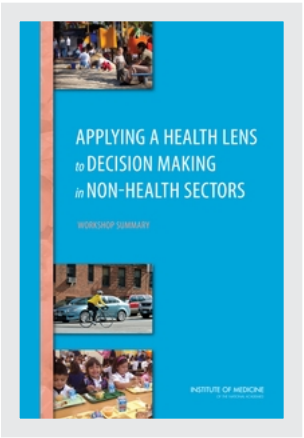

Applying a Health Lens to Decision Making in Non-Health Sectors: Workshop Summary

DETAILS

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APPLYING A HEALTH LENS *to* DECISION MAKING *in* NON-HEALTH SECTORS

WORKSHOP SUMMARY

Theresa Wizemann, *Rapporteur*

Roundtable on Population Health Improvement

Board on Population Health and Public Health Practice

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

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The serpent has been a symbol of long life, healing, and knowledge among almost all cultures and religions since the beginning of recorded history. The serpent adopted as a logotype by the Institute of Medicine is a relief carving from ancient Greece, now held by the Staatliche Museen in Berlin.

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"Knowing is not enough; we must apply.
Willing is not enough; we must do."
—Goethe

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Reviewers

This workshop summary has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the National Research Council's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published workshop summary as sound as possible and to ensure that the workshop summary meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the process. We wish to thank the following individuals for their review of this workshop summary:

Chisara N. Asomugha, Centers for Medicare & Medicaid Services
Peggy A. Honoré, U.S. Department of Health and Human Services
Elizabeth Rigby, George Washington University
Kenneth D. Smith, National Association of County and City Health Officials

Although the reviewers listed above have provided many constructive comments and suggestions, they did not see the final draft of the workshop summary before its release. The review of this workshop summary was overseen by **Susan J. Curry**, The University of Iowa. Appointed by the Institute of Medicine, she was responsible for making certain that an independent examination of this workshop summary was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this workshop summary rests entirely with the rapporteur and the institution.

Contents

Acronyms

ACA	Patient Protection and Affordable Care Act
ACPHD	Alameda County Public Health Department
CCT	conditional cash transfer
CDC	Centers for Disease Control and Prevention
DoD	U.S. Department of Defense
DOT	U.S. Department of Transportation
EEC	Equity and Excellence Commission
EIS	environmental impact statement
EITC	earned income tax credit
EPA	U.S. Environmental Protection Agency
FTE	full-time equivalent
GIS	geographic information system
HEAL	Healthy Eating, Active Living
HFFI	Healthy Food Financing Initiative
HHS	U.S. Department of Health and Human Services
HIA	health impact assessment
HiAP	Health in All Policies
HSC	Healthy Schools Campaign

HUD	U.S. Department of Housing and Urban Development
IOM	Institute of Medicine
ISI	Information Sciences Institute
MAP-21	Moving Ahead for Progress in the 21st Century
MassDOT	Massachusetts Department of Transportation
NCQA	National Committee for Quality Assurance
NRC	National Research Council
ORD	Office of Research and Development
PHI	Public Health Institute
PTA	Parent-Teacher Association
RCT	randomized controlled trial
RWJF	Robert Wood Johnson Foundation
SHC	Sustainable and Healthy Communities
STEM	science, technology, engineering, and mathematics
TIGER	Transportation Investment Generating Economic Recovery
UNICEF	United Nations Children's Fund
USDA	U.S. Department of Agriculture
USICH	United States Interagency Council on Homelessness

Introduction[1]

Health is influenced by a wide range of factors, many of which fall outside the health care delivery sector. These determinants of health include, for example, the characteristics of how people live, work, learn, and play. Decision and policy making in areas such as transportation, housing, and education at different levels of government, and in the private sector, can have far-reaching impacts on health. Throughout the United States there has been increasing dialogue on incorporating a health perspective into policies, programs, and projects outside the health field, including a recent Institute of Medicine (IOM) report that calls for government and the private sector to adopt a "Health in All Policies" approach (IOM, 2011) as well as a report on health impact assessments produced by the National Research Council (NRC, 2011).

On September 19, 2013, the IOM Roundtable on Population Health Improvement convened a public workshop to foster cross-sectoral dialogue and consider the opportunities for and barriers to improving the conditions for health in the course of achieving other societal objectives (e.g., economic development, efficient public transit). The roundtable

[1] This workshop was organized by an independent planning committee whose role was limited to identification of topics and speakers. This workshop summary was prepared by the rapporteur as a factual summary of the presentations and discussion that took place at the workshop. Statements, recommendations, and opinions expressed are those of individual presenters and participants, and are not necessarily endorsed or verified by the Institute of Medicine or the roundtable, and they should not be construed as reflecting any group consensus.

BOX 1-1
Statement of Task

An ad hoc committee will plan and conduct a public workshop featuring presentations and discussion of health-in-all-policies approaches. Health in all policies refers to giving consideration for potential health effects in policy making in many relevant domains, such as education, transportation, and housing. The committee will identify specific topics to be addressed, develop the agenda, select and invite speakers and other participants, and moderate the discussions.

engages members, outside experts, and stakeholders on three core issues: supporting fruitful interaction between primary care and public health; strengthening governmental public health; and exploring community action in transforming the conditions that influence the public's health. The need for action is clear and well-documented, said roundtable co-chair, George Isham, senior advisor at HealthPartners, Inc., and senior fellow, HealthPartners Institute for Education and Research. According to a 2013 NRC and IOM report, for example, Americans have worse health than people in other high-income countries, and health disadvantage is pervasive across age and socioeconomic groups in the United States (NRC and IOM, 2013).

The workshop planning committee was chaired by Pamela Russo, senior program officer at the Robert Wood Johnson Foundation, and included Terry Allan, Dawn Alley, Marice Ashe, James Knickman, Phyllis Meadows, Martin Sepúlveda, and Aaron Wernham. The committee's charge is described in Box 1-1.

ORGANIZATION OF THE WORKSHOP AND SUMMARY

The workshop, titled Applying a Health Lens to Decision Making in Non-Health Sectors, consisted of a keynote presentation on how social policies shape health (Chapter 2), and three panels with presentations and discussion. As described by Russo, the first two panels were designed to provide examples of successful health-oriented interagency collaborations at the federal, state, and local levels from speakers representing those sectors (Chapters 3 and 4). She noted that the United States has been slower to address intersectoral engagement for health than, for example, Australia, Canada, England, the countries of Northern Europe, or the World Health Organization. Although examples of collaboration have grown exponentially in the United States over the past decade, they

remain "points of light" rather than a nationwide approach to Health in All Policies (HiAP). The third panel aimed to outline issues and strategies for working across sectors to improve health, such as tools (e.g., health impact assessments), interagency relationships (backed by legislation and funding), and combining the goals of health with other goals such as sustainability or a stronger economy (Chapter 5). In the closing session, roundtable members were asked to offer their observations on the main themes that emerged from the workshop sessions and their perspectives on how to move forward (Chapter 6).

Russo encouraged participants to keep four questions in mind as they listened to the discussions. First, are some policy goals or topics easier to advance through action at different levels of government? (For example, smoking bans started in local communities and grew to be state-level policies.) Second, what are the challenges agencies and organizations face in incorporating health considerations in their policies and programs, and are there best practices for achieving benefits that can be shared? Third, should the focus of HiAP be exclusively on incorporating health considerations in policies, or would combining health with, for example, equity and sustainability be more likely to improve population health, by also reducing disparities and addressing upstream causes of poor health? Fourth, what can be done to increase attention to the impact of social and economic policies on health, as the majority of intersectoral attention and action thus far has been on the physical determinants of health?

2

How Social Policies Shape Health

Health is largely determined by factors situated outside the health care delivery system, said keynote speaker, David Williams, Florence and Laura Norman Professor of Public Health and professor of African and African American studies and of sociology at Harvard University. The health care system generally functions to provide care to those who have become sick. Yet it is where people live, learn, work, play, and worship that most influences their opportunities and chances for being healthy. Social policies can make it easier or harder for people to make healthy choices, Williams said.

It has long been recognized, Williams stated, that individual-level health interventions can be complemented by changes to the social, physical, and economic environments that determine health and risk factors for health. These "upstream interventions" can result in improved health without any conscious awareness or participation by individuals (Katz, 2009). Over the past century, dramatic improvements in health have been achieved through upstream interventions such as improved sanitation, improved working conditions and equipment safety, seatbelts in automobiles, road safety laws, initiatives to reduce drunk driving, elimination of lead in paint and gasoline, and the fluoridation of water.

THE CENTRAL ROLE OF PLACE IN SHAPING HEALTH

Geographic location determines exposure to risk factors and resources that affect health, Williams said. Safety, cleanliness of the air and environ-

ment, parks and places for physical activity, the quality of housing, the upkeep of streets and homes, access to nutritious foods, access to high-quality medical care, and accessible safe modes of transportation all affect whether a community is a healthy or unhealthy place to live (RWJF, 2009). Williams described several historical and current examples of the health effects of where and how people live.

Segregation

Residential segregation, the physical separation of the races by enforced residence in different areas, is a powerful example of the impact of social policy on health, Williams said. The implementation and influence of segregation laws spanned housing policies; the judicial system; neighborhood organizations; and major social, cultural, and economic institutions. Between 1860 and 1940, the extent of black-white segregation in both northern and southern cities increased dramatically and has remained relatively stable (Cell, 1982; Lieberson, 1980; Massey and Denton, 1993). Racial differences in socioeconomic status are heavily driven by segregation, as segregation determines access to educational and employment opportunities.

Segregation in the United States has created places that are markedly and distinctly unhealthy. Research suggests that the conditions linked to segregation constrain the practice of health behaviors, and promote unhealthy behaviors, and that segregation affects access to high quality medical care (Williams and Collins, 2001). Williams cited the work of Cutler and colleagues (1997) who concluded that the elimination of residential segregation would completely eliminate black-white differences in income, education, and unemployment and would reduce racial differences in single motherhood by two-thirds.

