



This paper represents the views of the author, not AHIP. The publication, distribution or posting of this paper by AHIP does not constitute a guaranty of any product or service by AHIP.

Social Determinants of Health: Evidence for Interventions

Suzanne Doran, RN, BSN, FAACM

Managing Editor
MCG Health

Emily Ferguson, RN, MSN, CCM

Associate Managing Editor
MCG Health

July 2022

Social Determinants of Health: Evidence for Interventions

By Suzanne Doran, RN, BSN, FAACM, and Emily Ferguson, RN, MSN, CCM

Executive Summary

The body of evidence supporting the need to address social determinants of health (SDoH) continues to grow. Given the recent documentation of poorer coronavirus disease 2019 (COVID-19) outcomes in individuals with SDoH needs, the urgency to create solid interventions that target barriers to health equity will continue to increase. Solutions to challenges within the SDoH landscape will require a multifaceted approach that considers person-centered needs and different organizational strategies.

Introduction

Healthcare delivery is undergoing significant change and is being shaped by large-scale transformative events, including an increase in chronic health conditions and understanding of social welfare inequities. The United States continues to have the lowest life expectancy, but the highest healthcare expenditure, relative to other developed nations, so identification of the underlying causes of social healthcare gaps is attracting much-needed attention.

SDoH are the environmental conditions in patients' lives—which can be social, economic, or physical—that contribute to or detract from health.¹ Such factors can explain up to 60% of an individual's health status.²

Simply defining social determinants of health and listing the needs that are not being met in certain populations is no longer enough. Evidence has established that large groups of people suffer negative health consequences due to a lack of resources. Value-based care initiatives and prominent organizations such as the American Academy of Pediatrics and the American Academy of Family Physicians have spearheaded the push to develop solutions related to social needs.³ Organizations across the care continuum are frustrated by the lack of consensus regarding who should be responsible for assessing and addressing these needs.

Over the last several years, especially during the COVID-19 pandemic, the problems have grown more complex. People were encouraged to stay home during the height of the COVID-19 pandemic; however, many individuals did not have adequate resources or a stable home setting to meet their basic needs. The concept of vulnerable racial and ethnic communities has also been highlighted and contributes to the widening health disparities within populations.⁴ A research brief from the Agency for Healthcare Research and Quality (AHRQ) recently highlighted the fact that substantial research gaps need to be addressed in order for organizations to design interventions for socially or economically vulnerable populations and patients with psychiatric or substance use disorders. Hospital lengths of stay could be reduced by improving research practices, developing targeted health system interventions, and collaboratively addressing the social care needs of medically complex and vulnerable patient populations.⁵

Initiatives

The National Committee for Quality Assurance (NCQA) released proposed updates to its Healthcare Effectiveness Data and Information Set (HEDIS) measures for 2023 that increase their focus on SDoH. Proposed measures would screen members for unmet food, housing, and transportation needs and document whether an intervention was performed for identified needs.⁶ This measure is part of a larger goal to improve health equity and increase accountability among health plans to evaluate and address SDoH for members. Notably, these needs have been identified as a priority by health plans, providers, and other health system entities, requiring a focus on measuring factors beyond typical clinical operations and outcomes. As there is not currently a national health plan measure to determine and address members' social needs, NCQA states that it is prioritizing this measure to fill the existing gap. The proposed measure would be reported using HEDIS Electronic Clinical Data Systems (ECDS) standards.

The Centers for Medicare and Medicaid Services (CMS) signed a final rule in April 2022; beginning in the contract year 2024, Medicare Special Needs Plans will be required to conduct annual health risk assessments that include at least one question in each of the 3 areas of housing stability, food security, and access to transportation. CMS will not require all plans to use the same questions but has provided a list of screening instruments from which the questions must be selected.

Defining terminology and standardizing reporting of SDoH have primarily been led by the Gravity Project. Launched in 2018 with funding from the Robert Wood Johnson Foundation, this group is a multistakeholder public collaborative with the goal to develop, test, and validate standardized SDoH data sets and terminology for use in patient care, care coordination between health and human services sectors, population health management, public health, value-based payment, and clinical research.⁷

Assessing Populations

The starting point for organizations requires implementing low-cost, easy-to-administer, readable, and brief SDoH screening tools within their workflows. Many multidomain social screening tools have been developed. While several tools have questions that have components of reliability and validity, no tool has met the gold standards for validity in all social screening categories.^{8,9}

Recent studies have shown the effectiveness of using screening tools that combine multiple health-related social need domains. One such tool is the Accountable Health Communities (AHC) Health-Related Social Needs (HRSN) Screening Tool. CMS developed the AHC HRSN tool specifically for AHCs. However, it is appropriate and widely applicable for use across healthcare settings. The AHC HRSN tool combines questions to quickly assess HRSNs from 13 domains.

