VIEWPOINT

VITAL DIRECTIONS FROM THE NATIONAL ACADEMY OF MEDICINE

Addressing Social Determinants of Health and Health Inequalities

Nancy E. Adler, PhD
Department of
Psychiatry,
University of CaliforniaSan Francisco School
of Medicine;
and Center for Health
and Community,
University of CaliforniaSan Francisco School
of Medicine

M. Maria Glymour, ScD, MS

Center for Health and Community, University of California-San Francisco School of Medicine; and Department of Epidemiology and Biostatistics, University of California-San Francisco School of Medicine.

Jonathan Fielding, MD. MPH

Fielding School of Public Health, University of California-Los Angeles; and Geffen School of Medicine, University of California-Los Angeles.

\leftarrow

Editorial pages 1679 and 1682

Corresponding Author: Nancy E. Adler, PhD, University of California-San Francisco School of Medicine, 3333 California St, San Francisco, CA 94118 (nancy.adler @ucsf.edu). The United States invests far more in providing clinical services than in addressing social and behavioral factors that powerfully affect health and mortality compared with other high-income nations that have better health. The United States has also large avoidable differences in health across groups, eg, life expectancy of 40-year-old men in the poorest 1% of the income distribution is 14.6 years shorter than for men in the richest 1%, and for women, the difference is 10.1 years.² Health disparities are found also by education, race, ethnicity, sex, sexual orientation, and place of residence. Policies that reduce social disadvantage can reduce health inequalities, for example, the health gap between blacks and whites narrowed in the decades after civil rights legislation. The comparatively poor health status of the US population, existence of health inequalities, and fluctuations in health in relation to policydriven changes in social conditions highlight the importance of policies addressing social determinants. Socioeconomic conditions underlie many health inequalities and compel attention to social policies that affect health, strengthening existing programs that can reduce disparities, and shifting health financing to reward improvements in individual and community health.

Upstream Social Determinants of Health

Social determinants, such as income and education, have wide-ranging effects across the life course. Higher income is related to better health outcomes, including lower prevalence of cardiovascular disease, diabetes, and depression as well as lower age-adjusted mortality. Although health improves as income increases at all income levels, the benefits of additional income are greatest at the bottom. Policies regarding wages, income, and paid time off for new parents or family caregivers can increase the financial security of people with the least income, improve population health, and reduce inequalities.

The Earned Income Tax Credit (EITC) is one example. Nearly 30 million low- to moderate-income working families, primarily parents, receive cash transfers via federal EITC benefits. Many states augment federal EITC benefits, and 12 states increase them by 20% or more. State benefit increases have been linked to better birth outcomes and better adult physical and mental health. Current EITC benefits are low for childless workers and noncustodial parents, and increasing benefits for the latter increases employment rates and child support payments. Currently, 20% of workers eligible for EITC do not receive benefits. This suggests that expanding enrollment and increasing benefits could help improve health.

Home-visiting programs for disadvantaged families are another example. Programs such as the Nurse-

Family Partnership address threats to social, emotional, and cognitive health for children of low-income families by assessing family needs, educating and supporting parents, and coordinating services. Some randomized evaluations of home-visiting programs found positive outcomes for cognitive development and lower mortality from preventable causes. ⁴ The Affordable Care Act expanded home visiting and mandated evaluations to learn how to effectively design and deliver these programs; these initiatives merit continuation. Other important policies address support for family caregiving, occupational health, and reducing the health effects of incarceration.

Behavioral Risk Reduction

Maintaining health throughout life requires resources that enable healthy behaviors and reduce environmental risks. Cigarette smoking, lack of exercise, and poor diet contribute to well over a third of premature deaths. These risk factors, shaped by social and economic forces, are more common among individuals in low socioeconomic groups. Promoting healthy behaviors involves making healthy behavioral choices easier, less expensive, and more socially normative.

The federal Supplemental Nutrition Assistance Program (SNAP) targets improved diets for enrolled children⁶ and serves an estimated 45 million households, but it misses approximately 17% of eligible participants. Temporary expansion of SNAP benefits in Massachusetts was associated with reduced inpatient Medicaid expenditures, suggesting that the conventional benefit levels may be too low. The nutrition program Women, Infants, and Children (WIC) provides pregnant and postpartum mothers of children aged O to 5 years with vouchers for supplemental food, nutritional and health counseling, breastfeeding support, and service referrals. WIC participation is associated with better birth outcomes and higher child immunization rates. Increasing WIC enrollment and expanding SNAP benefits would enhance the health of children and their families.

Tobacco use remains the strongest single predictor of premature mortality. Although policies such as added taxes on purchasing cigarettes have lowered cigarette use, approximately 17% of US residents still smoke and rates are higher among those with less income and education. Quitting is made more difficult by the fact that combustible cigarettes are designed with nicotine levels that engender physiologic addiction. Reducednicotine cigarettes facilitate smoking cessation. To Greater reductions in smoking-related disease and health

inequalities could be achieved if manufacturers reduced nicotine content of cigarettes to a nonaddictive level, a target that could be required by the US Food and Drug Administration (FDA).

Health Care Financing Strategies to Reduce Health Disparities

Health care access and financing contribute to overall heath and health inequalities. Individuals without health insurance receive less care than those with insurance, and their health may be adversely affected. The Affordable Care Act significantly improved health care access by establishing health insurance exchanges and expanding Medicaid to cover individuals up to 138% of the federal poverty line. However, approximately 3 million potentially eligible people live in states that opted out of Medicaid expansion, perpetuating health disparities.