Neighborhood Quality

Williams described several examples of initiatives to address the conditions linked to place. In the 1990s, the U.S. Department of Housing and Urban Development (HUD) launched three major programs: Moving to Opportunity helped poor families move from high poverty public housing to better residential conditions; Jobs Plus sought to saturate public housing with high quality employment services and rent-based financial work incentives; and Bridges to Work was designed to link central city residents to suburban employment opportunities. An analysis of the HUD initiatives by the Urban Institute concluded that such interventions can increase income, improve safety and security, and improve physical and mental health (Turner and Rawlings, 2005). Moreover, although families

do respond to real opportunities, meaningful change requires sustained effort over time because people need help not only in finding jobs, but in keeping jobs (challenges include retention, advancement, commuting costs, and child care). Programs that work best are those that address multiple barriers (e.g., housing, safety, health, employment, education). Other scientific assessments of Moving to Opportunity found that after 3 years, parents and their sons[1] who had moved from high-poverty to low-poverty New York City neighborhoods were doing better in terms of mental health (Leventhal and Brooks-Gunn, 2003), and 10 to 15 years later, there were reductions in the prevalence of severe obesity and diabetes in adults (Ludwig et al., 2011). Moving to Opportunity is a dramatic example, Williams said, of a non-health, place-based intervention that has had long-term dramatic and positive effects on health.

Another example highlighted by Williams is the Yonkers Housing Intervention, for which half of the public housing residents were randomly selected via a lottery to move to better housing in middle-class neighborhoods. After 2 years, those who had moved reported better overall health, less substance abuse, less neighborhood disorder and violence, lower use of welfare, and higher rates of employment than those who had not moved. They also reported greater satisfaction with public transportation, recreation facilities, and medical care (Fauth et al., 2004).

Although these examples show that simply changing the neighborhood environment, with no health intervention, can lead to improvement in health, this is not a good national model for how to solve the problem, Williams said, adding that one should not have to move to live in a better neighborhood. Additionally, Williams pointed out that there is nothing inherently wrong with living next to someone of your own race. The problem of segregation is not segregation per se, he continued, but what sociologist William Julius Wilson has described as the concentration effects of social ills that co-occur with segregation. There is a policy opportunity for a major infusion of economic capital to improve the social, physical, and economic infrastructure of the disadvantaged communities that could have huge spillover effects on health, Williams said.

EFFECTS OF SOCIAL AND ECONOMIC INTERVENTIONS

Economic Well-Being

Evidence suggests that social and economic policies intended to provide additional income to low-income individuals can also provide dramatic improvements to health, noted Williams. One study he cited, which

[1] This outcome was found only in male children.

was conducted as part of the negative income tax experiments of the 1970s, showed that low-income mothers who received expanded income support had better birth outcomes (measured as infant birth weight) than women in the control group. It was thought that the additional income allowed for improved nutrition (Kehrer and Wolin, 1979). Other studies have associated income from the Earned Income Tax Credit with reduced rates of low birth weight and increased mean birth weight (Hoynes et al., 2012; Strully et al., 2010). Implementation of the Social Security program dramatically reduced poverty levels among America's elderly and, research shows, led to mortality declines. Over the past several decades, when Social Security benefits have been increased, a commensurate decline in mortality among the elderly has been observed (Arno et al., 2011).

Another example shared by Williams was the Great Smokey Mountain Study in North Carolina, which assessed the impact of additional family income on the mental health over time of children aged 9 to 13 years at the start of the study. The opening of a casino on an Indian reservation provided additional income to American Indian residents of the community, but not to non-Indian residents. This natural experiment documented a decline in rates of deviant and aggressive behavior among adolescents whose families received additional income and showed that reduced rates of psychopathology persisted into adulthood when the adolescents had moved out of their parental home (Costello et al., 2003, 2010). Additional income for American Indian families who were poor at the time of the increase in income was also associated with higher levels of education, lower incidence of minor criminal offenses, and the elimination of the American Indian-white disparity on these outcomes. The authors postulated that the mechanism was improved parental behavior (Copeland and Costello, 2010).

The conditional cash transfer (CCT) programs are another source of evidence of the impact of increased income on health. These programs provide cash payments to low-income families contingent upon regular health care visits, school attendance, or participation in educational programs, Williams explained. Analysis of the first large scale CCT program in Mexico showed that increased income led to reduced rates of child illness and stunted growth, increased quality of prenatal care, and reduced rural infant mortality (Barber and Gertler, 2009; Barham, 2011; Rawlings and Rubio, 2005). Although the CCT programs included conditions for receiving the payments, Williams said that research shows that it was the additional income, not the conditions, that lead to the improvement in health. However, most experts believe that the conditions are important to ensure political support for these programs.

In the past 60 years, differences in health (measured as life expectancy

and mortality in national data) between African Americans and whites have narrowed and widened in tandem with racial differences in income, Williams said. The only time in recent history when the health of African Americans improved more rapidly than the health of whites was between the late 1960s and the late 1970s, when civil rights and anti-poverty policies narrowed the income gap between African Americans and whites (Cooper et al., 1981; Kaplan et al., 2008). Multiple studies demonstrate improvement in the health of African Americans in association with civil rights policy, for example, reduction in infant mortality and better birth outcomes associated with desegregation of southern hospitals (Almond and Chay, 2006). In the 1980s, the economic gap between African Americans and whites in the United States widened again, and health outcomes declined for African Americans. For example, Williams presented data from the National Center for Health Statistics that showed life expectancy at birth for African Americans declined from the 1984 level for 5 years in a row, while life expectancy for whites increased slightly during this same period.

Family Structure

Family structure can have significant impact on socioeconomic status and health. Compared to children raised by two parents, for example, children raised by a single parent (usually a female head of household) are more likely to grow up poor, drop out of high school, be unemployed in young adulthood, and not enroll in college. In addition, they have an elevated risk of juvenile delinquency and participation in violent crime, including homicide (McLanahan and Sandefur, 1994; Sampson, 1987). The sources of violent crime are rooted in social policy and related to structural differences in economic and family organization in communities. This harkens back to the role of segregation, Williams said, and he quoted Sampson and Wilson (1995, p. 41) who said that in the 171 largest cities in the United States, "the worst urban context in which whites reside is considerably better than the average context of black communities."

Social policy can counter some of the negative effects of family structure on poverty and child health outcomes, Williams said. A 2000 report by the United Nations Children's Fund (UNICEF) found, for example, that although the proportion of children in single-parent households in the United States and Sweden was comparable at 19 and 21 percent, respectively, the child poverty rate in single-parent households was 55 percent among Americans, but only 7 percent among Swedes. The overall child poverty rate based on income before taxes was comparable in the United States and Sweden, at 26.7 and 23.4 percent, respectively, however, based on income after taxes, the child poverty rate in Sweden

was 2.6 percent, while for the United States it was 22.4 percent. Williams also indicated that although there is a big emphasis in some policy circles on "cultural values" as drivers of group variations in family structure, there is impressive empirical evidence that indicates that marriage rates are associated with economic opportunities for males. An example is the research on the impact of military enlistment on the economic and family structure of households. Research shows that inactive duty military service promotes marriage over cohabitation, increased likelihood of first marriage, and greater stability of marriage (Teachman, 2007, 2009; Teachman and Tedrow, 2008). These patterns exist for both white males and African American males who enroll in the military, but the effects are stronger for African Americans. There is less economic discrimination in the military, Williams said, and more opportunities for advancement of minorities than in the civilian labor force, as well as generous military benefits to support a family. In this case, creating economic opportunity for males has a significant effect on family structure, which can have long-term positive effects on health, Williams said.

Educational Achievement

It has been suggested that reducing the black-white academic test score gap would have a significant impact on reducing racial inequality in earnings and, in turn, would help to reduce racial differences in health, family structure, and crime (Jencks and Phillips, 1998). Williams cited several examples of relatively simple psychosocial interventions that significantly reduced academic disparities. African American seventh graders who participated in a "self-affirmation intervention" (a writing exercise designed to affirm a sense of adequacy and self-worth) showed significantly improved grades across all of their academic work, compared to a control group. The intervention reduced the racial achievement gap by 40 percent after one administration (one class period), and the effect was still evident after 2 years (Cohen et al., 2006, 2009). A similar study of a "values affirmation exercise" with college women in the science, technology, engineering, and mathematics (or STEM) disciplines found similar effects, and reduced the male-female grade gap (Miyake et al., 2010). A "social belonging intervention" for minority college freshman sought to provide them with a sense of belonging and to help them to realize that all new students face difficulties in their college experience but that these challenges are temporary. Compared to a control group, students who participated in this intervention in their freshman year showed increased academic performance over their 4 years of college, and the black-white achievement gap was reduced by half. In addition, they had fewer doctor visits than the control group during their college years and improved self-

reported health (Walton and Cohen, 2011). Investments in early childhood education for low-income and minority children also have been shown to have decisive health benefits into adulthood (Reynolds et al., 2007).

Williams' Closing Thoughts

Health care improvements alone will not solve America's health problems, Williams stated. All policy that affects health is health policy, he said, and socioeconomic and racial or ethnic inequalities in health reflect the effective implementation of social policies that have reinforced such disparities. Eliminating disparities requires political will and a commitment to new strategies to improve living and working conditions, create opportunities to promote health for all, and remove barriers that make it nearly impossible for some Americans to make healthy choices. This will require collaboration across multiple sectors to build the science base to support the development of social policies that can produce systematic and comprehensive change. Williams concluded by highlighting the keys to long-term success as

- building the perspective of health into all policy making;
- including an explicit focus on health equity in policy making;
- convening, enabling, and supporting cross-sectoral collaborations;
- developing consensus-based standard data and methods for surveillance systems linking health, health equity, and the determinants of health; and
- investing in strengthening community capacity and potential for community advocacy.

DISCUSSION

During the brief discussion that followed the presentation, Williams responded to a question about the opportunity costs the interventions described. From a cost-benefit perspective, he said, it is in the long-term financial interest of society to implement these types of interventions. Americans have to realize that the status quo—gaps in health—is costing money. It is estimated that racial disparities in health cost the U.S. economy more than $300 million annually and socioeconomic inequalities cost the economy more than $1 trillion each year. There is also evidence that many of the interventions described may save money, but there needs to be a more systematic effort to build the business case for improving health, he said. Social policies affect health, but there is not yet a sufficient empirical base to indicate clearly which policies should be undertaken first and to inform the optimal timing and sequencing of policies.

In response to a question about engaging policy makers to effect systemic change, Williams said that the United States faces an educational and communication challenge. Most Americans do not think of the causes of poor health (i.e., the social determinants of health) as systemic. Our culture focuses more on the perceived contribution of individual values, choices, and behaviors in shaping individual health outcomes. Most leading policy makers have never considered the social determinants of health, he said. For them, health policy relates to coverage and perhaps quality and cultural sensitivity, rather than to factors outside the health care system.

