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## Moving Upstream: The Importance of Examining Policies to Address Health Disparities

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**Through decades of research** on strategies to best support behavior change, it has become clear that systems- and policy-level interventions can have just as great an influence as individual-level interventions. This fact is particularly true on a population level and especially for situations in which individual behavior change is constrained by structural factors. However, rigorous evaluation of these systems-and policy-level interventions are less frequently found in the health and public health literature. Partly, this limited examination is related to the fact that interventions designed to change systems and policies occur far upstream. It may be challenging to examine in a single study all the links that create a chain from a policy change to a systems change to an individual behavior change and, finally, to an improved health outcome.

Rigorous studies of policy are critical. In some cases, policy makers and advocates may assume that well-intentioned policies will have a positive effect on populations of interest, even though research sometimes demonstrates unintended negative consequences or spillover effects<sup>1,2</sup> among other populations. Moreover, variations in policies may reveal that some types of policy implementation are more effective at bringing about desired changes<sup>3</sup>; without examining the comparative effectiveness of these variations, our capacity to best operationalize systems changes is limited.

Social determinants of health, such as poverty and food insecurity, are increasingly recognized as critical drivers of health inequities. Importantly, these social determinants are driven in large part by the systems and policies in place that constrain the choices individuals are able to make and the resources they are able to acquire. Therefore, they are less amenable to change by intervention at the individual level.<sup>4</sup> For example, although families may fall into food insecurity because of a poor financial choice, more often food insecurity represents the accumulation of risk from poor access to quality education, limited

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employment opportunities, challenges accessing public benefits, systemic racism that reduces the ability to access health-promoting resources, and other upstream factors.<sup>5</sup>

Because these systems and policies play such an important role in altering the social determinants of health, health services and public health researchers are increasingly interested in examining these policies, and clinicians must become accustomed to understanding the implications of these policies for their patients. In this issue of *JAMA Pediatrics*, a study by Vasan et al<sup>6</sup> examined the US Department of Agriculture–mandated transition of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) benefits from a paper voucher to an electronic benefits transfer (EBT) debit card. It is an excellent example of the type of research needed in this field. It exemplifies the importance, and the challenges, of examining a policy change. In this study, the authors took advantage of a natural experiment,<sup>7</sup> namely geographic and temporal variation in states' transition to the EBT debit card, to find that the card was associated with a 7.8% increase in WIC participation rates. The authors hypothesized that this improvement occurred because of the decreased stigma and increased convenience of the debit card compared with a paper voucher, although follow-up interviews with recipients can better clarify whether this was indeed the salient reason for this change. The WIC program is proven to reduce food insecurity and improve health outcomes for pregnant women, infants, and young children.<sup>8</sup> Because, as this study elegantly demonstrates, electronic distribution of WIC benefits increased WIC enrollment, it is likely that electronic WIC benefits also improve food security and health outcomes for individual patients (although follow-up studies should confirm that this is the case).

Importantly, Vasan et al<sup>6</sup> found that states with the lowest WIC participation rates benefited the most from the policy change. This finding is typical of many policy changes. Although individual-level interventions are often maximally beneficial to the most well-resourced people who are most able to seek them out and follow through—as described under “fundamental cause theory”<sup>9</sup>—policy solutions can often be designed to maximally effect the least well-off. It is critical that policy evaluations examine differential effects of policy changes in different populations to ensure that efforts to address social determinants of health are narrowing, rather than widening, health inequities. At the same time, WIC remains one of the safety net programs with the lowest levels of use among eligible beneficiaries, as low as 25% among eligible children aged 4 years.<sup>10</sup> Future studies should continue to identify reasons for low use, as well as policy-level solutions to explore how to increase the availability of benefits to vulnerable groups.

In health care settings, implementation science seeks to promote the adoption and integration of evidence-based practices by understanding how interventions are implemented in real-world settings and how to reduce barriers to use and adherence. In this way, policy evaluations, such as the one by Vasan et al,<sup>6</sup> guide the implementation of effective policies to address health disparities, leveraging natural experiments to provide rigorous evidence for policy makers and advocates. For example, although this study examined the rollout of an electronic WIC debit card, other studies employed quasi-experimental methods to understand how the initial creation of WIC in the 1970s affected women's and children's health,<sup>11</sup> and more recent studies have examined how 2009 revisions to the content of the

WIC food package influenced perinatal outcomes.<sup>12,13</sup> Each of these helps to provide concrete evidence for specific aspects of the program that may improve health outcomes or health disparities.

Why should the clinician care about the transfer of WIC benefits to an electronic debit card? Our role as clinicians is to advocate for the health and well-being of our individual patients. But how can we do this job effectively when our patients are living within systems and structures that are poorly conducive to improved health? The answer is increasingly that clinicians should become more actively engaged in addressing the root causes of health inequities, such as the social determinants of health. To do that, we must understand which policies work so that we can better advocate for changes in our communities. As a community of clinicians, we must become more comfortable advocating for evidence-based policies that have real effects on our patients' outcomes because they effectively address social determinants of health.

This study provides important feedback for policy makers as well: easing use of WIC may increase participation rates. There are other policy proposals within WIC that similarly promise improved ease of use, for example, the ability to use WIC benefits for online food purchases. Should we as clinicians care whether WIC allows online purchases? We should, and we should advocate for the policy evaluation that demonstrates whether it works. If we are serious about addressing social determinants of health, then we must be serious about understanding the policies and systems that created inequities and the strategies that work to dismantle them.

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