# Population Health — A Bipartisan Agenda for the Incoming Administration from State Leaders

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The common goal of health policy leaders at the level of state government in the United States is promoting the health and well-being of all populations to the greatest extent possible within fixed resource constraints. Our health is affected by our physical and social environments, our genes, our economic and educational opportunities, and to a much lesser degree, the medical care we receive.[1] State leaders understand that as a society we are spending our health care dollars in the wrong ways for the wrong things — emphasizing treatment over prevention and medical care over social services.[2]

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States have responsibility for many of the factors that affect population health, including Medicaid programs, public health activities, commercial insurance regulation, and economic development and education. And the health challenges faced by states continue to grow. High-cost, high-need patients swamp Medicaid programs; prisons have become de facto treatment systems for substance use disorders; today's neglected children are tomorrow's state responsibilities; low- and middle-income families struggle with rising health care payments; and the demands of an aging population increasingly tax families, health care systems, and communities.

Even as Congress debates the future of the Affordable Care Act (ACA), state officials working in partnership with new federal executive branch leaders, primarily within the Department of Health and Human Services (HHS), can do much to respond to these challenges. Understanding the need to provide specific guidance for federal–state health policy to improve population health, the governing body of the Reforming States Group, a bipartisan group of health policy leaders from the executive and legislative branches of state governments convened by the Milbank Memorial Fund, has developed an agenda for the new administration proposing several health policy initiatives that have documented bipartisan appeal, are supported by evidence, and are achievable without new legislation.

We suggest a number of ways (see table) that state and federal officials could respond systematically to the health challenges faced by the United States, acknowledging the political and technical complexities of the task and the incremental nature of policy progress, and bypassing the ideological rhetoric that mars much of the current policy debate.

We think that Medicare's leadership in provider-payment reform policy through the work of the Center for Medicare and Medicaid Innovation (CMMI) and the goals of the secretary of HHS for adoption of value-based payment methods[3] should continue. The Centers for Medicare and Medicaid Services (CMS) can also provide specific guidance to states explaining how to engage Medicare in local all-payer delivery-reform efforts, including shared-savings approaches. Similarly, states could use clear guidance on using Medicaid administrative funds to support planning, implementation, and oversight of all-payer delivery-system reform, as well as on investment in evidence-based practices to improve quality and reduce costs.

Payer alignment is crucial in a multipayer system, since no payer accounts for a sufficient share of a provider's revenue to change the economic incentives. We are learning through the CMMI State Innovation Models Initiative and

**Policy Concepts and Proposals.***

| Policy Concept | Specific Proposals |
|---|---|
| Support state efforts for broad reforms of health care payment and delivery | Allow Medicaid funds to be used for building state capacity<br>Increase Medicare participation in state innovation<br>Increase flexibility for managing drug purchasing |
| Support state efforts to address causes and improve management of chronic illness | Integrate Medicaid finances into multipayer public health strategies<br>Provide flexibility in funding for social supports (e.g., housing, employment)<br>Strengthen community-benefit requirements |
| Support state use of data to inform policy | Improve federal data collection and state access<br>Adopt consistent federal standards for data sharing and interoperability |
| Strengthen state–federal partnership on health to ensure greatest impact from federal investments | Ensure federal interagency coordination of investments<br>Establish focal point of accountability in HHS to facilitate state–federal interactions |

* Adapted from the Milbank Memorial Fund (www.milbank.org/publications/letter-to-the-new-administration).

the CMS Comprehensive Primary Care Initiative that it is best for this alignment to happen at the local level, where payers can learn how to collaborate, not compete, on common challenges such as identification of population health priorities, provider-performance measurement, and primary care transformation. This work takes time, trust, and government-facilitated leadership. With clearer CMS guidance on the terms of Medicare participation, states will be encouraged to continue leading in payment-reform efforts. These efforts might take the form of variations on existing Medicare models, such as accountable care organizations or patient-centered medical homes. Alternatively, all-payer reform efforts could involve innovative solutions tailored to a state's health care system, such as statewide or regional global budgets.

Although they stand to benefit from these delivery-system reform efforts, state Medicaid agencies are stymied by management capacities that have not kept pace with program complexity: leadership turnover is high, skills development is often low, and critical management functions are outsourced. When state-led payment-reform innovations will benefit the Medicaid program, it seems proper and efficient for the program to support their development and implementation.

Second, HHS can adopt consistent national policies that would improve interoperable data exchange across health care, including behavioral health care, beginning with clarification of the rules governing permitted uses of data and the exchange of data related to services for mental health and substance use disorders. In addition, the federal government could develop a coherent approach that facilitates state access to health care data about state residents across federal programs, with appropriate assurances for privacy and security.

If the delivery system is to be reformed, clinicians, payers, and patients need to be able to share reliable clinical and administrative information. The federal government can assign responsibility to an individual or office to work with states and information technology vendors to remove policy barriers and promote compatibility of key state public health data and communications across disparate public health programs and funding sources. Although improvements are being made, states and local payer–provider collaboratives also need faster, easier access to federal Medicare and Medicaid data to plan and measure the efficacy of local policies.

Third, CMS can encourage states to develop and participate in population health models that cut across insurance and payment sources. It could allow state Medicaid funds to be used for health promotion activities, even if they are not Medicaid-covered services or billed on a beneficiary-specific basis, if they are part of an organized, multistakeholder, statewide or regional plan to improve population health.

It's estimated that people with one or more chronic conditions account for more than 85% of health care spending in the United States.[4] Our health care system is better at treating than preventing these diseases. Interpretations of federal policy, however, have occasionally allowed state officials to pay for services for Medicaid-eligible populations, rather than

individuals — for instance, with respect to immunizations and tobacco-control efforts. States have then advanced community-wide prevention approaches by coordinating with other payers. A similar path could be followed for other evidence-based chronic-disease prevention efforts, in areas such as obesity reduction and addiction treatment. Federal Medicaid funds could be allocated on the basis of the percentage of the population served or according to another proportional formula negotiated with states.

The challenges of chronic-disease treatment and prevention are heightened for Medicaid by the social and economic disadvantages experienced by its enrollees. These conditions — such as homelessness, poor diet, and lack of stable employment — are often major barriers to stable health.

To acknowledge this reality, CMS could facilitate state efforts to build new services and supports outside the health care system[5] — from providers such as community health workers, community paramedics, and peer-support specialists, and including efforts to increase supportive or temporary housing, supportive employment, and general transportation. New policies regarding state-plan amendment and waiver models could facilitate state use of Medicare and Medicaid funds to enhance the availability of services through comprehensive, flexible community-based models for vulnerable people with complex care needs.

Our proposed policy agenda is foundational but limited. Given the very nature of bipartisan action, there are important policy choices on which even members of the Reforming States Group do not agree — many of them regarding the future of the ACA.

Our proposal is also a long-term agenda for governing and avoids focusing on any single health care issue currently grabbing headlines. It can be achieved only when state and federal governments agree on their roles and responsibilities. We believe that states will have to accept financial and performance accountability for the funds and flexibility they seek, and that federal agencies will have to view state officials as true partners in efforts to serve citizens and acknowledge the diversity of political and cultural values in the United States.

Implementation of this agenda could improve the capacity of state officials to work with their federal partners and private-sector stakeholders — payers, patients, and providers — toward a common goal that none can accomplish by themselves: healthy people living long and fulfilling lives in healthy communities.

Disclosure forms provided by the authors are available at NEJM.org.

From the Milbank Memorial Fund, New York (C.F.K.); the South Carolina State Senate, Columbia (T.A.); the Department of Health Care Policy and Financing, State of Colorado, Denver (S.B.); and the Reforming States Group Executive Committee (T.A., S.B.).

This article was published on December 14, 2016, at NEJM.org.

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DOI: 10.1056/NEJMp1613250

# Public Health and Hospitals: Lessons Learned From Partnerships in a Changing Health Care Environment

Recent changes in policymaking, such as the passage of the Patient Protection and Affordable Care Act, have ushered in a new era in community health partnerships.

To investigate characteristics of effective collaboration between hospitals, their parent systems, and the public health community, with the support of major hospital, medical, and public health associations, we compiled a list of 157 successful partnerships. This set was subsequently narrowed to 12 successful and diverse partnerships. After conducting site visits in each of the partnerships' communities and interviews with key partnership participants, we extracted lessons about their success.

