Screening for Social Determinants of Health
The Known and Unknown

In the age of precision medicine and genomics, screening for social determinants of health in a clinical setting is relatively simple. This screening may be as or more effective than genetic screening in improving patient health and aiding risk stratification. Universal screening for social determinants of health by clinicians is now either recommended or being actively considered for recommendation by many professional societies and national organizations, including the American Academy of Pediatrics, American Academy of Family Physicians, and American College of Obstetricians and Gynecologists. Substantial evidence highlights ways to integrate addressing patients’ social determinants and social service needs into clinical care. Thus, now is an opportune time to review various practices for clinical screening and referrals. However, identifying and addressing patients’ social determinants will only be successful if these clinical practices occur with broad structural, community, and societal changes to the determinants that currently perpetuate poor health.

Advances in Evidence
Many validated social determinant screening tools exist but assess single determinants, such as food insecurity, intimate partner violence, or quality of housing. More comprehensive screening tools for adolescents or school-aged children are being tested and implemented in various settings. One study in primary care conducted comprehensive screening for 3166 patients. Of the 416 patients with screen-detected unmet needs, 46% reported that they had difficulty affording health care, 40% had food insecurity, and 36% struggled to pay for utilities such as heat and water. Additionally, the primary care patients with screen-detected social determinants were more likely to have depression, diabetes, and hypertension. It can be hypothesized that patients with financial insecurity avoid incurring health care costs, leading to higher likelihood of worse chronic disease outcomes. However, even in Canada, a nation providing universal health care, patients with screen-detected social determinants had lower rates of evidence-based diagnostic or medical screens, worse management of chronic diseases, and reduced use of health services. These data suggest that the quality of patient primary care and other services is compromised for these vulnerable patients even when financial barriers to medical care are removed.

Advances in Referrals and Interventions to Address Social Determinants
National organizations, companies, local universities, and state agencies, federally funded research endeavors, and professional communities are working to link patients with appropriate community resources in new and exciting ways. To succeed, these endeavors need clinicians to be involved. For example, a partnership between clinicians, a state agency, a technology company, a nonprofit organization, and patients created a series of crowdsourced interventions to decrease inhaler use in community patients with asthma. In this program, 497 patients (98 children and 399 adults) were willing to have their use of short-acting β-agonist medication electronically monitored for at least 60 days. The location and number of daily and nightly inhaler use and number of symptom-free days were obtained. During a mean follow-up of 273 days per participant, the monitors recorded 34,870 uses of inhalers. This type of monitoring identified geographic hot spots of inhaler use, and crowdsourced innovations were then solicited and tested. Rerouting trucks, planting trees in targeted areas, and creating real-time alerts for potentially dangerous environmental conditions were associated with a relative reduction of 78% (from 0.76 to 0.18) in mean daily inhaler use and of 84% (from 0.29 to 0.05) in mean nightly inhaler use and with 48% improvement (from 62% to 90%) in symptom-free days during a 12-month period.

Screening Controversies
Despite advances and novel demonstration projects, whether to implement comprehensive and universal screening for social determinants during the clinical encounter remains controversial. Two themes emerge from this debate. One theme focuses on the potential misattribution of responsibility that may result from such a large effort in clinical screening. From this perspective, appropriate interventions must occur at the community and governmental level. Obtaining data from clinician screening on the prevalence and consequences of numerous needs like better housing or food insecurity may provide information about the depth and breadth of the problem. However, this effort compromises time available for medical care and could distract from other important needs, such as temporary financial assistance, which involves government and other funding agencies.

