

The Role of the Emergency Department in the Care of Homeless and Disadvantaged Populations

David M. Morris, MD, MPH^{a,*},
James A. Gordon, MD, MPA^b

^a*Department of Emergency Medicine, MetroWest Medical Center,
Framingham Union Hospital, Framingham, MA 01702, USA*

^b*Department of Emergency Medicine, Massachusetts General Hospital,
Harvard Medical School, Boston, MA 02114, USA*

Emergency departments (EDs) provide the only universal health care accessible to the general public in the United States, with well over 100 million patient visits per year [1,2]. Operating at the critical interface between the hospital and its community, EDs are designed to meet the demands of all patients. Whereas the specific needs of each community will vary, the fundamental approach to delivering emergency care remains the same—dedicated health professionals work 24 hours a day, 7 days a week to provide care to all patients, regardless of social circumstance. Because the ED functions as the ultimate health care “safety net,” it can have a critical impact on homeless and other disadvantaged populations [3]. This chapter will review the epidemiology of social deprivation among ED patients, with a particular focus on understanding the nature of homelessness. It will then explore the value of an integrated approach to socio-medical care in the ED, and highlight successful ED-based approaches.

An overview of social deprivation among ED patients

Despite the development of outreach programs such as Health Care for the Homeless, many of the most disadvantaged individuals in our society rely on EDs for medical care [4–8]. A Los Angeles study of the homeless found that only 57% had any contact with medical care, and 23% of those

* Corresponding author. Department of Emergency Medicine, MetroWest Medical Center, Framingham Union Hospital, Framingham, MA 01702.

E-mail address: DMorris@quantech.net (D.M. Morris).

used the local ED as their primary point of care [9]. In San Francisco, 40% of homeless and “marginally housed” individuals surveyed had used the ED in the past year, a rate three times higher than the national average compared with the general population [10]. One New York City (NYC) hospital even reported a 20% to 30% incidence of homelessness among its ED population. These patients—who averaged six ED visits per year—were more likely to be middle-aged men suffering from tuberculosis, HIV, depression, schizophrenia, alcoholism, poor dentition, or penetrating trauma [6].

While disadvantaged populations have significant medical needs, their critical social needs often go unaddressed in the health care setting, leading to a vicious cycle of poverty and illness. Alarming levels of hunger (up to 18%) have been seen in ED populations, leading to untenable tradeoffs, for example, between paying for medicine or food [11]. Some patients are even forced to “heat or eat” during the harsh winter months [12]; almost 10% of patients in one Michigan ED reported their gas or electric service had been turned off in the previous year [13]. Across three EDs in the same study, 31% of patients reported one or more serious social deprivations over the past year, including housing eviction; interruption of power or phone service; lack of food; no working refrigerator, stove, or telephone; and crowded or dilapidated housing.

Homelessness: a critical issue in emergency departments

Epidemiology of homelessness

A homeless person lacks a stable nighttime residence and usually lives in temporary accommodations. Temporary living accommodations include shelters, community institutions, and open places not intended for regular sleeping accommodations [14]. Homelessness is the consequence of a number of factors, including poverty and the lack of low-cost housing, the absence of social plans, and insufficient general health and public services [15,16].

The Urban Institute estimates that 3.5 million people, including 1.35 million children, are homeless during a given year [14,17]. These approximations likely underestimate the true prevalence of homelessness because complete data are very difficult to collect on this itinerant population. Data collection of persons using homeless shelters, for example, represents only a cross-section of the homeless population. A 2001 study of seven American cities reported that that 37% of all requests for emergency shelter were unmet owing to lack of resources [18]. Many rural areas of the United States lack homeless shelters, despite significant levels of need. The “hidden homeless” are often uncounted, comprising individuals who frequently stay in automobiles, campgrounds, public parks, or other “unofficial” residences. One study reported that automobiles provide the most common form of shelter for these individuals (59.2%) followed by makeshift housing such as tents, boxes, caves, or boxcars (24.6%) [19,20].

The homeless population is a heterogeneous group [6,19–21]. The Centers for Disease Control and Prevention estimated in 1991 that men were more likely than women to be homeless. Fifty-one percent of the homeless were 31 to 50 years old. Whereas white males account for 80% of the homeless, families with children comprised the fastest growing segment of the homeless population; overall, 39% of the US homeless population consisted of children younger than 18 years. Forty percent of the homeless had served in the armed forces, compared with 34% of the general male population. Over the subsequent 10 years, the demographics of the homeless population evolved. In 2003, the US Conference of Mayors reported the ethnic distribution of the homeless across 25 cities: 49% African American, 35% Caucasian, 13% Hispanic, 2% Native American, and 1% Asian [18].