3

Highlights from the Work of Federal Agencies

Elements of healthy and sustainable communities include access to healthy foods, safe and affordable housing, environmental quality, and safe transportation. For the first workshop panel, representatives from four federal departments or agencies provided examples of successful interagency collaboration in the areas of environmental health, transportation, military health, and housing. Florence Fulk, Chief of the Molecular Ecology Research Branch in the Office of Research and Development at the U.S. Environmental Protection Agency (EPA) discussed how the EPA is linking health impact assessments and community research to decision making. Beth Osborne, Deputy Assistant Secretary for Transportation Policy at the U.S. Department of Transportation (DOT), discussed the relationship between transportation and health and highlighted several DOT initiatives to evolve transportation. Captain Kimberly Elenberg, Deputy Director of Population Health and Medical Management in the Office of the Assistant Secretary of Defense for Health Affairs in the U.S. Department of Defense (DoD), described Operation Live Well, a DoD education, outreach, and behavior change initiative to improve the health and well-being of service members and their families. Finally, Jennifer Ho, Senior Advisor in the Office of the Secretary at the U.S. Department of Housing and Urban Developoment (HUD), described two HUD grant programs aimed at fostering healthy and sustainable communities. An open discussion moderated by Dawn Alley, Senior Policy Advisor in the Office of the Surgeon General at the U.S. Department of Health and Human Services, followed the panel presentations.

ENVIRONMENTAL PROTECTION AGENCY

A sustainable community is one that protects the health and well-being of all residents, is economically vibrant with a return on public investments, provides new business opportunities, and conserves natural resources and open space, explained Florence Fulk. When communities are considering new development (e.g., transportation plans), they often focus on how it will achieve only one of these objectives. The EPA Sustainable and Healthy Communities (SHC) program, one of six key transdisciplinary research programs in the EPA Office of Research and Development (ORD), is based on the principle that a systems approach will improve a community's ability to address all of these objectives simultaneously. The vision of the SHC program is "actionable science for communities," Fulk said. The program seeks to inform and empower communities to include human health, economic, and environmental factors into their decisions and policies in a way that fosters community sustainability. Based on input from communities about their needs, the program focuses on four sectors: transportation, infrastructure, land use, and waste management.

Health Impact Assessments in Community Decision Making

One approach to integrating health concerns into policy making is the health impact assessment (HIA) (see Box 3-1). An HIA can provide state and local decision makers with the scientific data, health expertise, and public input that they need to factor public health considerations into the development of non-health plans, policies, or projects. The EPA's SHC

BOX 3-1
Major Steps in Conducting a Health Impact Assessment (HIA)

- **Screening:** Identify projects for which an HIA would be useful.
- **Scoping:** Identify which health impacts to consider.
- **Assessing risks and benefits:** Identify which people may be affected and how they may be affected.
- **Developing recommendations:** Suggest changes to proposals to promote positive or mitigate adverse health effects.
- **Reporting:** Present the results to decision makers.
- **Evaluating:** Determine the effect of the HIA on the decision process.

SOURCE: Fulk presentation (September 19, 2013) and originally from CDC, 2010.

program can provide the tools, models, and approaches to support HIAs, and data from HIAs can inform SHC research about the issues and decisions communities face, as well as how communities address the issues with regard to health, economic, and environmental factors. Over the past 10 years, Fulk said, HIAs have been used to inform decisions about, for example, mass transit, highway, and bridge design; housing and energy assistance programs; comprehensive planning and growth policies; and energy programs and natural resource management (including fossil fuel exploration and development, renewable energy, and water management policies).

As an example, Fulk described the HIA for the Proctor Creek Boone Boulevard Green Street Project, which is evaluating the potential positive and negative public health impacts of the project design. The city of Atlanta, Georgia, is considering the implementation of a green infrastructure project along Boone Boulevard in concert with a lane reduction project. The green street project will affect two communities that are suffering from a number of environmental problems, including pervasive flooding, impaired water quality, poverty, derelict properties, and aging infrastructure. The HIA is being led by EPA's Region Four Office of Environmental Justice and Office of Research and Development, in partnership with the Fulton County Health Department, the Centers for Disease Control and Prevention (CDC), and others (government agencies, universities, nongovernmental organizations, community organizations) across multiple sectors.

Green infrastructure, Fulk explained, is a nontraditional approach to infrastructure using natural processes (e.g., vegetation, soil filtration, shading, storm water management) to maintain healthy waters, protect the environment, and also support sustainability. Some of the green infrastructure approaches suggested for the Boone Boulevard Project include planter boxes and an urban tree canopy.

From the perspective of the SHC and EPA research, Fulk concluded, this HIA provides a model of interagency collaboration at the local, state, and federal levels. SHC is gaining experience in the application of HIAs in other environmental decision-making processes and helping to create a better understanding of the direct and indirect public health benefits from implementing green infrastructure.

DEPARTMENT OF TRANSPORTATION

A good transportation system can support active living, reduce air and water pollution, and give people safe access to the things they need, including health care, jobs, and other opportunities, said Beth Osborne.

Although this is well understood, these considerations are not always taken into account in our transportation systems, she said.

Eighty percent of DOT program funding goes to state DOTs, which have discretion on how that money is spent, Osborne said. State DOTs oversee state highways, but some will also oversee transit programs, and some even ports and airports. State transportation planners and engineers are focused on transportation efficiency (generally long distance rural routes that are straight, clear, and fast) and, in most cases, do not involve land-use authorities. Local governments are focused on development around the state-developed roadway system, often in a way that was never envisioned by the transportation planners.

For five decades, people traveled extensively by car, but since the late 1990s, people are making different transportation choices. Osborne said the system is not supporting these changes because land-use decisions are being made at the local level, and transportation decisions are being made at the state level, and the two levels do not always communicate. The way roadways are designed has a huge impact on behavior. People in one community may walk for many blocks to a grocery store, while in another neighborhood they may drive to a grocery store only a block away because it is across a very busy road that is too dangerous to cross on foot. People may wish to bicycle to work, but have no safe route to take. Lifestyles have changed and the transportation system has not.

Osborne described several DOT initiatives to evolve transportation systems (reiterating that the majority of funding and decision making resides at the state level). The DOT Transportation Investment Generating Economic Recovery (TIGER) Program awards competitive, discretionary grants for infrastructure projects. In Boston, for example, TIGER funds are being used to redesign and retrofit streets to move more people by bicycle and on foot. DOT is profiling best practices of metropolitan planning organizations and the work of some states that have developed system performance measures. DOT has also joined with HUD, EPA, and the U.S. Department of Agriculture (USDA) in coordinating agency programs that support livability in a community, which is defined as having transportation choices, housing choices, and destinations close to home.

These types of livable communities support healthy living, Osborne said, but they also save people and the government money. An emerging problem is that property values in these communities can increase rapidly, resulting in the functional exclusion of the people who most need non-motorized transportation. Supply and demand are still not balanced, she noted, as the transportation solutions being put into place are still not meeting market demand. To help inform both planners and residents, DOT is working with HUD on a Housing Plus Transportation Afford-

ability Index, a tool to assess the affordability of a home relative to both the cost of the home and the transportation costs for people to get where they need to go from that home. Similarly, DOT is working with CDC on a Transportation and Health Index to look at the impact of different transportation types on health.

In closing, Osborne noted that in the reauthorization of DOT, Congress has put a new focus on performance. The performance measures put forth are focused on issues such as reliability of the system, congestion, and air quality, but there are no health performance measures.

DEPARTMENT OF DEFENSE

Operation Live Well

Similar to national statistics, approximately 65 percent of the health care costs for the DoD are related to noncommunicable diseases, said Kimberly Elenberg, and many of those are aggravated by behavior choices, obesity, and tobacco use. These conditions not only drive up health care costs, they directly affect the ability of DoD to meet its mission,[1] impacting resiliency and readiness. Concerns about the health of a family member also affect a service member's ability to focus on his or her mission.

Operation Live Well is DoD's education, outreach, and behavior change initiative designed to improve the health and well-being of members of the defense community. This multiyear strategy was influenced by, and aligns with the U.S. National Prevention Strategy and is specifically tailored to the unique environments and circumstances of military service. Operation Live Well brings together all of the resources and capabilities of the entire military community to promote health, Elenberg said. The strategy is divided into three phases. Phase 1 is an information, education, and outreach campaign, including the Healthy Base Initiative (discussed on p. 18). Phase 2 involves rigorous evaluation of programs, services, and tools and expansion of those that are shown to be most effective in supporting a healthy lifestyle. Phase 3 will be the implementation of a long-term effort to institute sustained behavior change, such that healthy living is the easy choice and the social norm.

[1] The mission of the U.S. Department of Defense is "to provide the military forces needed to deter war and to protect the security of our country" see http://www.defense.gov/about (accessed March 10, 2014).

Healthy Base Initiative

The Healthy Base Initiative is a demonstration project being conducted at 14 military installations around the world (including Air Force, Army, Navy, Marines, and Coast Guard). The results of this initiative will inform the strategy implemented in phase 3, Elenberg explained. The primary objectives of the Healthy Base Initiative are to optimize health and performance, improve readiness and reduce health care costs, and provide DoD with the framework for best practices that support improvements in population health. As many service members do not live on base, the initiative is conducted in partnership with communities surrounding installations.

Initially, the project will assess the physical environment, existing health and wellness initiatives, and current health behavior of the population. The focus will be on initiatives that improve nutritional choices, increase physical activity, promote healthy weights, and decrease tobacco use. For example, can the walkability or bikeability of the military installations be improved? Can the selections at the dining facilities be improved, or can the open hours be extended so that people do not have to resort to using vending machines or fast food after hours? The bottom line is how, from a systems perspective, to make the healthy choice the easy choice.

The framework for the initiative (see Figure 3-1) is complemented by a strategic communication campaign. The key to success is a Health in All Policies (HiAP) approach, and intersectoral and cross-sectoral collaborations, with the goal of making this initiative meaningful to many different people, Elenberg said. Those who are highly motivated, and have a high ability to lead a healthy lifestyle, can serve as leaders in the community and work at a grassroots level to help motivate and mentor others.

