

CONCEPTS

Health Policy

The terminology of social emergency medicine: Measuring social determinants of health, social risk, and social need

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Abstract

Emergency medicine has increasingly focused on addressing social determinants of health (SDoH) in emergency medicine. However, efforts to standardize and evaluate measurement tools and compare results across studies have been limited by the plethora of terms (eg, SDoH, health-related social needs, social risk) and a lack of consensus regarding definitions. Specifically, the social risks of an individual may not align with the social needs of an individual, and this has ramifications for policy, research, risk stratification, and payment and for the measurement of health care quality. With the rise of social emergency medicine (SEM) as a field, there is a need for a simplified and consistent set of definitions. These definitions are important for clinicians screening in the emergency department, for health systems to understand service needs, for epidemiological tracking, and for research data sharing and harmonization. In this article, we propose a conceptual model for considering SDoH measurement and provide clear, actionable, definitions of key terms to increase consistency among clinicians, researchers, and policy makers.

KEYWORDS

emergency medicine, social determinants of health

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1 | EXISTING TERMINOLOGY

Social determinants of health (SDoH) have been defined by the World Health Organization (WHO) as the “conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies, and political systems.”¹ SDoH have been used to describe both individual and neighborhood-level data.² Several Medicaid programs use SDoH and “social risk” interchangeably when discussing the individual-level factors, such as access to food and housing, that affect health.³ Other Medicaid programs, such as MassHealth, separate SDoH from other neighborhood-based predictors of health in risk prediction models.⁴ The National Academy of Sciences uses the term “health-related social needs”⁵ to describe screening questions to assess 5 core domains (housing, food, transportation, utilities, and safety), whereas some authors have termed this concept “social risk.”⁶ Several papers have suggested that screening should be based on desire for assistance rather than the identification of unmet needs.^{7,8} This desire for assistance is termed a “social need” by some authors.^{6,9} The use of these multiple, somewhat overlapping, terms (SDoH, health-related social needs, social needs, and social risk) has hindered communication within the field of social emergency medicine (SEM), which “considers the interplay between social forces and the emergency care system as they together influence the health of individuals and their communities.”¹⁰

2 | IMPORTANCE OF SDOH IN THE EMERGENCY DEPARTMENT

Increased attention has been focused on social and systemic factors that influence health in emergency department (ED) settings.¹⁰ A recent systematic review found a high prevalence of material needs among patients in several ED studies.¹¹ In addition, studies have shown a strong association between SDoH and ED utilization.^{12,13} For example, during the first year of life, children who experienced homelessness were significantly more likely to visit the ED.¹⁴ Using insurance billing data for an adult sample, 1 study found that patients with incomes less than the national median had a significantly increased risk of ED visits for hypoglycemia in the last week of the month (when food benefits would be expected to run out) compared to earlier weeks.¹⁵ Health disparity populations, including racial/ethnic minorities, those with public insurance beneficiaries, and those with chronic disease also have higher rates of ED use.¹⁶ Patients with low socioeconomic status are also more likely to rely on the ED as a usual source of care.¹⁷

The combination of a high prevalence of needs in the ED patient population and the likelihood that many ED patients are not seen in primary care means that ED-based screening has the potential to reach many vulnerable patients. Recent changes in state public insurance programs have placed additional emphasis on the importance of social factors, with several states requiring screening for SDoH or health-

related social needs.^{18,19} Although social screening in primary care has been shown to be feasible in both adult²⁰ and pediatric^{21,22} settings, it has not been widely implemented in the ED setting. Before the initiation of ED screening, it is critically important to define what is being screened for and why. One particular challenge is the significant discrepancy between those who screen positive using a tool and those who actually request help. One study in a pediatric clinic focused on food insecurity and found that 36% of caregivers reported a food-related issue: 4% reported food insecurity but did not request help, 15% requested help but did not report food insecurity, and 17% both reported food insecurity and requested help.⁸

Implementation of ED screening is complicated by the heterogeneity of screening tools and the lack of a goldstandard to identify SDoH.⁷ In addition, different programs have used different terms for similar concepts including SDoH,^{2,20,23} health-related social needs,^{5,24} social needs,^{25,26} and social risk.²⁷⁻²⁹ ED clinicians, researchers, and policy makers, need a consistent terminology to identify patients who screen positive and those who are requesting assistance. In addition, an appropriate terminology would allow clinicians and researchers to have increased clarity about the goals of individual screening programs (eg, service, epidemiology, risk stratification), allow for improved comparison across studies, and allow policy makers and researchers to more effectively communicate and therefore more rapidly disseminate research.