The lessons we have learned from our investigation have the potential to assist others as they develop partnerships. (*Am J Public Health*. 2016;106:45–48. doi:10.2105/AJPH.2015.302938)

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This most recent study of public health and hospital partnerships had its genesis in spring 2012 at the Keeneland Conference in Lexington, Kentucky, when the president of the American Hospital Association made an observation that seemed, at the time, astonishing:

> We are all in this together, yes, both the medical system and the public health system, and we are needed if we are to generate that epidemic of health or if we are ever to achieve truly accountable health communities. . . . We need to know the most effective collaborative models to pursue. . . . As we work together toward an integration of public health and patient care into ongoing sustained population health, what policy and implementation potholes do we need to avoid?[1]

The reactors to that charge were the executive directors of the Association of State and Territorial Health Officials and the National Association of County and City Health Officials, who collaborated with the hospital community in a common concern for community health. All three embraced the opportunity to work in common pursuit of an "epidemic of health."

But the question that was raised regarding the most effective collaborative models was an issue that remained after the conference. At the time, there was little readily available information about effective collaboration between hospitals, their parent systems, and the health community. Although these partnerships have existed in the past, recent anecdotal reports of successful collaborative partnerships focused on improving community health prompted us to undertake this study. In it, we compiled a list of successful partnerships involving hospitals and public health agencies, distilled the lessons learned from their experiences, and developed eight core characteristics and 11 evidence-based recommendations to guide others' efforts to build successful community partnerships. They are described in the resulting report.[2]

First, we identified characteristics of successful partnerships, including in health and other sectors, from the literature. We then went through a series of steps to identify collaborative partnerships that (1) existed for at least two years, (2) included hospitals and public health departments, and (3) focused on improving community health. With the support of major hospital, medical, and public health associations and with some exploration on our own, we identified partnerships that exhibited the success characteristics and existed before passage of the Affordable Care Act (ACA; Pub L No. 111–148). We collected 157 nominations for study participation electronically. In early 2014, we reviewed these and narrowed them down through a series of assessment steps, resulting in a set of 12 highly successful and diverse community partnerships (Box 1).

In two-day intensive site visits to 12 partnerships, conducted between April and June 2014, we examined the partnerships' genesis; membership and organization; mission, goals, and objectives; funding support; and metrics for performance monitoring. We tabulated and analyzed the information we collected through the site visits and partnership document review, and we prepared a detailed report.[2]

Because the nominated partnerships were established before implementation of the ACA, these pioneers may be harbingers of a changing paradigm for improving the health of populations. On the basis of the lessons learned from the collective experience of these successful partnerships, we have shared our observations to guide others pursuing similar initiatives,

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*This article was accepted October 8, 2015.*

*doi: 10.2105/AJPH.2015.302938*

**PARTNERSHIPS INCLUDED IN THE STUDY POPULATION: 2014**

| Partnership Name | Location |
|---|---|
| National Community Health Initiatives Kaiser Foundation Hospitals and Health Plan | Oakland, CA |
| California Healthier Living Coalition | Sacramento, CA |
| St. Johns County Health Leadership Council | St. Augustine, FL |
| Quad City Health Initiative | Quad Cities, IA–IL |
| Fit NOLA Partnership | New Orleans, LA |
| HOMEtowns Partnership MaineHealth | Portland, ME |
| Healthy Montgomery | Rockville, MD |
| Detroit Regional Infant Mortality Reduction Task Force | Detroit, MI |
| Hearts Beat Back: The Heart of New Ulm Project | New Ulm, MN |
| Healthy Monadnock 2020 | Keene, NH |
| Healthy Cabarrus | Kannapolis, NC |
| Transforming the Health of South Seattle and South King County | Seattle, WA |

recognizing the inherent limitations in studying a limited number of successful partnerships.

## BUILDING SUCCESSFUL PARTNERSHIPS FOR COMMUNITY HEALTH

An emerging focus on and commitment to population health by many components of the health care system, particularly hospitals and health systems, is manifest through increasing collaboration with the public health system and collective action, rather than independent, uncoordinated "random acts of kindness by hospitals." The shifting focus of the health care system, encouraged in part by ACA provisions, recognizes the concerns of prevention and the socioecologic determinants of health. This is illustrated by the rapid increase in the number of publications from hospital organizations on population health[3,4] and the 157 nominations submitted for consideration in our study.

As communities across the country recognize the need to engage multiple stakeholders in addressing community health issues, there is a sense of anticipation about the potential impact of collaborative efforts. However, establishing and maintaining any type of partnership model is inherently difficult. The evidence in many sectors shows that success depends on the extent to which partnerships incorporate certain characteristics, including a vision, a mission, and goals that key constituencies understand and strongly support; a high level of trust among the partners; highly qualified and dedicated leadership; solid metrics for measuring performance; and a strong commitment to continuous evaluation and improvement.[2]

From our observations, even with the dedicated commitment and energy of all collaborative partners, bending the curve of health status in a community is hard work. Frequently, community health initiatives require considerable time to achieve improvements that depend on (1) the time required to implement the intervention and see the results, and (2) the appropriate use of evidence-based interventions. To sustain the partners' interest over extended periods, partnership leaders advise celebrating short-term successes while continuing to focus on longer-term health status improvement goals.

## MULTISECTOR DIVERSE PARTNERS' CONTRIBUTION

The coalitions we studied were broad in their membership, with partners drawn from many sectors. With leadership by a public health department or a hospital (or its health system) or both, all involved other community-based service providers, city and county governmental units, school systems, and other educational institutions. For example, the successful Quad City Health Initiative—a unique partnership that involves hospitals, local health departments, social service agencies, educators, and businesses among other partners from Iowa and Illinois—was seen as a model by that community for collaboration in economic development.

We found that the Kaiser Foundation Hospitals and Health Plan was the only partnership in which a health plan had a leadership role. Health plans stand to benefit from cost savings that would result from improved community health, so their absence was noticeable. Although many major businesses supported their staff involvement in partnerships, the businesses themselves were not principal partners, which was surprising because businesses stand to benefit from improved community health and reduced sick time. Partnerships are advised to undertake extra efforts to recruit partners from the employer and health insurer sectors as principal partners of these initiatives.

## PARTNERSHIP ORIGINS AND LEADERSHIP

A spark that ignited interest and prompted community leaders to consider collaborative efforts frequently led to the partnerships that were implemented. We identified three types of conditions that galvanized leadership actions to start coalitions. The first was a charismatic leader, like Art Nichols, CEO of Cheshire Medical Center/Dartmouth-Hitchcock, who was instrumental in the development of Healthy Monadnock 2020, a broad-based partnership in New Hampshire. The second was a health crisis that came to the attention of the community, such as the inner-city Detroit, Michigan, infant mortality rates that rivaled developing countries and prompted Detroit's competing health system leaders to create a joint task force dedicated to changing infant mortality statistics. The third was leadership ability to seize a grant-funding opportunity that incentivized collaborative initiatives to address documented community health issues. A greater understanding of these catalyzing forces can help other leaders identify key moments and circumstances for forging successful multisector community health partnerships.

In all partnerships a trusting, long-standing relationship between major actors in the

community was key to success. Without that trust and strong social capital, it would have been difficult for any of these initiating factors to result in the successful partnerships we studied. We also observed that although charismatic leadership was involved in establishing many of the partnerships, leadership tended to evolve over time to more of a servant-leadership model, a concept first described by Greenleaf and Spears,[5] in which the leaders put the needs of others first and shared power. This was not surprising because so much of the work is accomplished by volunteers, through consensus-building, and through influence, rather than by authoritative dictates. A servant-leadership approach was an important attribute of the leaders of the partnerships.

## MAINTAINING A CLEAR MISSION FOR INITIATIVES

All the successful partnerships we studied had clear mission statements, although they varied in length and format. Each mission focused on improving the health of the community; some were very specific, such as reducing infant mortality, and some were broad, such as becoming the "nation's healthiest community by 2020." Although all partnerships had major challenges, those with broad missions faced the more difficult challenges and may not have understood these challenges and the difficulty of implementing changes across a variety of sectors, settings, and activities when they began.

Some partnership representatives did not fully recognize the importance of building a clear understanding of population health concepts among all partners involved.[6] All partnerships in the study were committed to ongoing review of the mission statements, which we recommend to ensure partnership success and sustainability in the changing relationships within and between the multiple sectors involved in population health.

## FINANCIAL SUPPORT AND SUSTAINABILITY

Some of the partnerships we studied were financially fragile and lacked the long-term resource commitment that would ensure their continued functioning. The majority of local funds for these programs originated from the hospitals that supported the coalitions, usually as a part of their community benefit activities, as was the case with MaineHealth's development of the HOMEtowns Partnership. Some partnerships were grant supported, but because grants specify program spending and are time-limited, sustainability plans were needed to continue activities when the grant support ends.

