Will Social Determinants Reshape Pediatrics? Upstream Clinical Prevention Efforts Past, Present, and Future

Adam Schickedanz, MD, PhD; Laura Gottlieb, MD, MPH; Peter Szilagyi, MD, MPH

From the Department of Pediatrics, David Geffen School of Medicine at UCLA (A Schickedanz and P Szilagyi), University of California, Los Angeles, Calif; and Department of Family & Community Medicine (L Gottlieb), University of California, San Francisco, Calif
The authors have no conflicts of interest to disclose.
Address correspondence to Adam Schickedanz, MD, PhD, Department of Pediatrics, David Geffen School of Medicine at UCLA, University of California, 10960 Wilshire Blvd Suite 960, Los Angeles, CA 90024 (e-mail: Aschickedanz@mednet.ucla.edu).
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In the early 1960s when Dr. William Kannel, Director of the Framingham Heart Study, first coined the term "risk factor,"[1] most physicians considered it outlandish to screen patients for predictors of disease risk to guide their interventions. Despite the fact that heart attack and stroke cut short hundreds of thousands of lives every year, at the time, little was known about how cardiac disease precursors could be used to guide effective upstream prevention.[2] (As just one notable example of how little was known, consider the fact that physicians of the time were routinely taught a normal systolic blood pressure was a patient's age plus 100.[2]) But Dr. Kannel had studied the epidemiology of cardiovascular disease for years, establishing clear links between novel risk factors like hypertension, hyperlipidemia, and smoking and subsequent heart attack and stroke. Based on this early evidence, his logical (yet radical for the time) recommendation was that clinicians should screen for and intervene upon upstream risk factors in addition to managing downstream manifestations of cardiovascular disease.

Today, screening for and treating cardiovascular risk factors is medical orthodoxy, making it hard to imagine that, at the time, Dr. Kannel's idea was actually quite controversial. Decades after the Framingham Study documented links between early cardiovascular risk factors and later disease, Dr. Kannel was still trying to convince medical practices to incorporate upstream prevention activities. In 1978, he wrote, "[p]hysicians must come to recognize that vulnerable patients need treatment beginning well in advance of the appearance of symptoms. The occurrence of overt cardiovascular disease is not the first indication for treatment, but a medical failure."[3] Though the weight of the evidence would gradually spur clinical transformation, those changes were hard won. "Let me tell you the natural history of a new risk factor," Dr. Kannel recounted of his efforts to convince clinicians to adopt advances in prevention, "Every time we asserted something, it was first said to be bunk."[2] Little did he know then, identification and management of cardiovascular risk factors would represent arguably the most important advances in population health of the post-antibiotic era and save countless lives.

Today, health care continues to grapple with whether to move further toward prevention by identifying and treating the root causes of society's most prevalent diseases. We can now trace disease risk much further upstream than Dr. Kannel first imagined, revealing the "causes of the causes" that drive worse health through the conditions in which people are born, grow, live, work, and age, all shaped by the distribution of money, power, and resources. These powerful upstream conditions are the social determinants of health.[4] Screening for social risk factors and reducing social needs – the consequences (eg, homelessness and food insecurity) of adverse social conditions that directly impact health and present opportunities for clinicians to intervene[5] – is no longer an outlandish notion but is now increasingly routine in clinical settings, especially in pediatrics. Will social risk factor screening and new opportunities for upstream prevention reshape medicine and population health the way cardiovascular risk screening did half a century ago? Two articles from this month's issue provide some indication of the progress social risk-informed pediatrics has made to date.

First, Garg et al[6] show the extent to which social risk screening and navigation have already become part of pediatric clinical medicine. When the American Academy of Pediatrics (AAP) survey analyzed by Garg et al was fielded 5 years ago, over half of the national sample of pediatricians reported regularly screening low-income families for one or more social risks and nearly seven-in-eight had referred families to resources to address social needs in the last 12 months. The resources referred to most commonly included some long-recommended by AAP – food assistance programs and public health insurance. Since the study was conducted, the AAP expanded social risk screening guidelines by recommending pediatricians screen all families for a wide range of social risks related to poverty and, when relevant, refer families to

appropriate services.[7] More recently, the fourth edition of the *Bright Futures* guidelines moved social needs-informed prevention even further into mainstream pediatric medicine by embedding social risk screening into the well child visit periodicity schedule. Future studies may find these best practice guidelines increase incorporation of social risk factors in clinical care.

Second, Morgenlander et al[8] show that academic clinics appear to be setting the pace toward upstream pediatrics. The majority of respondents in their national sample of pediatric residency program continuity clinic directors reported that they screen for social risks, with an average seven social risks screened per clinic. Their relatively high degree of engagement and experience with social risk screening also provided these academic clinic directors insight into barriers to social risk screening in terms of time, resources, and training. The findings suggest that many continuity clinics are preparing the next generation of pediatricians to move pediatrics further upstream.

To accelerate progress toward upstream care, pediatrics will need to continue to evolve. Just as cardiovascular risk factor screening required structural changes to drive adoption, such as standardized diagnosis codes and reimbursement mechanisms, system-level supports also will be key to strengthen social risk-targeted care. Cautious optimism is warranted as the field grows: a standardized medical coding taxonomy for social risk factors is on the horizon;[10] electronic health record vendors increasingly incorporate social risk screening modules; and some state Medicaid agencies are beginning to incentivize care that addresses social risks.

In addition to adapting our professional roles, care practices, and policies to address social risks within the clinic and hospital walls, our solutions will be more effective if we also develop partnerships beyond the health care system and build on the strengths of the communities we serve.[9] Many of the best solutions will come from public programs, human services agencies, and community-based organizations already dedicated to tackling social risks. We need not reinvent the wheel or co-opt and medicalize effective social services but rather forge equitable partnerships with these experts in our communities. Dr. Kannel anticipated this truth too, knowing that clinical care would be insufficient to change the heart-unhealthy habits of the nation. "If the appalling toll of cardiovascular disease is to be halted," he wrote, "more must be learned about the promoters of risk factors, and steps taken to prevent or correct these influences. Physicians cannot do this alone; resources in the community must be found to help in the endeavor."[3] Accordingly, we should not be content to just build a better patient-centered medical home when we also have the opportunity to partner across sectors and build patient- and family-centered health communities.

This transformation is far from inevitable. It will take time, just as incorporating smoking cessation and lipid screening into health care took decades. It will take commitment from physicians and other health professions in partnership with patients, agencies and organizations, communities, and a wide range of systems and sectors who share our interests in supporting healthy kids and families. As the authors in this issue help illustrate, this work is already well underway, but the history of prior clinical prevention efforts suggest we still have a long way to go. Will pediatrics continue to evolve to fully realize the potential of social risk-informed care and intervention? Time will tell.

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