3 | PROPOSED TERMINOLOGY

3.1 | SDoH are universal and neither inherently positive nor negative

Guided by the SDoH Lexicon provided by Alderwick et al,⁶ we propose a simplified terminology around SDoH for emergency medicine clinicians, researchers, and policy makers (Figure 1). We begin with the WHO definition as the “conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.”¹ These can include both individual-level factors (such as education and employment) and neighborhood-level factors (such as transportation systems). All individuals are affected by SDoH, which can shape health for better or worse. For example, *positive* SDoH include high income and neighborhood cohesion. In contrast, *adverse* SDoH include individual poverty and neighborhood isolation (lack of transportation links). Examples of positive SDoH include improved infant mortality rates in counties with higher percentages of Hispanic residents³⁰ or pediatric respiratory health benefits in neighborhoods with high density of immigrants.³¹ In contrast, examples of negative social determinants include both individual and neighborhood poverty, which are associated with medication nonadherence.³² Thus, the term “SDoH” is applicable to screening studies where the prevalence and influence of specific determinants, risks, and needs are unknown. Risk factors can be individual or group level and may be causal in nature (lead to disease) or correlated markers of underlying causal factors that are more difficult to measure (eg, race is often

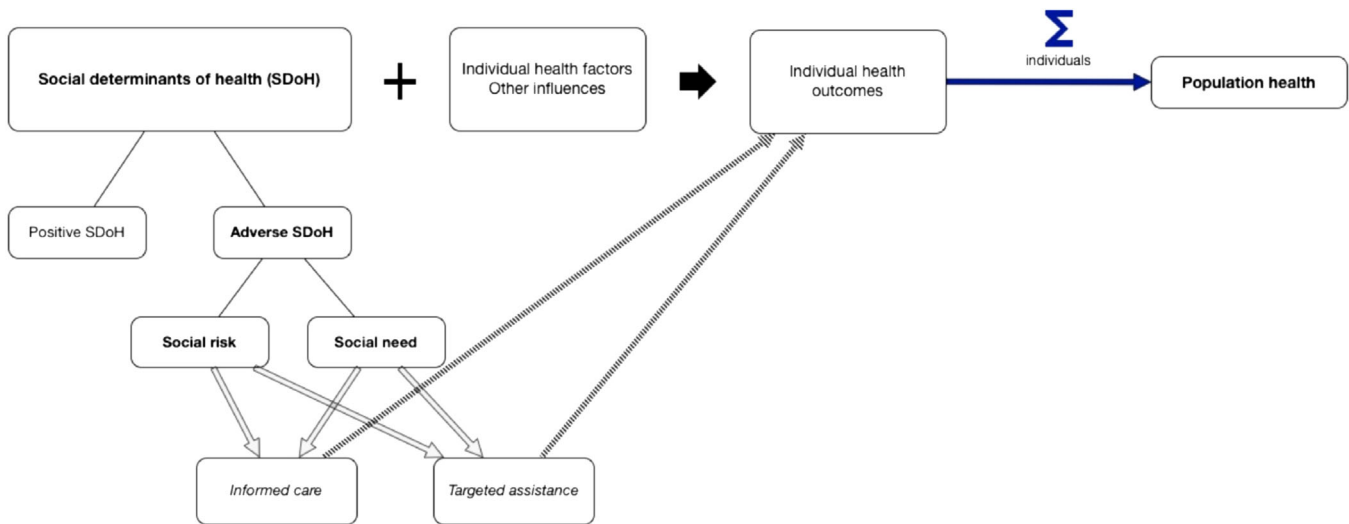


FIGURE 1 Terminology of SDoH. Across the top of the figure, SDoH and other factors combine to influence individual health outcomes. These outcomes, summed across the individuals, make up the health of the population. SDoH can be positive or adverse; adverse SDoH include both *social risk* (specific adverse social conditions associated with poor health) and *social need* (individual preferences and priorities regarding assistance). Both social risk and social need can be used to inform care and target assistance. Abbreviation: SDoH—social determinants of health

referred to as a “risk factor” for poor health outcomes, which are likely mediated by the effects of structural, systemic, and individual racism).³³