The current share of the US economy allocated to health care limits funding for other health-promoting efforts. Most payments involve fee-for-service, with payment proportional to the volume and intensity of services provided. Improving the alignment of incentives entails moving from a volume-based to a value-based system that rewards improvements in population health. Alternative payment mechanisms have been proposed to increase the focus on outcomes. Pay-for-performance provides more reimbursement for clinician and health care organization adherence to guidelines and for low rates of preventable adverse patient outcomes. Bundled or global payments provide a fixed amount for each condition or patient, adjusted for the patient's diagnoses and disease severity, regardless of services provided. Pay-for-performance initiatives have been associated with increased care quality, whereas bundled payments are associated with quality improvements and cost savings.8 The Department of Health and Human Services is moving toward alternative payment systems for Medicare, with a goal of 50% of payments through alternative models by 2018 and accelerated progress toward financing aimed at population-wide health improvement. Similar approaches are needed in the private sector to harmonize payment models across public and private payers, with additional attention to appropriately incentivizing care for vulnerable populations.

Summary Recommendations for Vital Directions

The emphasis in the US health system on medical treatments for acute problems has yielded benefits for some, but has not achieved higher overall levels of population health or increased longevity as seen in other nations. Overcoming US health disadvantage may require rebalancing priorities to prevent or ameliorate health-damaging social conditions and behavioral choices. It is not an issue of how much money is spent on health, but rather whether those dollars are spent to provide the greatest benefit. Some policies that would improve social and behavioral determinants of health would entail little or no additional cost.

- Strengthen assessment and action on health-improving social policies. Prioritize programs that already show improvement to health outcomes such as the EITC and home-visiting programs for vulnerable families with young children. Others deserving close attention include worksite parental leave policies, education, criminal justice reform initiatives, and minimum wage policies.
- Expand policies to facilitate health behaviors. To improve health and reduce inequalities, all people need to have the resources to engage in health-promoting activities. Priority attention should be given to enacting stronger federal action to extend SNAP benefits to more low-income populations, use FDA authority to lower the nicotine level in tobacco products, make firearm use safer, and improve children's educational experiences.
- Improve access and financing of health care services. Replacing volume-based with value-based care, extending access to services, and covering chronic disease management and oral health care could improve population health and reduce inequalities.

This Viewpoint includes only a sampling of the wide range of policy options addressing social and behavioral determinants of health. More extensive discussion is provided in the full report. Although such policies are not yet typically viewed as health policies, they have great potential to reduce health inequalities and improve the health and longevity of all people in the United States.

ARTICLE INFORMATION

Published Online: September 26, 2016. doi:10.1001/jama.2016.14058

Conflict of Interest Disclosures: All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest.

Ms Glymour reports receipt of grants to her institution from the National Institutes of Health (NIH) and the Robert Wood Johnson Foundation, personal fees in royalties from Oxford University Press, and personal fees from NIH outside of the submitted work. No other disclosures were reported.

Funding/Support: The National Academy of Medicine's Vital Directions initiative is sponsored by the California Health Care Foundation, the John A. Hartford Foundation, the Robert Wood Johnson Foundation, and the National Academy of Medicine's Harvey V. Fineberg Impact Fund.

Disclaimer: This Viewpoint on addressing social determinants of health and health inequalities provides a summary of a discussion paper developed as part of the National Academy of Medicine's initiative on Vital Directions for Health & Health Care (http://nam.edu/vitaldirections).

Discussion papers presented in this initiative reflect the views of leading authorities on the important issues engaged, and do not represent formal consensus positions of the National Academy of Medicine or the organizations of the participating authors.

Additional Contributions: Coauthors of the National Academy of Medicine discussion paper were David M. Cutler, PhD, Harvard University; Sandro Galea, MD, DrPH, Boston University School of Public Health; Howard K. Koh, MD, MPH, Harvard T. H. Chan School of Public Health and Harvard Kennedy School; and David Satcher, MD, PhD, Morehouse School of Medicine. Elizabeth Finkelman, MPP, National Academy of Medicine, served as the initiative director.

REFERENCES

- 1. Woolf SH, Aron LY. The US health disadvantage relative to other high-income countries. *JAMA*. 2013;309(8):771-772.
- 2. Chetty R, Stepner M, Abraham S; et al. The association between income and life expectancy in the United States: 2001-2014. *JAMA*. 2016;315 (16):1750-1766.

- **3**. Hamad R, Rehkopf DH. Poverty and child development. *Am J Epidemiol*. 2016;183(9):775-784.
- **4.** Olds DL, Kitzman H, Knudtson MD, et al. Effect of home visiting by nurses on maternal and child mortality. *JAMA Pediatr*. 2014;168(9):800-806.
- **5.** McGinnis JM, Williams-Russo P, Knickman JR. The case for more active policy attention to health promotion. *Health Aff (Millwood)*. 2002;21(2):78-93.
- **6**. Long V, Cates S, Blitstein J, et al. *Supplemental Nutrition Assistance Program Education and Evaluation Study (Wave II)*. Ann Arbor, MI: Altarum Institute: 2013.
- 7. Donny EC, Denlinger RL, Tidey JW, et al. Randomized Trial of Reduced-Nicotine Standards for Cigarettes. *N Engl J Med*. 2015;373(14):1340-1349.
- **8**. Song Z, Rose S, Safran DG, et al. Changes in health care spending and quality 4 years into global payment. *N Engl J Med*. 2014;371(18):1704-1714.
- **9**. Adler N, Cutler D, Fielding J, et al. *Vital Directions* for *Health: Addressing Health Disparities and Social Determinants of Health*. Washington, DC: National Academy of Medicine; 2016.

JAMA October 25, 2016 Volume 316, Number 16

1642

jama.com