Elenberg highlighted a few of the initiative's findings to date. Military food and nutrition services require major changes to provide healthful offerings. Onsite facilities, vending, and fast food outlets need to offer more healthy choices, and to offer them more prominently, she said. With regard to active living, there are well-equipped and conveniently located fitness centers and recreational programs for military personnel and their families. There are opportunities to increase physical activity in schools and to improve the ability to make healthy choices in the cafeterias. Although there are many primary prevention activities already occurring in military communities, Elenberg stated that increased communication and strategic coordination among them are expected to lead to more effective use of resources. Community understanding of and access to these services and resources needs to be improved through strategic communication and mobilizing for action through planning and partnership with health promotion councils.

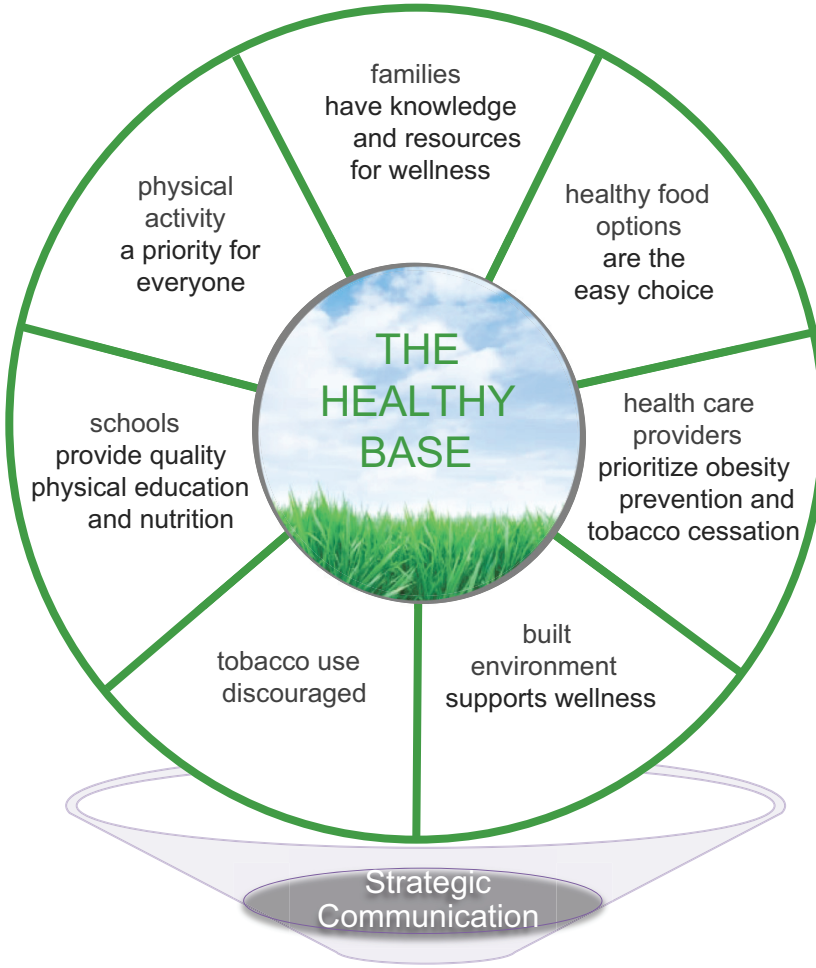

FIGURE 3-1 Framework for the Healthy Base Initiative.
SOURCE: Elenberg presentation, September 19, 2013.

HOUSING AND URBAN DEVELOPMENT

Our home is where we live, it is a part of the community in which we live, and everything that is going on in the community around us affects our health and our well-being, said Jennifer Ho. Housing is a means to health and well-being, and health comes into play in many of the activities of HUD. Ho quoted HUD Secretary, Shaun Donovan, who said that

"sustainability means tying the quality and location of housing to broader opportunities, like access to good jobs, quality schools, and safe streets. It means helping communities that face common problems start sharing solutions. It means being a partner to sustainable development, not a barrier." As mentioned by Osborne, HUD is working in partnership with DOT and EPA to foster healthy, sustainable communities.

Ho described two grant programs administered by the HUD Office of Sustainable Housing and Communities. Regional planning grants, totaling $170 million in 2010 and 2011, were awarded to improve regional planning efforts that integrate housing, land use, economic and workforce development, and transportation and infrastructure investments to address economic competitiveness and revitalization; social equity, inclusion, and access to opportunity; energy use and climate change; and public health and environmental impact. Communities participating in the regional planning grant program complete the Fair Housing and Equity Assessment, which helps them assess where people live according to race and economic status, and integrate those data with data on access to community assets, to understand the potential effect of policies on community members.

Community Challenge Grants, totaling $70 million in 2010 and 2011, enable communities to foster reform and reduce barriers to achieving affordable, economically vital, and sustainable communities, stated Ho. For example, grants promote mixed-use development and repurposing of existing buildings. Funded activities have included amending or replacing local master plans, neighborhood plans, corridor plans, zoning codes, and building codes. Between the 2 grant programs, HUD is currently supporting work in 48 states and the District of Columbia that covers areas where more than 133 million Americans live.

In assessing the sustainability of communities, HUD looks at a variety of flagship indicators. Examples described by Ho included

- Transportation choice: percentage of workers commuting via walking, biking, transit, or rideshare.
- Housing affordability: percentage of rental units and owner units affordable to households earning 80 percent of HUD area median family income.
- Equitable development: housing plus transportation affordability (proportion of household income spent on housing and transportation costs); access to healthy food choices (percent of total population that reside in a low-income census tract with a supermarket more than 1 mile away for urban or 10 miles away for rural populations); and access to open space (percent of

population with a park within 0.5 mile for urban or 1 mile for rural populations).
- Economic resilience: economic diversification; general local government to revenue ratio.
- Growth through reinvestment: net acres of agricultural and natural resource land lost annually to development per new resident.

In closing, Ho stressed that collaboration is essential. Many efforts across agencies and across initiatives have similarities. Interagency activities on homelessness, for example, are similar in some ways to the activities on sustainable communities. There are lessons learned and best practices that can be shared and opportunities to make better use of funding through partnerships. Collaboration across agencies requires commitment and support from leadership, she said, and staff need to become familiar with other programs and identify intersection points. Ho referred participants to the Partnership for Sustainable Communities website for more information about the HUD, DOT, and EPA partnership.[2]

DISCUSSION

In the discussion that followed the panel presentations, individual panelists and workshop attendees expanded upon a range of topics, with particular interest in how to foster revitalization without inadvertently furthering inequities, the cost of HIAs, the costs and benefits of intersectoral collaboration, the issue of livability initiatives beyond urban areas to rural areas, the role of communication, and an exploration of leverage points in the decision-making process.

Fostering Revitalization Without Furthering Inequities

Individual participants raised concerns about how revitalization in urban areas is leading to increased costs of rent, food, and other essentials, forcing out many long-time residents. As pointed out by roundtable member Phyllis Meadows, successful initiatives often result in displacement and the furthering of inequities. Ho highlighted the importance of considering the potential impacts of policies in creating geographic segregation. Osborne added that people who work in these sought-after neighborhoods (such as child care providers) are often unable to afford to live close to where they work. There is significantly higher demand for these neighborhoods than there is supply. Policies need to support

[2] See http://www.sustainablecommunities.gov/index.html (accessed March 7, 2014).

the retrofitting of more communities as desirable and healthy places to live, she said. Fulk reiterated that one of the core values of the HIA process is equity and that an HIA of a neighborhood development plan or policy should identify potential displacement of lower income families and make recommendations to mitigate that potential. Osborne noted that DOT recently updated its New Starts Guidance for transportation investments and, in collaboration with HUD, is working to put the affordable housing element into the evaluation process for transit projects. The intent is to ensure that people who are transit-dependent will still be able to access the transit as it is planned in the project. A healthy and sustainable community is one that is both racially and economically diverse, Ho said, and that vision should be stated at the outset of any project. Elenberg suggested that there needs to be outreach to let people know that their voices are important and to motivate people to participate in influencing and shaping their communities. Moderator Dawn Alley added that eliminating health disparities is one of the four strategic directions of the National Prevention Strategy, and the other three (promoting healthy and safe community environments, promoting empowered people, and increasing linkages between clinical and community preventive services) each have an equity dimension.

A participant suggested several state- and local-level practical strategies to help establish a balance between gentrification and concentrated poverty in a community. Inclusionary zoning, for example, requires land-use planning to include mixed income housing types (not just single unit homes); state guidelines can require mixed income opportunities for infill redevelopment[3]; and metrics for transportation plans should focus on ensuring that transportation is available to those with the lowest income. She also suggested the need for incentives for developers to build the equity component into plans. Ho responded that the HUD planning grants and challenge grants do create incentives to change behavior, and thereby change community outcomes. The fundamental issue is support from Congress with funding for the grant programs. Osborne added that while land-use decisions are local the federal government's role is to make sure that communities have the tools and the data to make the right land-use decisions (through programs such as the Planning Grants). Many communities are working with transportation data that is more than a decade old. Activities such as updating their planning models so they can understand how people are moving around the community, reevaluating their zoning rules, and updating the master plan, all require money and resources. Osborne encouraged participants to make DOT and the other

[3] Infill refers to the development of unused or vacant land within existing developed urban areas.

agencies aware of barriers to progress. For example, she cited an administrative rule from the 1970s that multifamily housing could not be built on a former brownfield. Since then, methods for decontaminating brownfields have advanced significantly, but the rule had not changed indicating a clear need to revise an outdated rule that was impeding progress.

Costs of HIAs

A participant raised a question about the costs, both financial and time, of conducting HIAs. Fulk responded that there are different levels of rigor for an HIA. The Green Street project (described previously by Florence Fulk on p. 15) is one of two HIAs that EPA is undertaking. The fact that EPA is involved means that these HIAs will be more elaborate, and will employ more resources, than what would typically be done, she said. The majority of the funding for these HIAs has gone toward bringing people together in community and stakeholder meetings and developing a document and the literature review to support it. In contrast, she described a rapid HIA to assess a prolonged heat policy that was completed in about 3 weeks by a work group for the Cincinnati Health Department. One of the goals for EPA is to level the playing field for all communities by providing freely accessible literature so they can better understand the relationships between the built and natural environments and public health, and Web-based tools and models to increase the rigor of community assessments. An HIA does not have to be an onerous, costly process, Fulk said.