3.2 | Risk versus need

Within the category of adverse SDoH, the proposed terminology separates social risk and social need. Social risks are the “specific adverse social conditions associated with poor health” as measured at the individual level,⁶ whereas social needs are determined by the individual preferences and priorities.⁶ For example, a social risk would be a positive screen for food insecurity, whereas a social need would be a request for food assistance. An individual can have multiple social risks and fewer social needs, or vice versa.⁹ Assessments of social risk may be most important for epidemiology, risk adjustment for payment models, or the design and deployment of programs to address social risks. Understanding the population at risk for homelessness (social risk) may help policy makers and city administrators plan shelter beds, but ED clinicians are likely to be more focused on patients requesting housing during their ED visit (social need). Both social risk and social need can be used to inform care decisions (eg, selecting location of follow-up appointments) and to target assistance to address adverse SDoH directly (eg, providing transportation to follow-up appointments). Importantly, the term “health-related social needs,” which was often used to describe risk factors rather than needs, would be replaced by “social risk.” The Appendix (Online Supplement) shows examples of how the terminology can be applied to the core domains of housing, food, transportation, and utilities. We do not provide a figure for safety because our prior work suggested wide variation in how people defined this concept.³⁴

3.3 | SDoH versus population health

As much of the SDoH work has been done under the auspices of population health and population health management, it is important to clarify that SDoH are not the same as population health. Population health has several different definitions, including conceptual frameworks for thinking about differences in health outcomes between populations and measurement of the health of a population. Population health also involves the study of “health outcomes and their distribution in the population...achieved by patterns of health determinants (such as medical care, public health, socioeconomic status, physical environment, individual behavior and genetics) over the life course.”³⁵ Overall, population health focuses on the impact of the health of the group, which can be defined by geography (eg, city), membership (eg, health plan), or other characteristics.³⁵ SDoH focus primarily on the subset of non-genetic, non-behavioral factors that mediate overall population health and are critical to incorporate when assessing population health outcomes.

4 | FUTURE WORK

In parallel with this effort to improve the terminology of SEM among clinicians, researchers, and policy makers, we encourage future work in several areas. There is an urgent need to standardize and incentivize the collection of SDoH data within electronic health records to support important research on how to best intervene.³⁶ Individuals collecting SDoH data should choose data collection tools (eg, PhenX Toolkit)³⁷ with specific attention to whether they wish to collect social risk, social need, or both. Additional work is needed to guide best practices for extracting data for research, quality improvement, and

payment reform/risk adjustment models.³⁸ Although many sources have suggested using billing and diagnosis codes, specifically International Classification of Diseases-10 (ICD-10) Z codes, they do not yet have a one-to-one link with any of the social risk screening tools, and several Z codes lack specificity. For example, "lack of adequate food and safe drinking water (Z59.4)" could include both people with a lack of resources to purchase food and those who live in neighborhoods without access to healthy food sources,³⁸ two problems that suggest very different interventions. Increased specificity in ICD coding regarding specific social risks and coordination with existing measures of social risk will increase the ease of such documentation. In addition to developing a system to collect SDoH data within the health care system, further work is needed to develop an infrastructure to share data with social care organizations, such as shelters or food pantries.³⁹ More robust research is needed on the effectiveness of screening programs for SDoH in acute care settings, including their impact on patient-centered outcomes (eg, well-being, insecurity) outside of downstream ED utilization.⁴⁰ Finally, additional research is needed into how to best combine data collection and intervention to improve clinical decision-making, health care access, and ultimately patient outcomes.⁷

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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APPENDIX

Online supplement

Appendix Figures: Examples of the terminology for housing, food, utilities, and transportation

Appendix A: Housing

Appendix B: Food

Appendix C: Utilities

Appendix D: Transportation

Abbreviation: SDOH, social determinants of health