In some cases the county authority or public health department provided funding support as the anchor institution of the partnerships, allocating funds for staff time and other operational activities such as Web site, telephone, and clerical support, as occurred for example in Healthy Montgomery (in Maryland). Again, we noted the unexpected absence of core support from health plans and major employers, with the exception of Kaiser. Because sustainability funding was an issue for every partnership studied, and even with the heavy reliance on volunteer labor, all partnerships are encouraged to constantly develop strategies for broadening and diversifying their sources of funding support.

## COMMUNITY RECOGNITION AND PERFORMANCE REPORTING

Although all the partnerships we studied were well established and appreciated by the principal partners and other participants, they often lacked recognition in their larger local communities. The participating hospitals, health departments, and other partners were well known in their communities, whereas some partnerships were not. Several used various communication mechanisms to inform their communities of their accomplishments, but all admitted that much more needed to be done to raise the visibility of the partnerships.

Measuring partnership performance and improvements in community health was a particular challenge for some partnerships we studied, because "population health" has different meanings to different people and logic models for community health improvement and initiatives are still evolving. In all cases, the partnerships adopted measures and metrics to monitor their success and improve performance as needed. Some partnerships reported struggles with defining metrics and obtaining data to measure progress on their objectives. Some were able to track only process measures and had not yet advanced to tracking more specific community health status outcome measures. These observations illustrated that to enable objective, evidence-based evaluation of a partnership's progress in achieving its mission and goals and to fulfill its accountability to key stakeholders, the partnership's leadership must specify the community health measures they want to address, the particular objectives and targets they intend to achieve, and the metrics and tools they will use to track and measure progress.

Partnerships' accountability and reporting, both to key stakeholders and the community at large, will be strengthened by the use of community health measures that are linked to mission and goals. Additionally, if leaders use these specific metrics and data after identifying their objectives for community health, they will be better able to monitor and report the progress and value of their partnership. Through developing impact statements that engage the community, they will go a step further in demonstrating progress in achieving their health objectives. Because of the evolving nature of reliable population health metrics, the release of both the Institute of Medicine Vital Signs[7] and the Robert Wood Johnson Foundation's measures of a "culture of health"[8] research will be helpful in partnership reporting.

## SUMMARY AND CONCLUSIONS

We have addressed the charge issued at the Keeneland Conference calling for the identification of successful partnerships among public health organizations, hospitals, and other stakeholders dedicated to improving local community health status. We have identified some effective models, and we have elucidated characteristics that seem to prompt their success.[2] However, it is important to recognize that ours is an initial effort. We are

aware of efforts that are occurring within funding agencies to develop more of these models and to highlight successful ones. We welcome that effort.

Our work demonstrates that a movement affecting many communities in the United States is afoot. The ACA and its requirements for nonprofit hospitals to create a community health needs assessment and propose improvement efforts in identified problems may have prompted this. This parallels efforts by health departments to prepare community health assessments and community health improvement plans in conjunction with applying for accreditation to the Public Health Accreditation Board. It is our sense that even without these external prompts, there was, is, and will continue to be a broad movement among a variety of community organizations to address their local health problems. Our work has, we hope, helped some of those communities that are just striking out in this effort gain valuable lessons that can be applied to their future development.

However, this growth should not be left to chance. There are several ways that local community efforts may be supported. To illustrate, we believe that all hospital and health system boards should form standing committees with oversight responsibility for their organization's engagement in examining community health needs, establishing priorities, and developing strategies for addressing them, including multisector collaboration focused on improving community health.[2] Similarly, local boards of health should act as a committee of the whole or create their own committees to work on creating and nurturing these community-wide partnerships.

In the course of our work, we examined two states where state health department advocacy had been successful in implementing initiatives to encourage hospital–health department partnerships: Maryland and New York.[9] Creative initiatives along these lines are underway in other states. Finally, we believe that the major national organizations representing health and health care should collaborate to foster duplication of these efforts in local communities through a variety of mechanisms. We believe there are communities all across the United States working, or planning to work, together to improve their communities' health. We must do whatever we can to ensure their success. AJPH

## CONTRIBUTORS

F. D. Scutchfield, L. Prybil, and A. V. Kelly drafted and edited the commentary. All authors contributed to the conceptualization and design of the commentary.

## ACKNOWLEDGMENTS

We would like to acknowledge funding by the Robert Wood Johnson Foundation (grant 71208) as well as Hospira, Inc. and Grant Thornton, which provided funding as a gift to an associated foundation, and not directly to the University of Kentucky.

We acknowledge other team members who assisted in the completion of the original study and commentary: Rex Killian, Angela Carman, Dave Fardo, Samuel Levey, and Anne George. Rachel Dixon provided editorial assistance for this commentary.

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DOI: 10.1377/hlthaff.2015.1357
HEALTH AFFAIRS 35,
NO. 8 (2016): 1416–1423


# Evaluating Strategies For Reducing Health Disparities By Addressing The Social Determinants Of Health

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**ABSTRACT The opportunities for healthy choices in homes, neighborhoods, schools, and workplaces can have decisive impacts on health. We review scientific evidence from promising interventions focused on the social determinants of health and discuss how such interventions can improve population health and reduce health disparities. We found sufficient evidence of successful outcomes to support disparity-reducing policy interventions targeted at education and early childhood; urban planning and community development; housing; income enhancements and supplements; and employment. Cost-effectiveness evaluations show that these interventions lead to long-term societal savings, but the interventions require more routine attention to cost considerations. We discuss challenges to implementation, including the need for long-term financing to scale up effective interventions for implementation at the local, state, and national levels.**

Despite improvements in medical care and in disease prevention, health disparities persist and could be increasing for chronic conditions such as obesity, cardiovascular disease, and cancer.[1,2] African Americans and other economically disadvantaged racial and ethnic minorities, and populations of all races with low socioeconomic status, experience large disparities in health. There is growing recognition that social determinants—the conditions in which people live, learn, work, play, and worship—can affect health and produce disparities. Social determinants that negatively affect health and well-being include poverty, lack of access to high-quality education or employment, unhealthy housing, unfavorable work and neighborhood conditions, and exposure to neighborhood violence.[3] Exposure to disadvantage can have deleterious neurodevelopmental and biological consequences beginning in childhood that accumulate and produce disease.[4] Yet current intervention strategies to reduce health disparities do not typically take a "life-course perspective" and tend to be disease specific, often targeting individual and health systems factors without addressing social determinants.

Interventions targeting individuals include improving health and lifestyle behaviors; reducing so-called socio-contextual barriers, such as access to adequate food and employment resources;[5] and delivering culturally and linguistically tailored health programs to specific individuals or groups.[6] Interventions targeting health systems that address discrimination, access to care, and quality of care are also important.[7] However, these approaches are not sufficient to address social determinants such as neighborhood conditions or poverty, which are also fundamental drivers of persistent health disparities.[3,8] For example, if one's neighborhood is unsafe even during daylight hours, interventions targeting outdoor physical activity are unlikely to be effective.[3] As Thomas Frieden's

five-tier Health Impact Pyramid suggests, the greatest health impact likely will come from interventions targeting socioeconomic factors that drive health disparities across multiple conditions.[9]

This article provides an overview of scientific evidence on interventions that address social determinants and can improve population health and reduce disparities. The studies included herein were identified by a working group of investigators from multiple institutions and disciplines who were supported by the National Institutes of Health (NIH)-funded Centers for Population Health and Health Disparities. These centers, located at ten institutions across the country, were established to better understand and address disparities associated with cancer and cardiovascular disease.

Interventions addressing upstream social determinants, such as social structures and policies including education and early childhood, urban planning and community development, housing, income enhancements and supplements, and employment, should be a central focus of health policy development, implementation, and future research. Although the interventions we discuss primarily target a single social determinant, they likely have ripple effects across others.