The AHC HRSN tool is versatile and may be administered in various healthcare settings, such as physician practices, emergency departments, behavioral health facilities, labor and delivery units, mobile clinics, and public health departments. It may also be administered during home or telehealth visits. In the AHC Model, screening can occur before, during, or after a clinical visit. There are benefits to each approach. An organization may offer pre-visit screening by phone or text message when a patient is reminded of or registers for a clinical appointment. In-visit

screening occurs during a clinical visit (in person or via telehealth). Post-visit screening occurs after a patient has received care; this approach is beneficial when patients receive care in busy clinical settings or for urgent conditions, such as in the emergency department.¹⁰

Numerous screening tools exist, and practices can adopt one for their use based on the needs most common to their population.¹¹ However, narrowing down those needs for the specific population should be carefully considered. Other screening tools that are appropriate for various levels of care include a food insecurity 2-question screening tool, Health Leads, HealthSteps, IHELLP (Income, Housing, Education, Legal Status, Literacy, Personal Safety), SWYC (Survey of Well-being of Young Children) Family Questions, WE CARE (Well Child Care, Evaluation, Community Resources, Advocacy, Referral, Education), and WellRx. Clinicians must decide which determinants are most relevant to their population and choose a screening tool that is appropriate and follows a workflow for the administration of the process.¹²

Barriers to Assessment

Barriers to assessment include lack of time, challenges with implementation, concern regarding lack of resources for positive screening results, and varying comfort levels from both patients and providers during the screening process.¹³ However, the evidence shows that despite gaps in the availability of social risk-related interventions in healthcare settings, patient-centered social risk screening, including empathy and attention to privacy, may strengthen relationships between patients and healthcare teams.¹⁴

Interventions

The breadth and complexity of social needs interventions make it challenging for stakeholders to identify a comprehensive list of studies evaluating such interventions to improve health outcomes. Many barriers exist to connecting patients to effective interventions, including inadequacy or irrelevancy of the resources offered and existing resources in the community, restrictive eligibility criteria, navigation of complex systems, physical inaccessibility (e.g., transportation barriers, medical complexity), losing or forgetting the resource, concerns regarding stigma, competing demands (e.g., work, children), language barriers, and prior poor experiences with healthcare or social service personnel and organizations.^{15,16,17}

Food Insecurity

- Participation in a medically tailored meals program appears to be associated with fewer hospital and skilled nursing admissions and less overall medical spending.¹⁸
- An observational study of 322 patients found that 51% (164 of 322) of patients referred to a food pantry through a primary practice collaboration visited a food pantry at least once. Visitors were more likely to be older, have diabetes, and have visited a food pantry before their referral. Patients with uncontrolled hypertension were less likely to visit a food pantry following their referral. Patients who had visited a food pantry before their referral had more visits in total and more produce-specific visits following their referral. The findings suggested that while the local pantry can connect patients to food resources, further attention may be needed to encourage its use among patients who have not previously accessed pantries.¹⁹
- In a systematic review of 39 studies comprising 170,605 participants, 14 studies provided high-certainty evidence of an association between offering food and reduced

food insecurity. Ten studies provided moderate-certainty evidence of an association between providing monetary assistance and reduced food insecurity. The association with better health outcomes was unclear.²⁰

Transportation Intervention

- A mixed-methods evaluation of a nonemergency medical transportation benefit offered to members of a Medicare accountable care organization (ACO) within an extensive academic health system revealed that participants were highly satisfied with the program, reporting that it eased financial burdens and made them feel safer, more empowered, and better able to take control of their health. Findings suggest that although transportation programs are commonly introduced to contain healthcare spending, it may be better to consider them as programs to improve healthcare access for people facing challenging circumstances.²¹
- A review of 1731 electronic health records that documented transportation insecurity indicated that posthospitalization appointment attendance rates improved when transportation insecurity was addressed as a part of discharge planning.²²

Housing Insecurity

- A study examining a nonprofit community-based program that supplied affordable housing with supportive social services to elderly Medicare beneficiaries suggested that investments in housing with supportive social services have the potential to reduce hospital use and thereby decrease spending for vulnerable older patients.²³
- An observational study including 3543 homeless patients enrolled in a Veterans Health Administration initiative indicated that providing services such as hygiene care, transportation, and food showed a 19.0% reduction in emergency department use and a 34.7% reduction in hospitalizations.²⁴