Costs and Benefits

Roundtable co-chair David Kindig raised the issue of return on investment and the possibilities of achieving co-benefits in collaboration with other sectors, rather than each sector working on competing, marginal interventions. Ho explained that, according to the federal budget guidelines in the Deficit Reduction Act, a discretionary program that creates a cost offset in a mandatory program may not view the savings realized by the mandatory program as justification for investing in the discretionary program. In other words, she said, housing is not an entitlement, and there are rules that limit department options with regard to federal budgetary issues. For example, if housing provides a health impact and if, with Medicaid expansion, it has a significant federal dollar impact, it is not possible to work with the Office of Management and Budget or the Congressional Budget Office to justify an increased investment in housing based on a cost offset to Medicaid. In a state budget, however, these types of conversations can come into play. She noted that New

York and Ohio are considering the relationship between investments in housing and the potential for Medicaid savings. Elenberg recommended looking beyond return on investment to economic models that can assess the costs avoided, which are just as important as returns. Osborne said that DOT requires applicants to the TIGER program to conduct a full benefit-cost analysis on their project, specifically, whether the project can improve safety, economic competitiveness, livability, sustainability, and state of repair. Applicants are encouraged to look at and compare overall benefits and overall costs that often go well beyond the transportation sector. Elenberg noted that military installations are small communities in themselves, and some have asked for training on making such assessments (e.g., how to look cross-sectorally, what is the difference between an output and an outcome).

Livability in Rural and Urban Areas

In response to a question about expanding livability initiatives to rural areas, Osborne noted that there is often the perception that the elements of livability discussed only apply to urban areas. In fact, many of these elements (e.g., a town center where people can meet, a walkable community) originated in rural America, and it is a rural sense of community that these initiatives are trying to reintroduce to urban areas. That said, these initiatives could certainly apply to rural areas that need revitalization.

Communication

Roundtable member Sanne Magnan raised the issue of developing messaging that can appeal to both political parties and help to establish common ground on the importance of population health. Osborne said that many people like the concept of livability because it is good for the environment, for public health, and for access to opportunity, but the issue that resonates the most with federal policy makers is that it saves money. Fulk noted that the Office of Research and Development at EPA is focusing on helping people understand the beneficial link between human health and ecosystem goods and services. Elenberg stressed the importance of a good strategic communication campaign for helping to motivate people to participate in a public health initiative.

Leverage Points at Different Levels

Moderator Dawn Alley asked the panelists about approaches or leverage points to be considered at different levels of decision making. Osborne

noted that policies that will affect how the built environment affects day-to-day living in a community involve very localized decisions. At the state level, the governor can require coordination across departments, for example, coordination of public health and transportation initiatives. At the federal level, decision makers think more broadly. Elenberg observed that sometimes when the focus is on large changes, such as overhauling the food options available in a cafeteria, very simple interventions to foster health are overlooked, such as turning off the soda machines during breakfast hours.

Performance Measures

A participant asked whether the forthcoming federal MAP-21[4] performance measures consider transportation choice as a measure. Osborne responded that Congress prohibits DOT from defining any performance measure not specifically listed in MAP-21, but states are not limited in developing performance measures locally. Baltimore, for example, has accessibility performance measures that include distance between residential areas and public transit.

[4] Moving Ahead for Progress in the 21st Century (MAP-21) is a long-term highway authorization providing funding for federal surface transportation programs. MAP-21 establishes national performance goals for federal highway programs. See http://www.fhwa.dot.gov/map21 (accessed March 10, 2014).

4

Highlights from the Work of State and Local Governments

As discussed by the first panel, the federal government provides policies, incentives, leadership, and tools for health, said session moderator James Knickman, President of the New York State Health Foundation, but "health is local." In this session, panelists described innovative efforts at the state and local levels to advance community health. Ned Codd, Director of Project Oriented Planning for the Massachusetts Department of Transportation (MassDOT) provided a brief overview of state laws and policies supporting Massachusetts' commitment to promoting healthy transportation. Freddy Collier, Assistant Director of the Cleveland Planning Commission, described his county's involvement in Place Matters, a national initiative which seeks to improve the health of participating communities by addressing disparities in social, economic, and environmental conditions through policy and/or systems change. Rochelle Davis, President and CEO of Healthy Schools Campaign, described her work to develop cross-sector partnerships and incorporate health and wellness into education policy and practice. Kathleen Dickhut, Deputy Commissioner at the Chicago Department of Housing and Economic Development, discussed the land-use, planning, and economic development aspects of A Recipe for Healthy Places, a plan to address the intersection of food and obesity. An open discussion moderated by Knickman followed the panel presentations.

HEALTHY TRANSPORTATION IN MASSACHUSETTS

Massachusetts has been working to build a strong foundation for promoting healthy transportation, said Ned Codd, and he provided a brief overview of state laws and policies supporting this commitment. An "early win" in the area of healthy transportation, Codd said, was the Complete Streets Policy and Design Approach established in the State's Project Development and Design Guide in 2006. The approach is to design roadways from the outside in, starting by accommodating the most vulnerable users first (pedestrians, bicyclists, and public transit riders getting on and off the roadway) and then the motorists.

In 2008, the state legislature passed the Global Warming Solutions Act, which called for economy-wide reductions in greenhouse gas emissions, 25 percent below 1990 levels by 2020, and 80 percent below 1990 levels by 2050. The result, Codd, said, was a focus on projects that enabled different transportation modes and minimized the use of automobiles.

That was followed in 2009 by a very broad-based transportation reform law that consolidated disparate transportation agencies into a single, multi-modal transportation agency under a strong secretary. The new focus was on customer service dedicated to moving people, and to promoting economic development, environmental sustainability, and quality of life. The approach was much more holistic, Codd explained, and enabled activities such as bringing the Registry of Motor Vehicles together with the Massachusetts Coalition for Biking to talk about including more information about bicycle safety in the driver's manual and on the driver's licensing examination.

Codd stated that the Massachusetts Transportation Reform Law also created the Healthy Transportation Compact, an interagency group co-chaired by the state secretary of transportation and the secretary of health and human services, to collaborate and focus on the health outcomes of transportation decision making. Efforts to promote health and transportation are supported by a number of different initiatives including, for example, the Mass in Motion Program (which promotes opportunities for active living), Municipal Wellness Grants, Leading by Example (which promotes green practices by state-owned and -operated facilities), and Safe Routes to School (which promotes healthy alternatives for children to travel to school).

The GreenDOT Policy is a broad-based, comprehensive policy that requires the state Department of Transportation (DOT) to consider the environment in all of its operations and policies. It is guided by three primary goals: reduce greenhouse gas emissions; promote healthy transportation modes of walking, biking, and public transit; and support smart growth development. Examples of GreenDOT initiatives highlighted by Codd included statewide bike weeks held in May since 2010; creation

of a 700+ mile statewide network of bicycle routes that will ultimately include about 500 miles of shared use paths; and a Mode Shift Goal to triple the amount of travel on foot, bicycle, and public transit between 2012 and 2030.

As required by the Transportation Reform Legislation, Massachusetts has also instituted health impact assessments (HIAs). A 2-day training session in HIAs was held for MassDOT, Health and Human Services, and consultant staff, Codd said, and a pilot HIA was conducted on a transportation study of an old, elevated highway in Somerville, Massachusetts. The transportation study has entailed reviewing a range of alternatives for removing the elevated highway and replacing it with a surface street; the companion HIA evaluated the health impacts of the different surface alternatives and found them all to be a significant public health improvement relative to the elevated highway.

Earlier in September 2013, the MassDOT Healthy Transportation Policy Directive was signed, requiring all MassDOT projects (roadway and transit) to serve all travel modes. All projects that are funded or designed should not just accommodate, but should actively promote the healthy modes of walking, biking, and public transit for on- and off-street facilities, and any projects that do not meet these standards require specific approval from the transportation secretary, Codd said.

HEALTHY COMMUNITY DEVELOPMENT: CUYAHOGA COUNTY, OHIO

Freddy Collier described the involvement of Cuyahoga County, Ohio, in Place Matters, a national initiative of the Joint Center for Economic and Political Studies Health Policy Institute. One of the challenges of influencing policy makers to approach their work through a health lens is how best to convey the message to local officials, he said. Place Matters was designed to improve the health of communities by addressing social conditions through policy and/or systems change. The Cuyahoga County Place Matters team engages policy makers and community members to use an overarching health and equity lens for the development of policies that create conditions for optimal health. There is a very deliberate focus on creating intersectoral collaborations, Collier said. The team includes local public health departments, land-use planners, academic institutions, developers, community residents, city and county governments, health care systems, and philanthropic organizations.

Locally, initiatives in Cuyahoga County such as the Connecting Cleveland 2020 Citywide Plan, which proposes creating a city that is a model for healthy living, began to go beyond bricks and mortar to consider social, economic, and environmental conditions as part of the City

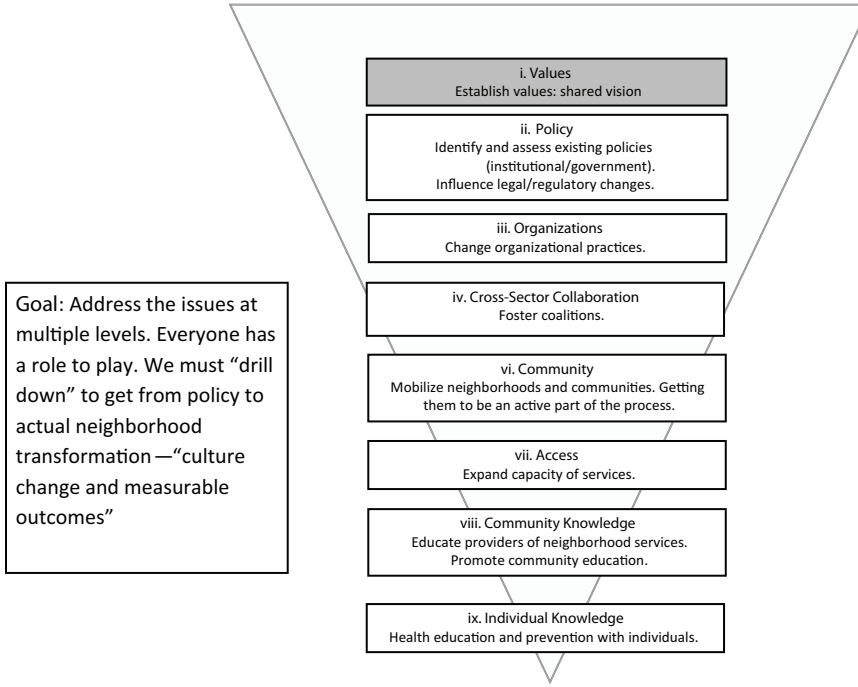

FIGURE 4-1 System change framework.
SOURCE: Collier presentation (September 19, 2013).

of Cleveland's Comprehensive Plan. Following the adoption of Connecting Cleveland in 2007, Cleveland Mayor Frank G. Jackson initiated the Healthy Cleveland Initiative to "create a culture and lifestyle of health." The Place Matters team saw this as an opportunity to engage, Collier said, and started to frame out how to have the conversations about systems change. Collier shared a model that he said became a valuable tool for conveying information (see Figure 4-1). System change requires change at all levels of a hierarchy, he said.