## Surveying The Evidence On Interventions

**EDUCATION AND EARLY CHILDHOOD** Improving access to high-quality education likely improves health.[10] Early childhood interventions, such as early childhood education and parental support programs, have positive health impacts and help address economic disadvantage and health disparities.[11,12] Because of their potential to improve outcomes for both parents and children, and to produce ongoing health and socioeconomic benefits over time, these interventions can yield a sizable return on investment. As such, there is growing consensus that adopting a life-course perspective (focusing on how experiences early in life can affect health over a lifetime and even across generations) is critical to improving population health and reducing and eliminating health disparities.[3,11]

The Perry Preschool Project—a two-year program carried out in the 1960s in which African American three- and four-year-olds from a disadvantaged community in Michigan were randomized to receive high-quality preschool education or not—was designed to improve educational outcomes and reduce the risk of school failure. While the intervention was not designed to assess health impact, it did find that children receiving the preschool intervention had higher rates of safety-belt use and engaged in fewer risky health behaviors such as smoking and illicit substance use in adulthood, compared to those in the control group.[13] Findings suggested the likelihood of improved health as adults, as well. At age forty, those who received the preschool intervention had higher education, income, and health insurance coverage and lower rates of violent crime, incarceration, welfare receipt, and out-of-wedlock births compared to the control group.[14]

In the Carolina Abecedarian Project—a longitudinal study in North Carolina in the 1970s—economically disadvantaged children (mostly African American) up to age five were randomly assigned to an early childhood intervention group or a control group.[15] The intervention consisted of cognitive and social stimulation including supervised play, daily structured academic instruction, and weekly home visits from teachers. At age twenty-one, the intervention group had fewer symptoms of depression, lower marijuana use, a more active lifestyle, and significant educational and vocational benefits compared to the control group.[16,17] By their mid-thirties, intervention-group members had lower body mass index and fewer risk factors for cardiovascular and metabolic disease compared to control-group members.[15] Return-on-investment estimates from these and other early childhood programs range from returns of three dollars to seventeen dollars per dollar invested.[12]

A 2008 report from Washington State showed that the Nurse Family Partnership—an early childhood home visitation program targeting low-income first-time mothers—yielded an estimated $18,054 net benefit per participant over the long term,[18] largely from reductions in crime, violence, child abuse, and other high-risk behaviors. Estimates of benefits included those directly experienced by participants and those to taxpayers and society (for example, via lower crime rates among participants, which would reduce costs to the criminal justice system).

Studies of the federally funded Head Start program, on the other hand, were not as promising and showed no consistent evidence of positive health impacts.[19] This might be because of variability in implementation across sites and lack of adherence to a set curriculum. A 2015 study of Head Start in Michigan did find that participants had decreased obesity rates compared to non participating children.[20] Other early childhood and education interventions have shown improvements in the educational outcomes of disadvantaged children, which likely translate into increasing socioeconomic status and, thus, better health outcomes in adulthood. But the health

impacts of many promising educational interventions have not been assessed.[21] For example, the schools in the Harlem Children's Zone initiative, which combines rigorous education at a Promise Academy charter school with access to multiple community services for children living in a ninety-seven-block area in Harlem, New York, eliminated the black-white academic achievement gap in math over the four years from enrollment in middle school to the completion of ninth grade. Similarly, the racial academic achievement gap in math and English language arts observed at enrollment in elementary school was eliminated by the third grade.[22]

**URBAN PLANNING AND COMMUNITY DEVELOPMENT** Citing persistent disparities in cardiovascular disease and obesity, the National Prevention Strategy released by the National Prevention, Health Promotion, and Public Health Council in June 2011, emphasized the importance of healthy community environments.[23] Studies have found that changes in nutrition, physical activity, and safety within communities can be achieved through urban planning and community development, which might also improve health behaviors.[24]

Research from the Healthy Food Financing Initiative in Philadelphia, Pennsylvania, suggests that policies and programs addressing access to healthy foods can increase awareness of viable options among residents.[25] While increasing availability and awareness is insufficient by itself, when accompanied by skill-building programs that improve consumers' food-shopping behaviors and nutritional knowledge, stocking policies at stores (including where to place products to make purchase of healthy items the default choice), and price adjustments (such as taxes on unhealthy food or subsidies for healthy food), these interventions can change behavior.[25]

Urban planning and community development can also encourage physical activity. Project U-Turn in Michigan sought to increase active transportation (biking, walking, and transit use), including active transportation to school. The project was associated with an increased proportion of children walking to school and an estimated 63 percent increase in active transportation citywide.[26]

Interventions that address the distribution and density of alcohol outlets in low-income communities can affect substance abuse–related morbidity, crime, and neighborhood safety. Alcohol outlets are often overly concentrated in low-income minority communities.[27] The Centers for Disease Control and Prevention's Guide to Community Preventive Services[28] touts interventions targeted at reducing the density of alcohol outlets as evidence-based approaches for reducing alcohol use, abuse, and related morbidity. Observational studies provide compelling evidence that decreasing the density of and proximity to alcohol outlets can reduce risk of violent crime, as well.[29] Such evidence has informed urban planning and policy efforts in some communities,[30] but rigorous evaluations of urban planning policy reforms aimed at curbing overconcentration of alcohol outlets in disadvantaged communities are needed.

**Although the interventions we discuss primarily target a single social determinant, they likely have ripple effects across others.**

**HOUSING** Housing quality and safety are known to affect health.[31,32] Interventions for lead abatement and indoor air quality improvement have reduced childhood lead poisoning and asthma morbidity, respectively.[33,34] Although not originally designed to evaluate health outcomes, housing mobility programs intended to increase low-income families' access to economic opportunity and safer neighborhoods have also demonstrated potential health impacts.[35]

Among them is the Scattered-Site Public Housing Program in Yonkers, New York, which randomized low-income residents to newly constructed low-income housing in middle-income neighborhoods or to continued residence in poorer neighborhoods. Moving to middle-income neighborhoods was associated with better self-reported health and decreased substance use, increased rates of employment, and decreased exposure to neighborhood violence.[35] The Moving to Opportunity (MTO) for Fair Housing Demonstration Program, one of the most rigorous housing mobility evaluations in the United States, also showed significant health impacts.[36,37] A randomized controlled trial of the federally funded Section 8 housing voucher program, MTO included participants in multiple cities who were randomized to one of three conditions: receipt of a housing voucher to move to a low-poverty neighborhood (experimental

**Reducing and eliminating disparities is a moral imperative that is also advantageous to the US economy.**

group), receipt of a housing voucher for use anywhere, or continued residence in public housing (control group). Randomization to the experimental group was associated, more than a decade later, with decreased risk of extreme obesity and diabetes and increased physical activity, and improved mental health and well-being, for the study population.[36,37]

**INCOME SUPPLEMENTS** In the United States, examples of income enhancements and supplements include the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); the Earned Income Tax Credit (EITC) for low-income families; and Social Security income (Old Age and Survivors Insurance) for the elderly. Most evidence on the health impacts of these programs comes from natural experiments.[8] WIC has been associated with reduced rates of low birthweight, and these effects appear stronger for women with lower versus higher education levels.[38] The EITC has been associated with reductions in low birthweight and maternal smoking.[39] The same research suggests that some associated health benefits, such as improved birth outcomes, might be greater for blacks than for whites. The initiation of the Social Security program was associated with decreased mortality for the elderly and larger declines in mortality over time as benefit levels increased.[40]

Conditional cash transfers, a cash benefit that is contingent upon certain behaviors by eligible beneficiaries, are less studied in high-income countries, but research in low- and middle-income countries suggests that they might be effective in increasing preventive care use and improving nutrition, health behaviors, and birth outcomes.[41] They could reduce disparities if the amount of cash transfer increased based on beneficiaries' level of economic disadvantage such that the poorest receive the largest cash amount.[42] The Five Plus Nuts and Beans pragmatic randomized controlled trial conducted at the Johns Hopkins Center for Population Health and Health Disparities, one of the NIH-funded centers mentioned above, suggests that pairing conditional cash transfers for use on groceries with nutritional counseling among African Americans with controlled hypertension is associated with increased fruit and vegetable consumption and improved dietary patterns.[43]

The Great Smoky Mountains Study in North Carolina examined the impact of income supplements to American Indians resulting from casino revenue. These supplements were associated with improved mental health outcomes in adolescence that persisted through early adulthood, increased education and reduced criminal offenses among American Indian youth, and the elimination of the racial disparity on both of these outcomes.[44,45]

**EMPLOYMENT** Employment can have both positive and negative impacts on health through effects on resources, chronic stress, and political power,[46] but there is limited population-level research examining the health impacts of employment interventions. Research on the effects of civil rights policies, including equal access to employment, indicates that the employment and income gains that resulted led to increases in life expectancy between the mid-1960s and the mid-1970s that were larger for blacks than whites, and greater for black women than black men.[47] Research examining employment interventions for specific vulnerable groups, including low-socioeconomic-status women and people with severe mental illness, also suggests that employment interventions could be effective in reducing health disparities in these populations.[48,49] For people with severe mental illness, employment improves quality of life, finances, and social support.[49] Participation in supported employment, an evidence-based practice assisting people with severe mental illness to obtain and maintain employment, is associated with improved employment outcomes.[50]

## Discussion

Health disparities have significant economic impacts, and reducing and eliminating disparities is a moral imperative that is also advantageous to the US economy. Eliminating disparities in morbidity and mortality for people with less than a college education would have an estimated economic value of $1.02 trillion.[51] Furthermore, research suggests that eliminating racial and ethnic disparities would reduce medical care costs by $230 billion and indirect costs of excess morbidity and mortality by more than $1 trillion over four years.[52]

As we have shown, there is sufficient evidence

to support policy interventions that focus on the social determinants of health, including interventions targeted at education and early childhood, urban planning and community development, housing, income enhancements and supplements, and employment. In particular, early childhood interventions have demonstrated consistent effectiveness at improving long-term health outcomes for disadvantaged children and families, are associated with accrued health-related benefits into adulthood, and are cost-effective.[12]

Yet some scholars and public health practitioners continue to oppose strategies that prioritize intervening in early childhood, noting that the prevalence of costly diseases is much higher among adults than children. While the need for prevention and treatment efforts among older populations with disparities remains, intervening in early childhood is the most economical way to interrupt the cascade of events that puts children at increased risk of poor health outcomes in childhood and adulthood.

