an integrated, coordinated, and adaptive framework must be put in place. Research in this area would benefit from exploring ways to improve communication between the larger healthcare system, which includes PCPs and ED physicians. Healthcare policy would also benefit from exploring ways to incentivize PCPs to deliver optimal care to FUEDs.

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