Goals

Programs involving care management solutions could assist in launching interventional activities and creating actionable care plans with goals. As pressure mounts for practices to consider patients' social conditions, studies are beginning to highlight how many healthcare organizations are engaging in social care.²⁵ In chronic conditions, case management has proven to be a valuable care component. For example, an AHRQ technical brief found that case management improved critical outcomes for patients with heart failure, including length of stay and readmissions.⁵

Conclusion

We are just beginning to understand the impact of SDoH on healthcare outcomes. As the relationship between the two is better characterized, additional initiatives and expectations to address the unmet needs of vulnerable populations should be developed. Acting now, in advance of defined requirements, may help populations with SDoH needs get much-needed assistance. Addressing organizational barriers, implementing effective screening tools, providing interventions, and following up on services provided are a start to addressing one of the largest problems facing healthcare today.

References

1. World Health Organization. (2022). About social determinants of health. Retrieved from http://www.who.int/social_determinants/sdh_definition/en/
2. Hill-Briggs, F., Adler, N. E., Berkowitz, S. A., Chin, M. H., Gary-Webb, T. L., Navas-Acien, A., Thornton, P. L., & Haire-Joshu, D. (2020). Social determinants of health and diabetes: A scientific review. *Diabetes Care*, *44*(1), 258–279. <https://doi.org/10.2337/dci20-0053>
3. Andermann, A. (2018). Screening for social determinants of health in clinical care: Moving from the margins to the mainstream. *Public Health Reviews*, *39*, 19. <https://doi.org/10.1186/s40985-018-0094-7>
4. Chae, D. H., Snipes, S. A., Chung, K. W., Martz, C. D., & LaVeist, T. A. (2021). Vulnerability and resilience: Use and misuse of these terms in the public health discourse. *American Journal of Public Health*, *111*(10), 1736–1740. <https://doi.org/10.2105/AJPH.2021.306413>
5. Tipton, K., Leas, B. F., Mull, N. K., Siddique, S. M., Greysen, S. R., Lane-Fall, M. B., & Tsou, A. Y. (2021). *Interventions to decrease hospital length of stay*. Agency for Healthcare Research and Quality (US).
6. Hayes, T. (2022, February 10). HEDIS public comment period is now open. National Committee for Quality Assurance. <https://www.ncqa.org/blog/hedis-public-comment-period-is-now-open/>
7. HL7 International. (n.d.). Gravity Project. Retrieved April 25, 2022, from <https://www.hl7.org/gravity>
8. Eder, M., Henninger, M., Durbin, S., Iacocca, M. O., Martin, A., Gottlieb, L. M., & Lin, J. S. (2021). Screening and interventions for social risk factors: Technical brief to support the US Preventive Services Task Force. *JAMA*, *326*(14), 1416–1428. <https://doi.org/10.1001/jama.2021.12825>
9. Moen, M., Storr, C., German, D., Friedmann, E., & Johantgen, M. (2020). A review of tools to screen for social determinants of health in the United States: A practice brief. *Population Health Management*, *23*(6), 422–429. <https://doi.org/10.1089/pop.2019.0158>
10. Centers for Medicare & Medicaid Services. (2018). The Accountable Health Communities Health-Related Social Needs Screening Tool. Baltimore, MD. <https://innovation.cms.gov/Files/worksheets/ahcm-screeningtool.pdf>.
11. Bleacher, H., Lyon, C., Mims, L., Cebuhar, K., & Begum, A. (2019). The feasibility of screening for social determinants of health: Seven lessons learned. *Family Practice Management*, *26*(5), 13–19.
12. Berman, R. S., Patel, M. R., Belamarich, P. F., & Gross, R. S. (2018). Screening for poverty and poverty-related social determinants of health. *Pediatrics in Review*, *39*(5), 235–246. <https://doi.org/10.1542/pir.2017-0123>
13. Berger-Jenkins, E., Monk, C., D'Onfro, K., Sultana, M., Brandt, L., Ankam, J., Vazquez, N., Lane, M., & Meyer, D. (2019). Screening for both child behavior and social determinants of health in pediatric primary care. *Journal of Developmental & Behavioral Pediatrics*, *40*(6), 415–424. <https://doi.org/10.1097/DBP.0000000000000676>
14. Byhoff, E., De Marchis, E. H., Hessler, D., Fichtenberg, C., Adler, N., Cohen, A. J., Doran, K. M., Ettinger de Cuba, S., Fleegler, E. W., Gavin, N., Huebschmann, A. G., Lindau, S. T., Tung, E. L., Raven, M., Jepson, S., Johnson, W., Olson, A. L., Sandel, M., Sheward, R. S., & Gottlieb, L. M. (2019). Part II: A qualitative study of social risk screening acceptability in patients and caregivers. *American Journal of Preventive Medicine*, *57*(6), S38–S46. <https://doi.org/10.1016/j.amepre.2019.07.016>
15. Hsu, C., Cruz, S., Placzek, H., Chapdelaine, M., Levin, S., Gutierrez, F., Standish, S., Maki, I., Carl, M., Orantes, M. R., Newman, D., & Cheadle, A. (2020). Patient perspectives on addressing social needs in primary care using a screening and resource referral intervention. *Journal of General Internal Medicine*, *35*(2), 481–489. <https://doi.org/10.1007/s11606-019-05397-6>
16. Orr, C. J., Chauvenet, C., Ozgun, H., Pamanes-Duran, C., & Flower, K. B. (2019). Caregivers' experiences with food insecurity screening and impact of food insecurity resources. *Clinical Pediatrics*, *58*(14), 1484–1492. <https://doi.org/10.1177/0009922819850483>
17. Steeves-Reece, A. L., Totten, A. M., Broadwell, K. D., Richardson, D. M., Nicolaidis, C., & Davis, M. M. (2022). Social needs resource connections: A systematic review of barriers, facilitators, and evaluation. *American Journal of Preventive Medicine*, *62*(5), e303–e315. <https://doi.org/10.1016/j.amepre.2021.12.002>