The studies described also have several limitations. First, most of the interventions discussed were not designed a priori to assess health impacts, or health disparities per se. Second, several of the studies were natural experiments that did not randomize participants to intervention or control groups, which means that systematic differences between intervention recipients and historical controls might exist, and effects of secular trends might not have been measured. Finally, given the long lag time between the intervention and measurement of health outcomes (particularly for early childhood studies), it is possible that other unmeasured factors are responsible for observed outcomes. Nevertheless, many of the interventions described—particularly in the early childhood and housing domains and those using long-term follow-up and randomization—represent high-quality scientific evidence of the health impacts of social determinants interventions that are far removed from traditional health policy.

Efforts to reduce disparities should focus on scaling up these interventions for implementation at the regional, state, and national levels. Effective implementation will likely require government investment and social welfare reforms, such as universal access to high-quality early childhood education programs, greater access to affordable housing, and efforts to increase housing mobility coupled with strategies for revitalizing neighborhoods. Obstacles remain, including lack of political will and access to long-term financing for these interventions, and threats to maintaining the high quality of interventions when scaling up. Funding and sustaining programs such as those presented here will be key, perhaps through public-private partnerships, social impact bonds (whereby investments in social programs that achieve desirable societal outcomes are funded by leveraging savings generated from program successes to spur private-sector investment), or tax reform. For example, 2006 legislation approved by voters in Denver, Colorado, sets aside a portion of sales tax revenue to fund the Denver preschool program. Also, voters in San Antonio, Texas, approved a sales tax increase to fund "Pre-Kindergarten for San Antonio," which offers high-quality, full-day preschool for all four-year-olds.[53]

**The complex interplay of factors that has resulted in persistent health disparities cannot be reversed with short-term investments.**

There is a critical need to invest in research designed a priori to evaluate the potential of social determinant–related interventions to improve health outcomes and reduce health disparities. This includes research designed to understand and minimize unanticipated negative consequences of interventions. For instance, interventions to optimize housing and supplement income have been associated with unanticipated negative health impacts. The income supplements received in the Great Smoky Mountains Study were also associated with increased accidental deaths and substance use in the specific months that households received payments[54] and in increased adolescent obesity among teens in low-income families.[55] In a subanalysis of MTO data, assignment to the group receiving housing vouchers to move to a low-poverty neighborhood was associated with increased mental health problems among boys.[56] Efforts to evaluate the health impacts of housing mobility programs should also assess their impacts on residential stability, social networks, access to services, and exposure to new stressors associated with moving.[57,58]

Furthermore, housing mobility interventions

**We must use existing research to "connect the dots" between interventions in multiple domains.**

alone do not eliminate the threats to health that remain for those unable to move, and it is not feasible to move all poor households. Research evaluating the health impacts of neighborhood transformation and revitalization initiatives is also needed.

Data on the impacts of social determinant–focused interventions on health cannot come solely from randomized controlled trials. While such trials might be the gold standard for research, they are not the only source for generating valuable scientific information. In the real world, policy makers should act on the basis of the best available data, including natural experiments and demonstration projects.[59]

The complex interplay of factors that has resulted in persistent health disparities cannot be reversed with short-term investments. Social determinant–related interventions designed to create structural changes must be coordinated with long-term efforts to change social and cultural norms, build on existing community strengths, and change the opportunity costs associated with healthy behaviors to make the healthy choice the default choice. For such interventions to have sustained, intergenerational positive health impacts, they must be coupled with attention to social marketing, behavioral economics, social services, and other supports.

Quantifying cost savings more globally—that is, including savings accrued later in life and from nonhealth sources—is also critical. It also raises important questions about how to reallocate savings accrued in the health care sector that result from investments in other sectors, such as education, housing, employment, finance, and community development and urban planning. Individual program cost-effectiveness studies, although valuable, are insufficient to quantify the economic impact of social determinants interventions, which may have life-long ripple effects across multiple domains. Instead, long-term modeling studies are needed and must address indirect and opportunity costs, and account for indirect effects of upward social mobility on health.

To optimize health outcomes, we must also use existing research to "connect the dots" between interventions in multiple domains. Future research should also identify how best to deliver interventions to both improve overall population health and reduce health disparities.[60] For example, a community development intervention that improves physical activity for all community residents could actually widen disparities if increases in physical activity are greater for advantaged versus disadvantaged groups.

## Conclusion

Interventions focused on the health care sector are insufficient to address population-level health disparities. Future research, policy, and implementation efforts should concentrate more on interventions targeting upstream social determinants of health, focusing in particular on interventions targeting children and families. Efforts should focus on scaling up proven interventions in the fields of early childhood and education, housing, urban planning and community development, employment, and income enhancements. They should also focus on strengthening the evidence base through future research and efforts to more comprehensively understand the economic impact of widespread implementation of social determinant–targeted interventions. ■

Rachel Thornton was supported by a grant from the National Heart, Lung, and Blood Institute (Grant No. K23 HL121250-01A1). The authors were supported by the following Centers for Population Health and Health Disparities grants from the National Cancer Institute and the National Heart, Lung, and Blood Institute. Beti Thompson, principal investigator (PI), Understanding and preventing breast cancer disparities in Latinas (Grant No. P50CA148143-01); David R. Williams, PI, Lung Cancer Disparities Center: jointly addressing race and socioeconomic status (Grant No. P50CA148596-01); Lisa A. Cooper, PI, Johns Hopkins Center to Eliminate Cardiovascular Health Disparities (Grant No. P50HL105187-01); Katherine L. Tucker, PI, Boston Puerto Rican Health Study—CVD risk factors (Grant No. P50HL105185-01); Electra D. Paskett, PI, Reducing cervical cancer in Appalachia (Grant No. P50CA105632-06); Lynda H. Powell, PI, Rush Center for Urban Health Equity (Grant No. P50HL105189-01); Alexander N. Ortega, PI, Family and neighborhood interventions to reduce heart disease risk in East Los Angeles (Grant No. P50HL105188-01); Richard Warnecke, PI, University of Illinois at Chicago Center for Population Health and Health Disparities (Grant No. P50CA106743-06); Alice S. Ammerman and Cam Patterson, PI, Center for Reduced CVD Disparities: genes, clinics, and communities (Grant No. P50HL105184-01); and Dedra S. Buchwald, PI, Center for Native Population Health Disparities (Grant No. P50CA148110-01).

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# Policy Approaches to Advancing Health Equity

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Public health policy approaches have demonstrated measurable improvements in population health. Yet, "one-size-fits-all" approaches do not necessarily impact all populations equally and, in some cases, can widen existing disparities. It has been argued that interventions, including policy interventions, can have the greatest impact when they target the social determinants of health. The intent of this article was to describe how selected current policies and policy areas that have a health equity orientation are being used with the aim of reducing health disparities and to illustrate contemporary approaches that can be applied broadly to a variety of program areas to advance health equity. Applying a health equity lens to a Health in All Policies approach is described as a means to develop policies across sectors with the explicit goal of improving health for all while reducing health inequities. Health equity impact assessment is described as a tool that can be effective in prospectively building health equity into policy planning. The discussion suggests that eliminating health inequities will benefit from a deliberate focus on health equity by public health agencies working with other sectors that impact health outcomes.

