

COMMENTARY

Social Determinants of Health and Primary Care: Intentionality Is Key to the Data We Collect and the Interventions We Pursue

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Social determinants of health (SDOHs)—the conditions where we live, learn, work, and play—often influence the lives of patients much more than health care services. Family physicians in particular witness the impact of these factors on a daily basis in clinical practice, and they have begun to screen for SDOHs and intervene when appropriate to mitigate their effects. This issue of the *Journal of the American Board of Family Medicine* focuses on SDOH data collection and analysis that informs patient care, population health, and policy interventions. Collectively, this series of articles establishes the foundation for a robust SDOH research agenda for primary care. (J Am Board Fam Med 2016;29:297–300.)

One of my most humbling realizations as a physician began when I read the landmark article by Michael McGinnis and colleagues¹ during public health school 4 years after the piece was published. I was struck by their conceptual model that spelled out determinants of population health into genetic predisposition, behavioral choices, environmental conditions, social circumstances, and health care. I was troubled that the relative number of hours I spent studying medicine and the amount of the US gross domestic product dedicated to medical treatment versus health promotion all a sudden felt vastly lopsided and grossly misaligned compared with where we should be spending our time and dollars, particularly when McGinnis et al¹ estimated that shortfalls in acquisition of health care services contributed to early mortality only 10% of the time. Like many of my peers, I started to understand that there is much more to health—and more opportunities to affect it—than health care alone.

Since that commentary by McGinnis et al¹ in the early 2000s, the attention paid to social determinants of health (SDOHs) has intensified. The Center for Medicare and Medicaid Innovation, created by the Affordable Care Act, has produced a number of models focused on how better to align population health outcomes with delivery system transformation initiatives.² In fact, the Center for Medicare and Medicaid Innovation has taken notice of the importance of SDOHs and has requested proposals for a project to identify the outcomes of widespread community screening for social needs combined with referral to community resources.³ Major foundations have launched campaigns expressly dedicated to studying and improving the conditions in which we live, learn, work, and play—most notably the Robert Wood Johnson Foundation and its push to build a culture of health.⁴ Respected national leaders, including the National Quality Forum and the Institute of Medicine, have called for collection of SDOH data to include in electronic health records (EHRs).^{5,6} Health services and policy researchers are increasingly exploring the role of the built environment and adverse childhood experiences (ACEs), including neglect, child abuse, and household dysfunction, on future health status.^{7,8} This collective energy devoted to SDOHs has generated greater awareness and action in clinical settings and more advances on the policy and population health fronts.

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Collecting and Analyzing SDOH Data

In this special issue, 9 thought-provoking articles examine SDOHs through 2 distinct, yet linked, dimensions: (1) data acquisition and analysis; and (2) interventions designed to address SDOHs. Three of the articles discuss the benefits and challenges of primary data collection. Glowa and colleagues⁹ issued an Article ACE questionnaire in rural practices and found that of 111 responses, 62% had experienced ≥ 1 ACE, whereas 22% had ≥ 4 ACEs. They found that administering the survey did not significantly lengthen the visit itself, but the results were not stored in the EHR for future reference or action. Similarly, Page-Reeves and her team¹⁰ at the University of New Mexico created an 11-question instrument they used to screen 3000 patients at 3 different family medicine clinics. The WellRx pilot, spanning housing, income, food insecurity, substance abuse, transportation, and employment, among other domains, showed that 46% of screened individuals had 1 social need, whereas 63% faced multiple needs. After screening, community health workers and medical assistants connected patients and their families to needed resources and services. As a result of this work, the New Mexico Department of Health now requires managed care organizations to provide community health workers to Medicaid patients.

Moving beyond Article, Pinto and his fellow researchers¹¹ found that asking patients to complete a 14-item survey on SDOHs using a tablet interface was both feasible and acceptable. Developing the survey, garnering staff buy-in, and achieving integration with the clinic's EHR took a significant amount of time. However, the planning period provided the research team and clinic staff the opportunity to address concerns regarding discrimination with use of the data and whether asking about these topics would interfere with the doctor-patient relationship.

Primary data collection certainly yields rich, individualized dividends, but it may, from a systems perspective, lead to less consistent and less reliable data, especially if each individual clinic decides to ask—and act on—different questions. Furthermore, the amount of time needed to develop, administer, and integrate primary SDOH data into preexisting EHRs cannot be overestimated. The 3 abovementioned articles lay the groundwork for a meaningful research agenda. When it comes to

primary SDOH data collection, we need to explore who should collect the data and by what means, what domains to query, and how best to integrate the newly acquired information into EHRs and clinical workflows without unduly burdening providers or practices in terms of process or time.

Alternatively, as Hughes et al¹² describes, taking advantage of publicly available secondary data from various sources can mitigate some of the burden of primary data collection and drastically reduce the time needed to obtain meaningful contextual SDOH data. Various geospatial technologies now exist to link aggregated, population-level secondary data such as vital statistics or disease surveillance to patient addresses within EHRs. This actionable, neighborhood-level data provide context about chronic disease risk and social deprivation in the areas where our patients live. Secondary data complement what we collect from the individual patient and helps us provide more nuanced care; in addition, analysis of these data can produce useful insights regarding risk prediction within communities and how to allocate resources accordingly.¹³ In this issue, Li et al¹³ state it best: “Improving population health requires collecting and examining data in a more holistic and systematic way that reflects ecosystems of patients’ health-related risk factors.” The articles by Hughes et al and Li et al further inform the data research agenda: What is the interplay between individual- and neighborhood-level data? How should we apply these factors to improve health status?