18. Berkowitz, S. A., Terranova, J., Randall, L., Cranston, K., Waters, D. B., & Hsu, J. (2019). Association between receipt of a medically tailored meal program and health care use. *JAMA internal medicine*, 179(6), 786–793. <https://doi.org/10.1001/jamainternmed.2019.0198>
19. Walker, D. M., DePuccio, M. J., Hefner, J. L., Garner, J. A., Joseph, J. J., Headings, A., & Clark, A. (2021). Utilization patterns of a food referral program: Findings from the Mid-Ohio Farmacy. *Journal of the American Board of Family Medicine: JABFM*, 34(6), 1174–1182. <https://doi.org/10.3122/jabfm.2021.06.210036>
20. Oronce, C. I. A., Miake-Lye, I. M., Begashaw, M. M., Booth, M., Shrank, W. H., Shekelle, P. G. (2021). Interventions to address food insecurity among adults in Canada and the US: A systematic review and meta-analysis. *JAMA Health Forum*, 2(8), e212001. doi:10.1001/jamahealthforum.2021.2001
21. Berkowitz, S. A., Ricks, K. B., Wang, J., Parker, M., Rimal, R., & DeWalt, D. A. (2022). Evaluating a nonemergency medical transportation benefit for accountable care organization members. *Health Affairs (Project Hope)*, 41(3), 406–413. <https://doi.org/10.1377/hlthaff.2021.00449>
22. Hoffman, S. C., Buczkowski, A. S., Mallory, L., McGovern, L. B., Cappen, S. M., Douglass, A. S., Correia, R., Longnecker, L., Taylor, C. S., Holmes, R., Poulin, B., & McElwain, L. L. (2022). Addressing transportation insecurity improves attendance at posthospitalization appointments. *Pediatrics*, 149(1), e2020032862. <https://doi.org/10.1542/peds.2020-032862>
23. Gusmano, M. K., Rodwin, V. G., & Weisz, D. (2018). Medicare beneficiaries living in housing with supportive services experienced lower hospital use than others. *Health affairs (Project Hope)*, 37(10), 1562–1569. <https://doi.org/10.1377/hlthaff.2018.0070>
24. O'Toole, T. P., Johnson, E. E., Aiello, R., Kane, V., & Pape, L. (2016). Tailoring care to vulnerable populations by incorporating social determinants of health: The Veterans Health Administration's "Homeless Patient Aligned Care Team" program. *Preventing Chronic Disease*, 13, E44. <https://doi.org/10.5888/pcd13.150567>
25. Frazee, T. K., Beidler, L. B., Fichtenberg, C., Brewster, A. L., & Gottlieb, L. M. (2021). Resource brokering: efforts to assist patients with housing, transportation, and economic needs in primary care settings. *Annals of Family Medicine*, 19(6), 507–514. <https://doi.org/10.1370/afm.2739>

MCG Health © 2022. Cover photo courtesy Shutterstock / Ody_Stocker

MCG Health, 701 Fifth Ave., Ste. 4900 • Seattle, WA 98104 • (206) 389-5300 • www.mcg.com