**KEY WORDS: equity lens, health disparities, health equity, health impact assessment, Health in All Policies, social determinants of health**

Policy implementation has long been recognized as one of the important cornerstones of public health and, together with assessment and assurance, makes up the core functions of public health.[1] The US Centers for Disease Control and Prevention (CDC) defines policy as "a law, regulation, procedure, administrative action, incentive, or voluntary practice of governments and other institutions."[2] It further states that "health can be influenced by policies in many different sectors, e.g., transportation policies can encourage physical activity (pedestrian- and bicycle-friendly community design); policies in schools can improve nutritional content of school meals."[2]

Several policy approaches have demonstrated effectiveness at the level of the general population.[3] For example, several of what are considered the 10 greatest public health achievements of the 20th century are due, in part, to policies such as seat belt and child restraint laws and smoke-free policies.[4,5] However, policy interventions can impact communities differentially and, in some cases, can widen health disparities.[6] There is some evidence that "downstream" interventions, which focus on change at the individual level, are more likely to increase health inequality than are "upstream" interventions, which focus on social change or policy change.[6]

The intent of this article was to describe how selected current policies and policy areas that have a health equity orientation are being used with the aim of reducing health disparities and to illustrate contemporary approaches that can be applied broadly to a variety of program areas to advance health equity. To illustrate current federal efforts, we describe key federal policies and policy agendas aimed at reducing health disparities and point out where they intersect with state, local, and nongovernmental efforts. We argue that policies addressing differential access to living and working conditions needed for health may be more effective when health equity is the goal. To illustrate how such

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The authors acknowledge the contributions of Ms Ashley Borda, who conducted literature reviews contributing to this article.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

The authors declare no conflicts of interest.

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DOI: 10.1097/PHH.0000000000000365

upstream strategies can be developed, we describe a CDC activity that uses the World Health Organization's (WHO's) Commission on the Social Determinants of Health model as a framework to generate strategies. We describe how applying an equity lens to the Health in All Policies (HiAP) approach can foster health equity and describe how an equity lens has been applied to the practice of health impact assessment (HIA) for more equitable impact. With the exception of our examples at the federal level, which we consider to be among the most prominent federal efforts to reduce health disparities, our policy examples were not chosen to reflect or even be representative of the universe of relevant policies; rather, they were chosen to be illustrative.

## Policy Interventions to Reduce Health Disparities and Achieve Health Equity

The implementation of policies to reduce health disparities is a central feature of federally sponsored and supported health initiatives.[7] In 2010, passage of the Affordable Care Act (ACA) created an opportunity for millions of previously uninsured Americans to gain access to health care insurance, providing a potential opportunity to reduce disparities in health and health care.[8] In addition to increasing access to care, this landmark legislation included other needed provisions such as creating Offices of Minority Health at agencies of the US Department of Health and Human Services (HHS) to raise the level of focus on health disparities across operating divisions (ACA section 10334), strengthening workforce diversity (ACA sections 5402, 5404), and requiring nonprofit hospitals receiving community benefit tax exemptions to conduct community health needs assessments that incorporate community feedback (ACA section 9007). The community health needs assessments are intended to identify community health improvement projects that will improve health outcomes. The ACA called for a revision in national data collection standards outlined in section 4302; implementation guidance indicates that the "minimum data standards ... on race, ethnicity, sex, primary language, and disability status must be included in all population health surveys conducted or sponsored by HHS."[9] The minimum racial categories include American Indian or Alaska Native, Asian, black or African American, Native Hawaiian or other Pacific Islander, and white; and the minimum ethnicity categories are Hispanic or Latino and Not Hispanic or Latino. This revision facilitates more granular data collection, which allows for better identification of specific population health needs.

The ACA also created the National Prevention, Health Promotion, and Public Health Council—referred to as the National Prevention Council (NPC). This federal multijurisdictional effort is chaired by the US Surgeon General and comprises 20 federal departments including Agriculture, Health and Human Services, Housing and Urban Development, Defense, Education, and Transportation. Establishment of the NPC represents Congress' recognition that health is both affected and improved by more than the health care sector. The NPC enhances communication and coordination across federal departments and ideally supports decision making that promotes the nation's health. The National Prevention Strategy: America's Plan for Better Health and Wellness, released in 2011 by the NPC, includes priorities and actions that reflect multisector efforts to improve health and reduce health disparities.[10]

In a separate effort, the National Partnership for Action to End Health Disparities and its complementary components—the HHS Action Plan to Reduce Racial and Ethnic Health Disparities and the National Stakeholder Strategy for Achieving Health Equity—engage federal, state, and local partners to work toward reducing racial and ethnic health disparities.[11] While the HHS Action Plan to Reduce Racial and Ethnic Health Disparities lays out the federal government's commitment to actions to reduce disparities, the National Partnership for Action to End Health Disparities is the first actual roadmap provided by the federal government for reducing health disparities, outlining goals for all health agencies within HHS, in partnership with state and local jurisdictions, including Regional Health Equity Councils.[11]

Further evidence of the federal commitment to eliminating health disparities and achieving health equity is found in *Healthy People 2020*, the nation's health objectives, which included for the first time in its 40-year history a topic area devoted to the social determinants of health.[12] The topic area is organized around 5 domains: Economic Stability, Education, Health and Health Care, Neighborhood and Built Environment, and Social and Community Context.[12]

In addition to specific provisions within the ACA that support reducing health disparities, the National Partnership for Action to End Health Disparities, and *Healthy People 2020*, other policy levers, including Executive Orders (EO), have been employed to address specific goals of eliminating health disparities at the national level. Executive Orders are directives issued by the President of the United States regarding operations of the Executive Branch.[13] To address factors contributing to health disparities, for example, Executive Orders have been used to improve language access to services since 2000 (EO 13166) and increase diversity and inclusion in the federal workplace since 2011 (EO 13583).

At the state and local levels, the Public Health Accreditation Standards, which are used to guide the public health department accreditation process, include standards for the integration of health equity into the work of governmental departments of public health. Revised standards, released in December 2013, emphasize a focus on specific populations with greater health risks, inclusion of such populations in state or community health assessments, and consideration of addressing the social determinants of health in community health improvement processes.[14]

While it is beyond the scope of this article to comprehensively describe the numerous and varied policy efforts at federal, state, and local levels to address health inequities, we have documented that policy is integral to public health efforts to achieve health equity, as well as address specific risk factor disparities. Although disease- and risk factor–specific policies are needed, a broader approach to policy that includes societal conditions can help address factors leading to health inequities—differences in health that are avoidable and unfair—across a broad range of outcomes and populations.[15] It has been argued that interventions, including policy interventions, can have the greatest impact when they target socioeconomic factors and can have greater impact on outcomes than other types of interventions.[16]

Addressing the social determinants of health is increasingly understood as necessary if population health is to be improved and health inequities are to be eliminated. This task is often described as "policy, systems, and environment change," an approach that expands the focus beyond health behaviors and clinical services.[17] Associations between community and societal contexts and individual and family health status are generally understood within the field of public health, and the commonly used socioecological model[18] has been an important tool for communicating these relationships. For example, resources such as the CDC Practitioner's Guide for Advancing Health Equity focus on specific policies used by communities, in combination with other interventions that can be effective in reducing disparities.[19] The Institute of Medicine's Roundtable on the Promotion of Health Equity and the Elimination of Health Disparities also examined how issues such as race and racism, residential segregation, and lack of community infrastructure influence the environments that impact health and recommend a focus on these influences in the development of policies to address health disparities.[20]

Growing attention to the ethical and practice imperatives for pursuing health equity in public health is gaining traction in the public and private sectors.[21] However, addressing health inequities requires understanding how *systematic* differences in social conditions and processes effectively influence health.[22] Without a solid understanding of these conditions and processes, the concept of social determinants can be overgeneralized and efforts to address health inequities will be limited and run the risk of not achieving the expected impact on the community's health.