Etiology of homelessness

Two trends are largely responsible for the rise of the homeless population over the past 30 years: (1) shortage of affordable housing and (2) an increase in poverty [22]. There is a gap between the number of people who need affordable housing and the number of housing units available. This has created a housing crisis for the poor. Approximately 2.2 million low-rent housing units disappeared from the market over a 20-year span between 1973 and 1993 [6,22]. These units were abandoned, demolished, converted into condominiums, or became unaffordable. In the mid-1990s, the median rental cost paid by low-income renters rose 21% [22], a rate greater than the rise in income levels [14]. This situation leaves many families on long waitlists for public housing. The average wait time for federal housing assistance rose from 26 months to 28 months between 1996 and 1998 [22]. Length of stay within homeless shelters has subsequently increased, especially as actual shelter space declines. In New York City during the 1990s, families stayed in shelters for an average of 5 months before relocating to housing [23]. Since then, the length of stay in a shelter has risen to a year [15].

Individuals living at poverty levels must constantly manage tensions about unforeseen illness, accidents, or missed paychecks, which could catapult a person into homelessness. Other factors influencing homelessness include domestic violence, mental illness, substance abuse, and lack of affordable health care [19,24]. In a study of 777 homeless parents in 10 US cities, 22% were homeless because of domestic violence and abusive relationships [25]. It is difficult to calculate the annual incidence of domestic violence and its true influence on homelessness. Most Americans stereotype homeless people as individuals with severe mental illness. In fact, about 22% of the single adult homeless population suffers from some form of severe and persistent mental illness, ranging from depression, bipolar disorder, and schizophrenia [26]. There is a complex relationship between substance abuse and homelessness such that there are disproportionately high rates of alcohol and drug abuse among the homeless [27–29]. The US Conference

of Mayors found that 30% of the single male homeless population had problems with substance abuse, including alcohol, cocaine, and heroin [18]. Lack of affordable health care also contributes to the cause of homelessness [30]. Members of the working poor who develop serious illnesses or disabilities are prone to job loss and depletion of savings simply because they lack insurance. Uninsured medical care carries such a high price tag that the working poor may choose to defer needed health care. Such a delay can lead to complications of formerly simple medical illness, fostering late presentations of progressed disease states. Because of the lack of affordable health care, especially in consideration of the fact that 14% of all ED visits are made by uninsured patients [2], many working poor end up in the ED for basic medical and social care [13,21,31].

Health of the homeless

Poor health is closely associated with homelessness, and homeless individuals are much more likely to use the ED as a source of care [6]. By necessity, some subjugate their health care to competing needs for food, clothing, and shelter [11]. Not surprisingly, the homeless population has a particularly high mortality rate. In Philadelphia during 1994, the homeless had an age-adjusted mortality rate 3.5 times higher than the general population [32]. In New York City during 1990, the mortality rates of homeless individuals were 2 to 3 times that of the general population [33]. In Atlanta during 1987, the median age at death among homeless persons was 44 years [30]. The median age at death among the homeless in San Francisco during the period of 1985 to 1990 was 41 years [30]. Between 1988 and 1993, the Boston Health Care for Homeless Program reported a median death age of 47 years. Among the Boston cohort, the leading causes of death among homeless males age 18 to 24 years were homicide, traumatic injury, and acute poisoning from overdose. HIV and AIDS accounted for the leading cause of death among men and women age 25 to 44. Cancer and heart disease were the leading causes of death among men and women age 45 to 54 [34-36].

Health issues are compounded by homelessness. Environmental injuries such as exposure to the cold and heat are frequent reasons for ED visits. Homeless patients with frostbite and heat exhaustion generally present in later disease states. Cold winter nights prompt individuals to seek out the ED for food and shelter. Homelessness also precludes good nutrition, hygiene, and basic first aid, adding to the complex needs of the homeless. Exposure to the dirty environment of the street, coupled with inadequate clothing and nutrition, often predisposes homeless persons to skin and soft tissue infections. The homeless also suffer a greater risk of trauma from muggings, beatings, and rape [9,29,37].

Chronic medical problems are exacerbated by homelessness. Approximately 40% of homeless persons report at least one chronic health problem,

including psychiatric and medical health issues [6]. These chronic illnesses frequently go unrecognized and untreated until late in their course. Even when health conditions are detected, lack of compliance and consistent follow-up often result in disease progression, disability, and premature death. Conditions that require meticulous treatment such as HIV, diabetes, psychiatric illness, and substance abuse are extremely difficult to treat and control among the homeless. One study examining diabetes management among residents of homeless shelters in Toronto revealed an increased risk of mortality and morbidity. Among 50 individuals surveyed, 72% reported experiencing difficulties with diabetes management and 44% had poor glucose control [38].

HIV and homelessness

Studies indicate that the prevalence of HIV among homeless persons ranges between 3% and 20% [39]. A Los Angeles study found that two thirds of people with AIDS had been homeless. Up to 50% of persons living with HIV and AIDS are expected to need housing assistance of some kind during their lifetime [40]. HIV infection exacerbated by homelessness leads to higher morbidity and mortality. Homeless people with HIV die from AIDS more commonly than other HIV-infected populations [39]. These patients also tend to have higher rates and more advanced forms of tuberculosis.