What Makes Us Healthy?

The Place Matters team also began to raise awareness about what it is that makes us healthy, including both medical and socio-ecological aspects of health. Collier presented a framework for health equity that shows how upstream social factors (neighborhood conditions, institutional power, social inequities) and downstream health status factors

(risk factors and behaviors, disease and injury, mortality) play into health and health equity (see Figure 4-2). Health equity is the fair opportunity to obtain full health potential. No one should be at a disadvantage from achieving this potential if it can be avoided. We are responsible for creating the conditions for people to have optimal health, he said.

The team reached out to elected officials to help them understand fundamentally what is meant by population health, and the role of social determinants of health. Economic, environmental, and social conditions that influence health include, for example, poor ventilation, mold, rodents, abandoned property, crowding, hunger, dangerous streets, transportation hazards, worsening traffic conditions, poor quality food, no place to play, declining moderate-wage jobs, and limited access to jobs, health care, and a lack of social networks. Dealing with these conditions from a position of limited control can result in chronic stress on individuals, which is an underlying cause of many health conditions. From a land-use perspective, Collier said, many of these challenges can be managed.

The team also worked to inform policy makers that differences in well-being between and within communities are systematic, patterned, unfair, and can be changed. These differences are not random, as they are caused by past and current decisions, systems of power and privilege, policies, and the implementation of those policies. The choices people make are shaped by the choices that they have. For example, many people are inundated with poor food options; therefore, they make poor choices about what to eat.

Another approach used to convey the message to policy makers about health equity was the use of geographic race maps. Collier showed maps of Atlanta, Boston, Buffalo, Charlotte, Cincinnati, Cleveland, Columbus, Detroit, and the District of Columbia, which all showed evidence of place-based segregation. Utilizing geographic information systems (GISs) in Cuyahoga County, the Place Matters team identified one of the largest disparities of life expectancies nationwide, a 24-year difference in life expectancy between the communities of Hough and Lyndhurst. This significant disparity launched a dialogue among multiple sectors of Northeast Ohio, Collier said.

In conclusion, Collier said that conveying the message and framing the conversation are critical tasks for engaging decision makers outside the medical sector.

LINKING HEALTH AND EDUCATION: HEALTHY SCHOOLS CAMPAIGN

Healthy Schools Campaign is based on the very simple and common sense notion that healthy students are better learners, and that health and

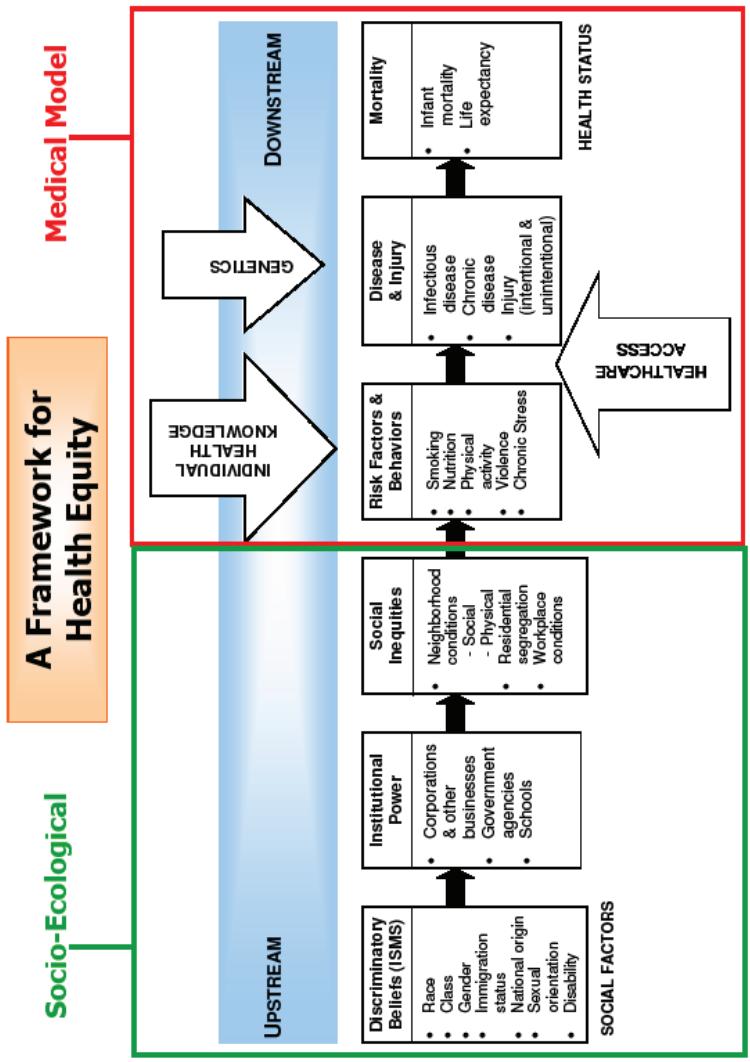

FIGURE 4-2 A framework for health equity.
SOURCE: Collier presentation (September 19, 2013), citing figure adapted by the Alameda County Public Health Department from the Bay Area Regional Health Inequities Initiative, Summer 2008. http://www.acphd.org/social-and-health-equity.aspx (accessed November 26, 2013).

wellness should be incorporated into all aspects of the school experience, said Rochelle Davis. Based in Chicago, Healthy Schools Campaign is locally focused, working to make changes in schools, communities, and the broader school district in Chicago, and nationally minded, elevating the lessons learned to state and federal policy levels. A core part of the organization's mission and vision is to work at the intersection of health and education and address the disparities that exist in both.

The primary focus in Chicago has been on changing the food and fitness environment. Healthy Schools Campaign supports Chicago schools in meeting the U.S. Department of Agriculture (USDA) HealthierUS School Challenge to improve nutrition, physical activity, and nutrition education. In the past 3 years, more than 200 schools (about 40 percent of Chicago elementary schools) have met the challenge, resulting in more than 90,000 students attending schools in which the environment was significantly more supportive of healthy eating and physical activity. Davis added that these changes at the school level have been followed by changes in district policy (e.g., higher nutrition standards that often exceed the HealthierUS School Challenge standards; an extensive local and sustainable procurement program; breakfast in the classroom; reinstatement of recess).

The work of Healthy School Campaign is framed to align with education goals, including improving student growth and development, and addressing the achievement gap. Davis cited the work of Charles Basch (2011) who documented the connection between health disparities and the achievement gap, and identified seven health conditions that have a strong impact on learning. If the education sector is going to address the achievement gap, they are going to have to address health disparities, Davis said, and there are proven best practices for school-based interventions in health.

In 2013, the Equity and Excellence Commission at the U.S. Department of Education released a report providing recommendations on addressing equity in education, and student health was identified as a critical focus area for schools (EEC, 2013). Healthy Schools Campaign is working to connect health and wellness to some of the key strategies the education sector is focusing on to achieve its excellence goals, specifically, data-based decision making, transparency, and professional development.

Data-Based Decision Making

The education sector is placing significant focus on developing data systems to better understand the factors that affect learning and to inform data-based education policy decisions. Given the impact that student health has on academic performance, Davis said, it is crucial to include

information about student health and about how schools support student health among the data collected and in the analysis of student success.

Davis highlighted Texas as one example of how health is being incorporated into data-based decision making. Texas mandates that states annually assess students in grades 3 through 12 on their physical fitness. That information is then compiled by school districts and analyzed to identify relationships between student academic achievement, attendance, obesity, disciplinary action, and school meal programs.

Healthy Schools Campaign has met with the U.S. Department of Education Office for Civil Rights to include health in their analyses. The Office for Civil Rights conducts surveys to document and address inequities in educational opportunities. Although it has one of the most comprehensive sets of data on schools, there is virtually no data on student health and well-being. Healthy Schools Campaign is recommending that data collected include information about facilities, food, fitness, and health services.

Transparency

With regard to transparency, student performance (i.e., test scores) has long been used to measure a school's performance, and to compare schools within a district or state. However, Davis noted, there is little information in school reports about anything connected to health and wellness.

Healthy Schools Campaign is working to integrate health and wellness into school progress reports at both the district and state levels. In Chicago, for example, school progress reports include whether or not the school has a Healthy Schools Certification from USDA. The impact of this addition to the report has been significant, Davis said, and is clearly one of the reasons that more than 200 schools across the district have sought to achieve this designation. At the state level, legislation was introduced to authorize the State Board of Education to update their school report card, and the Healthy Schools Campaign successfully advocated for this new report card to include a health and wellness metric.

Professional Development

The education sector is reevaluating how it prepares teachers, principals, and administrators to meet the needs of students today, explained Davis. Healthy Schools Campaign works to ensure that educators also have the knowledge and skills to support student health. In Chicago, Healthy Schools Campaign offers a program called Fit to Learn for teachers and principals on how to incorporate healthy eating and physical

activity into their classrooms and schools. The training provides participants with the research basis for linking health and learning, and focuses on strategies for incorporating nutrition education and physical activity into lesson plans as well as implementing health-promoting rewards and celebrations.

Multi-Sector Resource Support

Davis highlighted several efforts to leverage money from other sectors to meet education goals. Because schools face many barriers in accessing resources from the health sector, Healthy Schools Campaign is advocating for relevant changes to the Medicaid reimbursement rules. Healthy Schools Campaign has also launched a program called Space to Grow, to redesign schoolyards to provide places of active play and outdoor education, and is partnering with the Metropolitan Water Reclamation District and the Chicago Department of Water Management to build these playgrounds to be green infrastructures that will also help to address storm water management issues. Davis also noted that they are encouraging the U.S. Department of Education to incorporate health and wellness into the School Improvement Grant Program, a $5 billion program to support the 5,000 lowest-performing schools.

In conclusion, Davis reiterated that Healthy Schools Campaign is also working to raise these broad issues (e.g., creating health promoting environments in schools) at a national policy level.