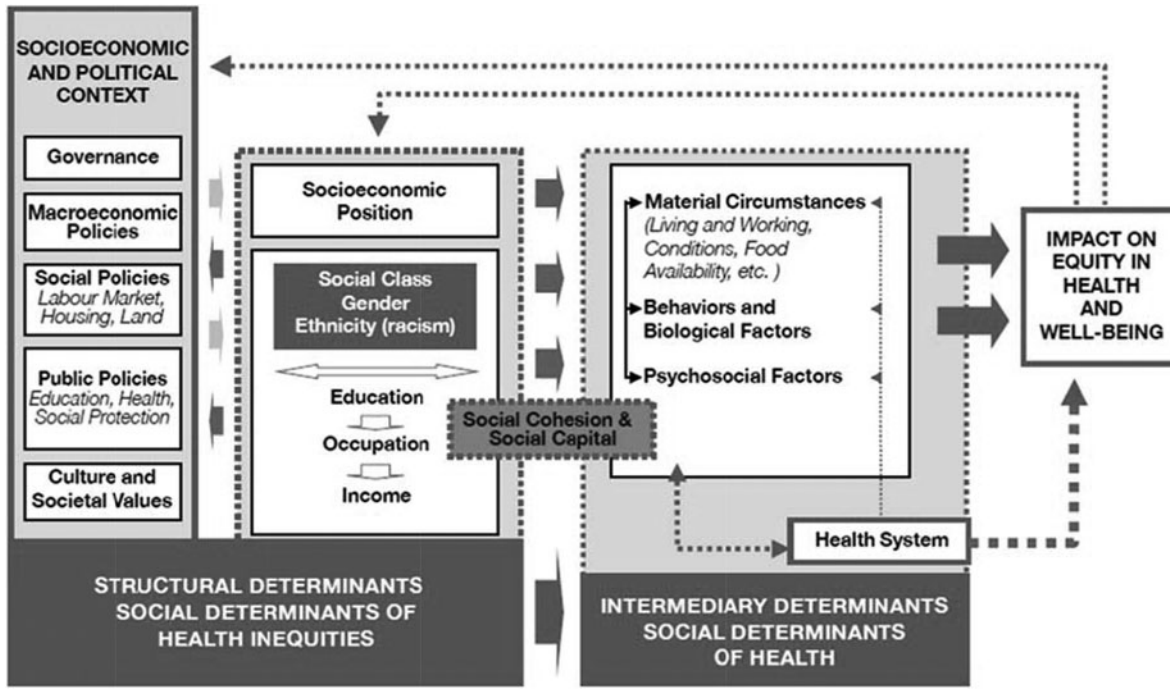
## Applying a Social Determinants of Health Framework to Policies to Achieve Health Equity

To support the development of effective action, the WHO's Commission on Social Determinants of Health (CSDH), a global collaboration of policy makers, researchers, and civil society members, proposed a comprehensive framework for understanding and addressing the social determinants of health inequities[23] (see Figure).

The CSDH framework draws on many models that preceded it but provides needed specificity to inform in-depth explorations of the mechanisms and pathways through which structural policies and processes contribute to differential exposure, differential vulnerability, and, consequently, differential health outcomes. Briefly, the main domains of the CSDH framework are as follows:

- *Structural determinants: Socioeconomic political context*. The structural, cultural, and functional policies and processes that shape how societies are organized—governance structures, macroeconomic policies, social policies, public policy, culture and societal values, and epidemiologic conditions.
- *Structural determinants: Socioeconomic position*. This domain describes how structural policies and processes interact to effectively assign socioeconomic position based on social characteristics (eg, race/ethnicity, gender) through more or less access to essential resources including education, occupation, social class, and income.
- *Intermediary determinants*. Broadly encompassing living and working conditions, this domain also includes psychosocial, behavioral, and biological characteristics, as well as the health system.
- *Crosscutting determinants (on the framework, social capital, and social cohesion)*. This domain acknowledges human agency and the role of people in the shaping of policies and processes that effectively determine how societies are organized.
- *Health equity*. The comparison of the health of populations based on hierarchies of social advantage and disadvantage (eg, race/ethnicity, income, gender).

**FIGURE ● Policy Approaches to Advancing Health Equity**[a]




[a]Reprinted with permission from Solar and Irwin.[23]

The CSDH framework seeks to explain how the differential impact of structural policies and processes influences socioeconomic position based on race, ethnicity, gender, and other social categories, and how this positioning creates vulnerability through more or less access to living and working conditions needed for health.[23] An understanding of this difference between structural and intermediary determinants is needed to set reasonable expectations for outcomes. For example, interventions addressing intermediary determinants may improve the situations of those currently living in vulnerable conditions. However, addressing the structural determinants that give rise to these conditions in the first place is necessary to ensure equitable, sustainable opportunities for health and safety over the life course and over generations.[24] Finally, and importantly, the framework accounts for human agency in the generation of structures, policies, and processes that create and distribute life chances and opportunities for health by emphasizing the need to include groups historically and currently excluded from societal decision-making processes that impact their health and life opportunities.[24] The distinction between the determinants (eg, macro-level policies) and the processes that give rise to their distribution (eg, social and political power) is critical for the development of effective actions to eliminate health inequities.

A consideration of the evidence of the impact of policies on the determinants laid out in this framework reveals evidence in some areas, but that gaps remain. The impact of certain types of policies on social determinants has been well documented, such as in the areas of affordable housing, and some education interventions. For example, evidence of the impact of affordable housing on health demonstrates health benefits ranging from freeing up resources for food and health care, reducing stress through stability, improving mental health through greater control over one's environment, reducing environmental problems caused by poor quality housing, and providing stable linkages to community services, such as mobility services for seniors.[25]

The evidence base for the impact of educational policies on health equity is growing. In its systematic review of education interventions, the US Community Preventive Services Task Force found the following interventions effective in improving the health prospects of low-income and racial and ethnic minority children: full-day kindergarten programs and high school completion programs for students at high risk for noncompletion.[26] However, evidence of effectiveness of policies in other areas of health equity is less well-known and must be further researched. Challenges to understanding how policy can effectively address the

social determinants of health include the complexity of the context, the length of time needed to demonstrate impact, the difficulty in navigating interorganizational and intersectoral partnerships needed, and competing priorities of less complexity.[27]

## An Example of Using the CSDH Framework to Explore Health Inequalities: Child Abuse and Neglect

The CSDH framework can be used as a practical tool to inform public health research and practice. For example, the CDC's Division of Violence Prevention (DVP) has used the framework to explore mechanisms and pathways potentially contributing to the differential burden of child abuse and neglect.[28] Following is a brief overview of this exploration.

DVP is working to ensure that no child ever experiences abuse or neglect. To achieve this goal, it is critical to understand why some children are at greater risk than others. Estimates of child abuse and neglect vary depending on the source, definitions, and measures. Although the National Incidence Study[28] underestimates the incidence of child abuse and neglect relative to self-report data,[29] it is useful in that it disaggregates the data by race/ethnicity and socioeconomic status to understand the distribution of the burden. While all children may be at risk for abuse or neglect, all children do not have the same risk: African American children are nearly twice as likely as white children to experience abuse and neglect, and children living in families with low incomes have nearly 5 times greater risk of abuse and neglect than children living in families with higher incomes.[30]

Some part of this differential burden may be attributable to parental/caregiver education level or limited parenting skills; the fact that children living in low-income families are far more likely to experience abuse and neglect raises important questions about how the conditions in which some parents and caregivers are raising children may contribute to greater risk for harm. Examining the intermediary determinants domain, it is known that living and working conditions associated with increased risk for child abuse and neglect include poverty or low family income,[31] parental unemployment,[32] residential instability,[33] high poverty neighborhood,[34,35] and high violence neighborhood.[34,35]

Given the relationship between living and working conditions and risk for child abuse and neglect, it is important to understand how access to these conditions is achieved and why some families are less likely than others to have the opportunity to raise their children in healthy environments. Examining the socioeconomic position domain, examples of education, occupation, and income patterns potentially contributing to more or less access to conditions needed for health include lower high school completion rates among African Americans and Latinos than among whites[36] and among people living in poverty than among those not living in poverty,[36] overrepresentation of minority racial and ethnic groups in service sector and low-paying jobs,[37] higher risk for unemployment among people without a high school diploma than among college graduates,[38] higher risk of poverty for African Americans and Latinos,[39] higher wealth in white households than in black and Hispanic households,[40] and gender wage inequities at all education levels.[41]

Understanding how socioeconomic patterns may be shaped by structural policies and processes is important to the overall goal of improving conditions for health and safety. A few examples of structural determinants that may be contributing to these socioeconomic patterns include the following: *education*—less funding for schools in districts with a high concentration of poor students than low poverty school districts[42]; *labor market*—discriminatory hiring practices[43,44]; *housing*—increased risk for high-risk, high-cost loans by race/ethnicity within the same income groups[45]; and *justice*—differential sentences for drug offenses based on race/ethnicity.[46]

This brief exploration provides an understanding of how structural policies and societal processes can cluster, systematically limiting access to conditions needed for health. It shifts the narrative around child abuse and neglect from "bad parents" to parents raising children in stressful, unhealthy conditions. The excessive stress experienced by families and communities dealing with several or all of these compounding obstacles no doubt places children at greater risk for abuse and neglect. These societal obstacles cannot be solved by families on their own.