Homeless HIV patients face many barriers to optimal care. Injection drug use and lack of health insurance among homeless individuals have been shown to negatively effect health care use, level of medical care, and health status. Adherence to complex medical regimens may be more difficult if one does not have stable housing or access to basic subsistence needs such as food and clean clothing. Poor compliance among homeless HIV patients is a strong predictor of protease inhibitor failure and a contributing cause of medication resistance, which has grave personal and public health implications [41,42]. High-risk sexual behavior and drug use are prevalent among the homeless population, further complicating HIV prevention efforts [43–45].

Mental illness and homelessness

Approximately 20% to 25% of the single adult homeless population suffers from some form of severe and persistent mental illness. However, only 5% of the estimated 4 million people who have serious mental illness are homeless at any given point in time [26]. According to the Federal Task Force on Homelessness and Severe Mental Illness, only 5% to 7% of homeless persons with mental illness need to be institutionalized; most can live within the community with appropriate supportive housing options. Unfortunately, there are not enough community-based mental health treatment programs and affordable housing to accommodate the number of people disabled by mental illness in the United States. Homeless people with mental

disorders remain homeless for longer periods of time and encounter more barriers to stability than other homeless populations. They tend to be in poorer physical health, are more frequently unemployed, and have more contact with the legal system compared with homeless individuals who do not suffer from a mental disorder [46].

Pediatric illness and homeless children

Homelessness is an independent risk factor for poor pediatric health status [47,48]. Homeless children experience an increased number of acute illnesses, and frequently present to the ED for health care [49,50]. The most common presentations include fever, ear infection, diarrhea, and asthma [51]. Rates of immunization among homeless children are consistently lower compared with their domiciled counterparts. In New York City, approximately 61% of homeless children studied had not received their proper immunizations, compared with 23% of all New York City 2 year olds. An estimated 38% of homeless children in the NYC shelter system have asthma—a rate four times that for all NYC children, and the highest prevalence of any pediatric population in the United States. Homeless children suffer from acute otitis media at a rate that is 50% greater than the national average [50,51]. They also live in less structured and safe environments, placing them at greater risk for injury, lead toxicity, anemia, malnutrition, iron and calcium deficiencies, and depression. These children are more likely to be exposed to domestic violence, mental illness, and substance abuse, resulting in academic and behavioral problems and developmental delays [47,48].

Integrating health and human services in the ED

A 2001 study of mortality among the homeless in Boston discovered that 21% of the homeless had contact with medical care within 1 month before death, and 21% had greater than six contacts [37]. For many of these disadvantaged patients, the ED is their primary or only health care site [13]. Clearly, the isolated provision of medical care in this setting is not enough to interrupt the cycle of poverty and illness.

However, since the ED is a high-catchment area for disadvantaged individuals, it is well positioned to serve as a community triage and coordinating entity for essential social and human services. Providing dedicated social work and case management services in the ED is essential. A system of “social triage” can build on the traditional social work approaches by institutionalizing social assessment and service referrals alongside medical diagnosis and treatment [3]. Project ASSERT (Alcohol, Substance Abuse, Service, Educate, Referral, Treatment Program) is one example of an ED program started in Boston, Massachusetts, designed to screen patients for social problems, like alcoholism, substance abuse, and domestic violence, and to coordinate referral and access to community services [52]. Simply

coordinating primary care discharge referrals for children, for instance, has been shown to decrease recurrent ED visits [53]. Project ASSERT has now spread to other sites, serving as a model for integrating social services and health care in the ED. Other programs have automated the screening and referral process through computer-based “kiosks,” strategically positioned user-friendly information booths for use in ED waiting rooms [54].

Although dedicated social outreach workers are vital to providing comprehensive care for disadvantaged ED patients, many hospitals struggle to pay for social work services [55]. Using volunteers and automated screening can help with costs, but cannot replace dedicated professionals. Recent studies suggest that creative social outreach not only makes a significant difference in the lives of patients, but can also pay for itself [56]. A multicenter trial of health insurance outreach among uninsured children presenting to the ED demonstrated that simply handing out blank insurance applications could nearly quadruple the odds of successful enrollment [57]. Adopted nationwide, this approach could lead to coverage for more than a quarter million additional children per year. Such enhanced enrollment, according to another Michigan study, could allow hospitals to retroactively recover payment for previously unfunded visits [58]. This funding stream could potentially supercede the cost of salaries for ED-based social outreach workers to care for our most disadvantaged patients.

Summary

Homelessness and social deprivation is widespread among ED patients. Organized emergency medicine can have a significant impact on total community health by maintaining a universal “safety net” for the delivery of integrated health and human services. Cost-effective approaches to socio-medical integration in the ED are not only feasible, but are critical to promoting the health and welfare of homeless and other disadvantaged populations.

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