A RECIPE FOR HEALTHY PLACES: CHICAGO

A Recipe for Healthy Places is a plan by City of Chicago to address the intersection of food and obesity. The "recipe" contains six community-based planning strategies: build healthier neighborhoods, grow food, expand healthy food enterprises, strengthen the food safety net, serve healthy food and beverages, and improve eating habits. Kathleen Dickhut discussed the first three strategies which all involve land-use, planning, and economic development.

Build Healthier Neighborhoods

Dickhut described three basic steps to building healthier neighborhoods: collect and analyze data on obesity-related health disparities, identify priority communities with elevated risk for obesity-related diseases, and then focus land-use planning on those communities to addresses the situation. Data compiled to identify priority communities included the presence of areas where residents of low-income communities had to

travel more than half a mile to reach a grocery store that is at least 2,500 square feet in size; high food insecurity rates; and high diabetes hospitalization rates.

The Southside of Chicago has several priority communities. The City of Chicago planning staff, with technical support from the Chicago Metropolitan Agency for Planning and grant funding from the U.S. Department of Housing and Urban Development (HUD) Sustainable Communities Initiative has undertaken planning activities under a land-use strategy called Green Healthy Neighborhood.

Grow Food

The second strategy with land-use implications is to grow food. There are many public open spaces in the city for recreation, but urban agriculture is limited. The goal was to create a system of public open spaces for large-scale growing of food, job training, and education. Dickhut described two agricultural sites that have been developed in partnership with the nonprofit organization Growing Home.

Expand Healthy Food Enterprises

The third planning strategy is to support the expansion of businesses involved in the production, processing, and distribution of healthy food, and expand the number and variety of healthy food retail options. Dickhut noted that urban agriculture was not defined in the zoning ordinance, so it was necessary to change the zoning in order to allow the expansion of food production. The new urban agriculture zoning defines urban farm, aquaponics, and hydroponics, and makes them permitted uses for business, commercial, and industrial zoning districts. Vacant city-owned land parcels have been identified for sale to individuals in the community to grow food for private enterprise, including people who have been trained at the nonprofit hubs such as the Growing Home farms.

Work is also ongoing to expand the number and variety of food retail options, including the sale of city-owned vacant parcels of land to develop a retail center with a Whole Foods store.

DISCUSSION

In the conversation that followed the presentations, the panelists, roundtable members, and other participants discussed how to begin reorienting American culture toward health (and not merely clinical medicine), aligning resources and creating partnerships, engaging young people, and identifying workforce training needs.

Shifting the Culture Toward Health

Moderator Knickman asked panelists their opinion on whether there is a cultural movement toward concern for livability, and whether they have experienced any pushback or heard concerns about such projects not being of value. Collier said that the mayor of Cleveland is very focused on human impact. Understanding the conditions on the ground from a human standpoint allows for a public health response from a land-use perspective. Previously, planners did not take these conditions into consideration when zoning and planning communities. He cautioned, however, about mistaking activity for success. Codd noted that there has been some criticism in Massachusetts, for example, about wasting money on projects for bicycles. But he said that the state feels that offering safe transportation options is essential, and people have repeatedly demonstrated that they want to have these choices. Davis pointed out that there is an enormous amount of activity happening in schools across the country to promote healthy eating and physical activity, and very strong reinforcement of this message from the White House. The concern, she said, is what happens if support from leadership or funding for programs diminishes. It is important that the relevant actors seize the moment and integrate health into the core of education, education metrics, accountability, and professional development. Dickhut agreed that it is important to seize upon the current interests of policy makers and encourage them to make this part of their legacy.

A participant asked for examples of initiatives that might have the potential to be scaled up nationally. Codd suggested that one foundational element that works at the local, state, and federal levels is the Complete Streets approach to designing transportation systems. With this approach, the focus is on spending every dollar to promote access and safety in all modes, and to provide people with the transportation choices that they have shown they want.

Resources and Partnerships

A participant said that there are many tools available to communities for land use planning. The challenge is how to connect these grassroots community efforts toward changing the local infrastructure to the Patient Protection and Affordable Care Act (ACA) and disease prevention. Davis responded that schools can be very important components of community care (e.g., through screening, chronic disease management, prevention, health promotion), but there are barriers at federal and state levels that make it difficult for schools to access health sector resources. Codd suggested that, in the current fiscal environment, new money for initiatives is going to be small (e.g., limited in geographic scope or to pilot programs).

Another approach is to make smarter use of existing funding, for example in the transportation or education sectors.

A participant pointed out that the public sector has enormous purchasing power (not just as a purchaser of health benefits, but also of food and land), and an enormous impact on employment. These are levers that can be used to improve health, he said. With regard to the influence of large-scale purchasers, Collier noted that the Cleveland Clinic has taken some very aggressive steps toward ensuring that employees are healthier, but there has been some opposition. This approach has spilled over into the City of Cleveland, which has begun eliminating sugar-based drinks from all of its vending machines as a practical step toward better health for its more than 8,000 employees. He suggested that ongoing, persistent education and dialogue with local officials is essential for influencing the uptake and institutionalization of healthy community design. Dickhut added the importance of also talking to the constituents about proposed plans for their community. Codd reiterated that the Leading by Example Program of the Commonwealth of Massachusetts promotes environmentally sustainable and healthy purchasing decisions and travel decisions by state employees.

Individual panelists also discussed the role of the business community in building healthier communities, and the potential for partnerships. In Chicago, Davis said, there is a very strong sense that schools are not working the way they need to, and that that impacts business. For example, the corporate community clearly understands that Chicago needs a better education system in order to attract workers that want to live in the city. There is a civic and business advisory committee, and corporations want to come to the table and understand what they can do to improve the schools. Collier added that developers are operating what he considers a community business, and it is important that they view health and its improvement as a business opportunity. Codd said that in Massachusetts, many businesses want to be located in walkable communities with transportation choices.

Engaging Students

Roundtable member Marthe Gold noted that school-aged children are a potential constituency, asked whether school systems are talking to students about the experience of being ill and the notion of the value of health for their education. Davis was not aware of such efforts, but responded that in Chicago there is a focus on the violence that children face, including helping children develop different ways of expressing themselves, and helping children who have been subject to bullying or violence. Codd said that Massachusetts does work with students to educate them on the

importance of healthy transportation, such as the statewide Safe Routes to School program. The program includes pedestrian and bicycle safety training, and education on the importance of walking and bicycling and other forms of exercise. Another program is focused on in-school assessments to identify infrastructure deficiencies and safety and access issues that prevent students from walking and biking to school.

Workforce Issues

A question was raised about the present and anticipated workforce issues (e.g., capacity, training, distribution) associated with applying a health lens to policy making in other sectors and in the implementation of HIAs. Dickhut noted the need for a team approach, because this is not work that one profession or one individual does. There are the planning experts, and the experts in other areas, such as health. Collier said this is not about building a new workforce around HIA. Rather, it is reexamining the existing workforce in these sectors and getting them to operate differently. HIA, for example, can be viewed as a new method of engagement for a planner. The question really is how to reframe the value proposition? Dickhut added that HIAs and efforts to consider health in all policy making are about adding substance, not about creating more work. Codd noted the importance of being willing to accept that things that were traditionally outside one's particular area of specialization are no longer outside. In fact, he added, health may be at the heart of work in one's own sector if one understands how the connections are made, and how actions taken affect the broader environment.

5

Working Across Sectors to Improve Health

In the third panel session, speakers discussed strategies and tools for effective intersectoral collaboration and decision making. Aaron Wernham, Director of the Health Impact Project, a collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts, provided further support for health impact assessments (HIAs) as a practical tool to facilitate health-informed public policy. Loel Solomon, Vice President for Community Health at Kaiser Permanente, described his organization's conduct of community health needs assessments, and discussed examples of cross-sector collaboration at the community level to address the needs identified. Linda Rudolph, Co-Director of the Center for Climate Change and Health at the Public Health Institute, and Connie Mitchell, Chief of the Policy Unit in the Office of Health Equity at the California Department of Public Health, together described lessons learned from California's Health in All Policies Task Force. Following the presentations, an open discussion was moderated by Phyllis Meadows, Senior Fellow at The Kresge Foundation.

HEALTH IMPACT ASSESSMENTS

Aaron Wernham elaborated on one of the key tools for cross-sector public health collaboration, the HIA. For detailed information about HIAs, he referred participants to the National Research Council (NRC) report on HIAs (NRC, 2011).

There are a variety of challenges to working across sectors, includ-

ing the lack of common language; lack of understanding of each other's processes, and the constraints (political, funding, and legislative) on the way each does business, as well as differing priorities. Policy makers in other sectors such as transportation and housing, for example, may not understand health data, and public health professionals may not understand the constraints and limitations of the planning process. In addition, there is not a lot of funding for new activity, and there are few formalized requirements for doing this work, Wernham said.

As an example of an HIA, Wernham described the process of integrating health into an environmental impact statement (EIS) in Alaska. The Bureau of Land Management was conducting an EIS to examine a proposal to open a vast tract of land near several Alaska Native Communities to oil and gas leasing. Historically, many people in these communities have been supportive of oil and gas development, and much of their $300 million annual local government budget is derived from oil and gas revenues. On the one hand, these revenues are very important to health as they support the health department and the local water and sewer system, for example. On the other hand, Wernham explained, this land is a culturally important area, and also where residents hunt and fish for food, and much of the community was opposed to this particular proposal. Rather than simply attending community meetings, the local government became a "cooperating agency" (allowed under the regulations that drive the EIS process), and the local health department drafted the HIA that was incorporated into the EIS.

The HIA addressed a wide range of health determinants, including air and water quality; noise; food security and dietary change; the influx of non-resident workers; the risk of alcohol and drug trafficking to previously very remote, isolated communities; and benefits such as increased revenues, employment, and income. As a result of the intense engagement among the local government, tribal governments, and the federal agency, an effective relationship was established, and the agency modified the leasing plan and protected key harvest areas. A number of mitigation measures that the community had been asking for (after more than one decade) were finally put into place by the agency to protect the safety of fish and game, and to monitor air and water quality. The final plan was widely accepted by communities, industry, and by state and federal agencies, and there was no litigation. Also as a result of the successful collaboration, the agency is actively soliciting help on additional HIAs and EISs, and the Alaska Department of Health and Social Services now does HIAs on every large project in the state. This is funded mainly through the permit structure of the Department of Natural Resources, Wernham explained. In Alaska, natural resource development is the largest part of

the state budget, and is thus one of the major drivers of all of the determinants of health in communities.