The CSDH framework has also been used as an assessment tool to map existing DVP child abuse and neglect prevention activities that identified critical work primarily in the intermediary determinants domain including behavioral interventions and health systems changes. More recently, DVP's child abuse and neglect prevention activities have expanded to include an evaluation of structural policies that contribute to differential risk for child abuse and neglect[47] and support for state partnerships to promote positive development of children and families.[48] These efforts are part of *Essentials for Childhood: Assuring Safe, Stable, Nurturing Relationships and Environments for All Children*, DVP's unifying vision and strategic approach to preventing child maltreatment.[48]

More broadly, efforts to address the intermediary and structural determinants of health inequities are growing among community organizations, state and local health departments, and other organizations.

A recent publication by the National Association of County & City Health Officials, *Expanding the Boundaries: Health Equity and Public Health Practice*, provides important perspectives for developing new approaches and new partnerships to address health inequities; brief case studies from local and state health agencies; and elements of emerging practices, including reframing relationships with communities to address health inequities.[49] Additional examples of experiences employing these approaches are needed to contribute to an evidence base from which practitioners can draw to address structural and intermediary determinants of health and health inequities.[50]

## Addressing Health Equity Through HiAP Approaches

One approach to addressing social determinants of health within the context of the CSDH framework is HiAP. HiAP has been defined as "an approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies and avoids harmful health impacts in order to improve population health and health equity."[51(pi2)] Underlying the HiAP approach is the premise that, because many of the influences on health come from outside of the health sector, partnership with other sectors is needed.[52] Globally, in 2013, the Helsinki statement called for the WHO to support Member States and provided recommendations to national governments in the implementation of HiAP. Among these is a commitment to health and health equity as a political priority and the inclusion of communities, social movements, and civil society.[53] The WHO has since provided guidance and is monitoring best practices of global HiAP efforts.[54]

HiAP is an approach to decision making that recognizes public policies have the potential to influence health equity either positively or negatively.[55] To achieve a result that advances health equity, an explicit focus on equity is necessary. Some implementers of HiAP note implementation challenges when embracing an equity lens, including opposition to directing resources to poor communities and communities of color.[56] However, benefits have also been identified and include a change in values across sectors leading to a greater understanding of the value of equity and the importance of an equity focus.[56]

## Role of Health Equity Impact Assessment

HIA has been described as way to make clear the link between policies in social sectors, those targeted by a HiAP approach, and health.[57] The National Research Council of the National Academies defines HIA as:

> a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects.[58(p5)]

Similarly, health equity impact assessments (HEIA) employ methodologies to determine the outcomes and benefits of proposed or existing policies and explicitly assess, through an equity lens, what groups or individuals are differentially impacted by the outcomes and seek to prospectively build health equity into policy planning.[59] Like HIA, HEIA requires the involvement of the groups impacted by policies in identifying needs, barriers, challenges, as well as potential solutions,[59] which, for traditional HIA, continue to prove challenging.[60]

Both HIA and HEIA differ in that HIA methodology, when not explicitly addressing equity, may lack sufficient guidance and definitions and therefore omit important values such as fairness and social justice.[61] To acknowledge the explicit inclusion of equity as a core value of an HIA, a set of equity indicators has been developed by the Society of Practitioners of Health Equity Impact Assessment.[62]

### Examples of a national HiAP effort

Within the United States, the NPC was charged with the development of a strategy for advancing health and prevention. The National Prevention Strategy: America's Plan for Better Health and Wellness includes the elimination of health disparities as a strategic direction and makes 5 recommendations for reducing disparities[63]:

1. Focus on communities at greatest risk;
2. Increase access to quality health care;
3. Increase workforce capacity to address disparities;
4. Support research to identify effective strategies to eliminate disparities; and
5. Standardize and collect data to better identify and address disparities.

Within the more than 200 implementation steps included in the NPC Action Plan,[63] several explicitly address health disparities:

- Support and expand cross-sectoral activities to enhance access to high-quality education, jobs, economic opportunity, and opportunities for healthy living (eg, access to parks, grocery stores, and safe neighborhoods).

- Identify and map high-need areas that experience health disparities and align existing resources to meet these needs.
- Increase the availability of de-identified national health data to better address the needs of underrepresented population groups.
- Develop and evaluate community-based interventions to reduce health disparities and health outcomes.
- Support policies to reduce exposure to environmental and occupational hazards, especially among those at greatest risk.
- Support and expand training programs that bring new and diverse workers into the health care and public health workforce.
- Support health center service delivery sites in medically underserved areas and place primary care providers in communities with shortages.
- Increase dissemination and use of evidence-based health literacy practices and interventions.

Complementary to efforts in the global arena, the NPC and National Prevention Strategy provide an organizing framework for a domestic US agenda that supports a HiAP approach at the national, state, and local levels.

### Example of a state HiAP effort

California's HiAP Task Force, created by Executive Order in February 2010, was charged with recommending programs, policies, and strategies to improve the health of Californians while advancing the goals of the state's Strategic Growth Council including "improving air and water quality, protecting natural resources and agricultural lands, increasing the availability of affordable housing, improving infrastructure systems, promoting public health, planning sustainable communities, and meeting the State's climate change goals."[64(p9)] In 2013, California's Health and Safety code was amended through section 131019.5 to explicitly address the health status of all populations, with a priority on eliminating health and mental health disparities and inequities.[65] In coordination with the HiAP Task Force, the new requirements include a special focus on populations that have experienced socioeconomic disadvantage and historical injustice. This amendment made explicit the state's commitment to addressing disparities using the tools of governance. Through these governmental processes, the state has set aspirational goals, developed a Healthy Communities framework, prioritized an indicator project, and conducted root-cause mapping. Accomplishments of the HiAP Task Force that impact equity include but are not limited to the creation of a Farm to Fork Office; a housing siting and air quality work group; crime prevention through environmental design; and school siting guidance.[66]

### Example of a local HiAP effort

In an effort to address social inequities such as varying school enrollment rates, increased incarceration of youth of color, and differing child mortality rates between white and native American children within King County, Washington, county leaders decided to actively consider health across all departments and develop an infrastructure within local government to support this priority. Similar to the statewide effort in California, King County's Ordinance 16948 uses the authorities of governance to address disparities, establishing implementation steps, and identifying 14 determinants of equity for county leaders to address the following: affordable, safe, quality housing; quality education; access to health and human services; healthy built and natural environments; family wage jobs and job training; early childhood development; economic development; strong, vibrant neighborhoods; access to safe and efficient transportation; community and public safety; equitable law and justice system; access to affordable, healthy, local food; equity in county practices; and access to parks and natural resources.[67] The county reports annually, and the Office of Performance, Strategy and Budget holds all agencies accountable for equity and social justice impacts in budgets and business plans, and all supervisors and managers are required to attend trainings on the social determinants of health to increase awareness of the health impacts of their work. Effective community engagement strategies that encourage participation in decision-making processes that impact health are a cornerstone of the King County initiative.[68]

The adoption of HiAP models within the United States is occurring at the local, state, and national levels. To date, research on, and evaluation of, HiAP approaches is limited.[69,70] Given the nascent nature of this work, application of models such as those described may contribute to and build an evidence base for the value or contributions of such approaches. Yet, research on intersectoral action is needed to understand the context in which it occurs, the critical success factors that lead to measurable change, and the barriers to success. In instances where the inclusion of health equity is made explicit, in addition to research, there is likely value in building tacit knowledge through the sharing of success characteristics and impacts, particularly those found to reduce health disparities.[71]

## Conclusion

National policy levers, such as Executive Orders, professional standards, and legislation, are currently

being used to focus on eliminating health disparities and achieving health equity.[14,15] These efforts suggest that, despite improvements in increasing access to health care, progress in access alone is not likely to bring about the changes needed to achieve health equity. A social determinants of health framework, with a health equity lens, can identify where structural factors and intermediary determinants play an important role in shaping the conditions for health and health equity and when policy interventions can be instrumental in reducing inequities in health.[72] Because many of these determinants occur outside the realm of public health, a HiAP approach can be used to create cross-sectoral initiatives to improve population health and reduce health inequities. Our discussion here suggests that reducing health inequities will require a deliberate focus on health equity on the part of departments of public health and other public health agencies, as well as other sectors impacting health. Tools cited in this article have been developed by scholars and practitioners engaged in social determinants of health and HiAP approaches. These tools—and the experiences upon which they are based—can be helpful in advancing such efforts at the state and local levels.

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