The other theme centers on the concerns and implementation barriers perceived by clinicians. Even though health care professionals generally support social determinant screening in the clinical setting, many perceive issues and barriers with implementing screening processes. In a 2019 survey, 66% of 154 physicians did not feel confident in their capacity to address social determinants of health. Physicians also reported common issues that prevent social determinant screening, including lack of time (70%), low availability of resources to address social service needs (55%), and concerns that patients will be uncomfortable answering these questions (16%). Most physicians (94%) felt that the screening would be more appropriately conducted by social workers. This survey highlights another issue: increasing concerns that the use of the electronic health record, which is likely to be part of
the screening process, is frustrating physicians, and that adding screening for social determinants of health many only exacerbate this issue.

**Best Practices in Implementing Screening for Social Determinants**

**Build a Referral List and Identify Social Screening Needs**

Having a list of local community services has improved immediate referral of screened patients with social service needs. County departments of public health can help identify these services. Also, information about local mental health professionals is available in some communities from public health agencies and is also available electronically in publications such as Psychology Today. Medical residents from local teaching health centers who seek a quality improvement project have also helped to locate and link patients to community social services. Additionally, the CLEAR toolkit, which is an electronic clinical decision aid about social determinants of health, can be used to collate local social resources and identify useful social needs screening appropriate for specific patient populations. Comprehensive lists of social determinants to consider for screening have also been created, as has the multideterminate Health-Related Social Needs Screening Tool that the Centers for Medicare & Medicaid Services uses in demonstration projects.

**Implement Co-location Care Models**

Many practices have integrated social service navigators, clinicians, or resources directly into clinical practice. A co-location treatment model supports continuity of care, destigmatizes social service needs, and eases the barriers to referral. In a stepped-wedge trial of 9 federally qualified health centers involving 238 087 clinical encounters among 57 490 unique patients, a strategy derived from machine learning methods to risk-stratify patients by social determinants screening was created from patient-level available data. The risk-stratification strategy then was used to predict the need for a social worker, dietician, or behavioral health or other health service practitioner before a clinic appointment. This automated prediction improved patient attendance at future clinic appointments (attendance during 62 254 intervention encounters vs 175 833 control encounters). It also increased successful social service referrals, the primary endpoint of the study. A limitation of this study, and others in this field, was that no health outcomes were reported—one of the ultimate goals of screening for social determinants of health. Joining these types of innovative referrals and cross-sector interventions may offer increased efficiency for the clinician—a direct intervention for patients' social service needs—and bypass the need for screening for social determinants of health during the clinical encounter.

**Leverage Technology**

Automation of screening and referrals for social determinants was recently tested in a large hospital within the Medicaid safety net. The demonstration project completed screening on 70% of 2420 patients. Of these, 86% of 376 patients who requested resources received tailored resources that had been embedded into the electronic health record and created by a team of professionals. A team-based approach is likely needed to enable this type of process. In addition, while adoption of such electronic health records-based tools is feasible, further research is needed to determine how to best integrate them into clinical care. Auto-filled screening questionnaires that give patient-specific suggestions seamlessly integrated into patient encounters could help increase adoption rates. Other barriers related to adoption by patients also need to be better understood, including why such information, referrals, and care offered by social workers is not wanted by patients.

**Conclusions**

Disparities in social determinants of health, which involve the conditions in which people are born, grow, work, and age, are associated with substantially different health outcomes. Much is known about the harm caused by social determinants of health, but less is known about who should screen, identify, and deliver programs to reduce these harms and successfully address patients' social determinants, individually or at the societal level. There are potential adverse consequences of either choosing to screen or choosing not to screen for social determinants in a clinical setting. There is already concern that many physicians are spending too little time in meaningful patient care and too much on electronic record entry and other administrative responsibilities. It is possible that screening for social determinants of health would add further clinician burden and not successfully address the disparities in health outcomes that result from large structural and societal inequities.

Demonstration projects are needed to test if clinical screening leads to case finding, referral, and receipt of social services and ultimately to improved patient outcomes. Continued advances, debate, focus, and clinician demand for answers about how to best address and eventually eliminate patients' social determinants of health disparities will help ensure continued progress.

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**ARTICLE INFORMATION**

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**REFERENCES**


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