Using Social Determinants Data to Inform Interventions

High-quality data are critical to identifying underlying challenges with SDOHs and to evaluating the impact of initiatives designed to mitigate them. This special issue also features 4 unique SDOH interventions that span different places, people, and processes. Mehta et al¹⁴ directly tackled a lack of health insurance and the cost of medical care when delivering in free clinics 1-on-1 counseling for high-risk patients with diabetes and referring them to local federally qualified health centers. They found that this warm hand-off led to improved glycemic control and more stable health care access for these patients at federally qualified health centers. Riley and colleagues¹⁵ studied another high-

risk group when they created a shared medical home partnership between a primary care office and a school-based health center for adolescents facing transportation and cultural barriers to a regular source of care. In their ecological study they encountered greater adherence to preventive care and chronic disease management than when the teens were seen only in the local primary care office.

Kozhimannil et al¹⁶ turn our attention to which member of the health care team can help patients effectively navigate SDOH factors. They investigated how doulas influence pregnancy and birth outcomes for low-income, racially and ethnically diverse women. Through focus groups, they learned that doulas help address health literacy and improve communication among members of the care team.

Last, Lam et al¹⁷ explore the processes by which low-income, under-resourced populations suffering from depression engage in their care: either through an interagency coalition approach across sectors or via technical assistance made available to agencies to improve services they offer, including webinars, online tools, and site visits. The former approach tends to offer additional benefits, especially for particular subgroups of patients. These 4 studies highlight the application of SDOH data to shape initiatives at the patient, population, and policy levels and prompt an intervention research agenda: How do SDOH data direct community resources, foster intersectoral collaboration, and enhance the quality of care provided?

This special issue lays the foundation for a robust research agenda for the collection and use of SDOH data to address challenges commonly seen in primary care. However, a note of caution is warranted: we must not let the research process interfere with common sense or delay action. For example, housing is critical to health, for it provides shelter, freedom from violence, a safe place to store food and medicine, a place to care for personal hygiene, and an address when applying for jobs. We do not need more research studies that indicate housing is integral to health, for we intuitively know this already. Rather, we must be intentional and proactive in what research questions we choose to ask and answer and in what interventions we pursue to affect the health of our patients, families, and communities.

References

1. McGinnis JM, Williams-Russo P, Knickman J. The case for more active policy attention to health promotion. *Health Aff (Millwood)* 2002;21:78–93.
2. The CMS Innovation Center [homepage]. Available from: <https://innovation.cms.gov>. Accessed April 3, 2016.
3. Centers for Medicare & Medicaid Services. Accountable health communities model. Available from: <https://innovation.cms.gov/initiatives/AHCM>. Accessed April 15, 2016.
4. Robert Wood Johnson Foundation. Building a culture of health. Available from: <http://www.rwjf.org/en/how-we-work/building-a-culture-of-health.html>. Accessed April 3, 2016.
5. Institute of Medicine. Capturing social and behavioral domains in electronic health records: phase 1. Washington, DC: National Academies Press; 2014.
6. National Quality Forum. Multi-stakeholder input on a national priority: improving population health by working with communities—action guide 1.0. Washington, DC: National Quality Forum; 2014.
7. Roux A, Mair C. Neighborhoods and health. *Ann N Y Acad Sci* 2010;1186:125–45.
8. The adverse childhood experiences study. <http://www.cdc.gov/violenceprevention/acestudy/>
9. Glowa PT, Olson AL, Johnson DJ. Screening for adverse childhood experiences in a family medicine setting: a feasibility study. *J Am Board Fam Med* 2016;29:303–7.
10. Page-Reeves J, Kaufman W, Bleecker M, et al. Addressing social determinants of health in a clinic setting: the WellRx pilot in Albuquerque, New Mexico. *J Am Board Fam Med* 2016;29:414–18.
11. Pinto AD, Glatstein-Young G, Mohamed A, Bloch G, Leung F-H, Glazier RH. Building a foundation to reduce health inequities: routine collection of sociodemographic data in primary care. *J Am Board Fam Med* 2016;29:348–55.
12. Hughes LS, Phillips RL, DeVoe JE, Bazemore AW. Community vital signs: taking the pulse of the community while caring for patients. *J Am Board Fam Med* 2016;29:419–22.
13. Li V, McBurnie MA, Simon M, et al. Impact of social determinants of health on patients with complex diabetes who are served by national safety-net health centers. *J Am Board Fam Med* 2016;29:356–70.
14. Mehta PP, Santiago-Torres JE, Wisely CE, et al. Primary care continuity improves diabetic health outcomes: from free clinics to federally qualified health centers. *J Am Board Fam Med* 2016;29:318–24.
15. Riley M, Laurie AR, Plegue MA, Richardson CR. The adolescent “expanded medical home”: school-based health centers partner with a primary care clinic to improve population health and mitigate

- social determinants of health. *J Am Board Fam Med* 2016;29:339–47.
16. Kozhimannil KB, Vogelsang CA, Hardeman RR, Prasad S. Disrupting the pathways of social determinants of health: doula support during pregnancy and childbirth. *J Am Board Fam Med* 2016;29:308–17.
 17. Lam CA, Sherbourne C, Tang L, et al. The impact of community engagement on health, social, and utilization outcomes in depressed, impoverished populations: secondary findings from a randomized trial. *J Am Board Fam Med* 2016;29:325–38.