HIAs are being used across a broad range of social, environmental, and economic policies, Wernham said. After Hurricane Katrina, energy prices spiked considerably, especially in the Northeast which was facing a very severe winter at the same time. The state legislature in Massachusetts was considering whether or not to increase funding to the Low-Income Housing Energy Assistance Program. This was not viewed as a health policy, Wernham noted. The HIA highlighted the health effects of lack of heat, such as the use of space heaters and ovens, which can lead to carbon monoxide poisoning, burns, and the spread of infectious diseases when many people crowd into one room. In addition, people faced such difficult decisions as whether to buy food and medicines, or pay for heat. Ultimately, the report recommended an increase in funding for the energy assistance program and noted that it would have implications for Medicaid expenditures as well, because many of the beneficiaries are also publicly insured.

Another example described by Wernham is the Healthy, Hunger-Free Kids Act, which required the U.S. Department of Agriculture (USDA) to regulate the sale of snack foods and beverages sold in schools. The HIA that was conducted found that there would be less student access to, purchase of, and consumption of unhealthy foods and beverages, and improved nutrition because of increased participation in school meal programs. USDA was wrestling with a key concern from school districts around the country regarding the impact of such changes on revenues. The HIA included an analysis of revenues after districts enacted policies that restricted the sale of snack foods and beverages, and found quantitatively that revenues would actually increase because more students would purchase the school meal program. This was important because the HIA helped answer not only the salient health questions, but also offered data that addressed a central policy challenge (schools' concern about revenue loss) in the rulemaking process.

The use of HIAs has expanded significantly since they were first used in 2000. A 2007 study found a total of 27 HIAs completed across several states, Wernham said, while ongoing data collection by the Health Impact Project and partners showed at least 241 HIAs completed or in progress across 35 states, Washington, DC, Puerto Rico, and at the federal level as of 2013 (an increase of more than 800 percent).

HIAs are being used to achieve concrete policy changes that benefit health, as well as effecting systems changes. An HIA is not just a tool to inform a single decision, he said, but a tool to build effective, more streamlined collaborations. With regard to funding, Wernham noted that conducting an HIA on every decision is not feasible or necessary. Fortu-

nately, in many cases, health-based standards have been routinely incorporated into city planning decisions and a separate HIA is not needed. Many of the HIAs can be completed in 1 or 2 months, rather than 1 or 2 years.

In conclusion, Wernham said that the goal is improving the conditions that allow more people to be healthier. Policy reform and tactics are one approach, but Wernham also posed a question regarding whether, ultimately, a larger-scale social movement may be needed to address some of the root causes of illness and health iniquity. He noted that many of the important changes that led to improved conditions for people in poverty stemmed from the civil rights, worker protection, and women's suffrage social movements, for example.

CROSS-SECTOR COLLABORATION AT THE COMMUNITY LEVEL

Kaiser Permanente is an integrated health care delivery system that includes 37 hospitals and covers 9 million members. As part of the hospital function, Loel Solomon explained, Kaiser conducts community health needs assessments, and it is clear that the health burdens that communities are facing cannot be addressed with the limited tools that hospitals and doctors in the medical system have. Multisector collaboration is essential. In addressing healthy eating and active living in relation to obesity and diabetes, for example, there are issues of the safety of physical activity environments (e.g., parks, sidewalks). Violence is another overarching issue in communities, and people are dealing with toxic stress, the impacts of stress on parenting, and a social service system that does not serve their needs. For families who are under tremendous financial pressure and are struggling to make ends meet, health moves downward on the priority list.

Solomon shared several key insights from conducting community health needs assessments. In addressing community health needs with community partners, he said, it is necessary to focus on convergent strategies, even if the goals of the collaborating organizations are divergent. The goal is to harness the expertise, the passion, and the interest that different groups bring to the issues (not to get everybody to sign on to the same platform or the same mission). A key organizing principle is the concept of co-benefits. Sometimes practitioners need to "leave the health language and principles at the door," he said, and meet the community partners on their ground, learn their language, and their priorities. This is an unusual kind of partnership structure in many ways, and he likened it to being a gracious dinner party host and ensuring that everybody feels comfortable at the table. It is also important to be flexible and take opportunities where we find them, he said.

Solomon illustrated these insights with several examples. The Valley Hi HEAL (Healthy Eating Active Living) Zone in Sacramento, California, is 1 of 40 community health initiatives that Kaiser Permanente and its funding partners have launched across the country. The focus is on improving food and physical activity environments to drive behavior change of a small geographic population. Partners in the development and implementation of the plan included the school district, city agencies, local elected officials, the business improvement district, the police department, residents, faith leaders, social service providers, and open space groups. One of the early priorities they identified was community safety and walkability around Valley Hi Park. The process of taking back the park galvanized this community around safety and quality of life issues. Solomon noted that more than half of the communities in the HEAL initiatives identified violence as a major issue. For a health care organization, the focus is on health outcomes, but there must be a balance between focusing on strategies to address health behavior change, and meeting the community where they are.

Another example is the Every Body Walk! campaign, a collaborative of partners working to build a movement for walking and walkability. The partners have very different goals, Solomon said. For example, the developers consider this to be business development strategy for economic vitality (e.g., pedestrians are part of a vibrant downtown), while the national Parent-Teacher Association (PTA) wants to see students walking and biking to school, and views this as quality time between parents and their children. It is important to maintain a broad perspective around engaging constituencies, Solomon said, and that means not leading with health all of the time.

The final example shared by Solomon is the Convergence Partnership, which is focused on improving food and physical activity environments in the community by promoting equity, making policy and systems changes to create the conditions for health, and fostering connections among people to work together more effectively for co-benefits. There have been several key successes, for example, the federal Healthy Food Financing Initiative (HFFI). HFFI scaled up an initiative in Pennsylvania that began as a jobs/social justice initiative to bring supermarkets to underserved areas, which has drawn national attention. Solomon highlighted several key factors for success of the Convergence Partnership. The first factor was disciplined focus on the value proposition. In the case of the Convergence Partnership, this was whether proposed investments drive the equity agenda and support the connection between health and one or more non-health goals (i.e., whether they are co-benefit strategies). There was also a concerted effort to enlist and engage new partners with a focus on funders that target areas aside from health. The partnership

structure and operating agreements are also important to foster trust, and an understanding each other's different interests and benefits. Finally, a capable program director is essential.

HEALTH IN ALL POLICIES: CALIFORNIA'S EXPERIENCE

Linda Rudolph and Connie Mitchell discussed their experiences with the California Health in All Policies Task Force as an example of collaboration and decision making across sectors. The presentation was based on a discussion paper prepared for the workshop (Rudolph et al., 2013a).

California Health in All Policies Task Force: Structure and Function

The California Health in All Policies Task Force was created through an executive order under Governor Schwarzenegger in 2010, explained Mitchell. A senate concurrent resolution in 2012 recognized the value of Health in All Policies (HiAP), and the task force was included in statute in the health and safety codes of California under the new Office of Health Equity. The 19-member task force includes state agencies, offices, and departments under the auspices of the Strategic Growth Council. The task force regularly reports to the Strategic Growth Council and to the public, and seeks public input on documents and implementation plans. Mitchell noted that in addition to quarterly task force meetings and workgroups in between, task force staff visit each agency to engage in longer discussions with them about priorities, barriers, and how the task force can help them achieve their goals. The task force also interacts with local governments, regional efforts, and nongovernmental organizations to see how discussions and policy changes at the state level are playing out at the local level.

The task force is funded through several mechanisms. The Strategic Growth Council gets an allocation of funding from the Air Resources Board for their support of the task force. The Department of Health provides two staff positions (full-time equivalents, FTEs), office space, equipment, and supplies for the staff that support the task force. The Public Health Institute, through their funding from The California Endowment, Kaiser Community Benefits, and Community Transformation Grants provides another five FTEs.

Health as a Bridge

HiAP supports intersectoral collaboration by bringing together partners from many sectors to recognize the links between health and other issue and policy areas, break down silos, and build new partnerships to

promote health and equity, and increase government efficiency. Health serves as a bridge for the process, Mitchell said, not the driver. A key part of the task force staff's work is nurturing collaboration and negotiation among competing interests.

The task force began its work by gathering input from the people it hoped to serve, through a series of workshops around the state. More than 1,200 initial recommendations were collected, which were reduced to 34 priority recommendations and 8 implementation plans that were approved by the Strategic Growth Council.

Activities and Achievements

Mitchell highlighted several major activities and achievements of the task force, including the creation of an interagency Farm to Fork Office and a Food Procurement Interagency Workgroup, and the incorporation of health considerations into the updated California General Plan Guidelines. The task force is working to align school facility and city planning processes to rejuvenate schools and their communities, and there are guidance documents near completion regarding crime prevention through environmental design; housing siting near major thoroughfares; and nutrition guidelines for state agencies.

Challenges

A key challenge for the task force, Mitchell said, has been balancing the implementation of current plans and meeting plan goals, with the development of the new ideas and projects that are constantly being suggested. The staff is also asked to provide technical assistance in response to growing interest from other agencies and local communities. Another challenge is fostering ongoing communication across multiple sectors, which she said requires a special skillset and a lot of time. Securing sufficient staff and resources is essential to meeting all of these challenges. She also noted the importance of demonstrating value through evaluation and accountability. Evaluation can be particularly challenging because of the time lag from policy design, through decision making, implementation, and monitoring of results. These are complex adaptive systems; they are nonlinear, dynamic, co-evolutionary, and uncertain, she said. HiAP is not a model that can be tested, but an approach to decision making.

The Health in All Policies Approach

Rudolph defined HiAP as a collaborative approach to improving the health of all people by incorporating health considerations into decision

making across sectors and policy areas. Decision makers are informed about the health, equity, and sustainability consequences of the policy options that are under consideration during the policy development process, with the intent that policy outcomes will reflect those consequences (Rudolph et al., 2013b).

The conceptual underpinnings of the HiAP work in California is that the physical, social, economic, and services environments in which people live, work, study, and play are the key determinants of their health choices and their health outcomes, Rudolph said. The stark differences in these environments contribute to persistent social and health inequities in disadvantaged communities that have unhealthy environments, few resources, and few opportunities for health and thus, significantly unhealthy outcomes. In these environments, the living conditions that are determinants of health outcomes are largely shaped by institutions, businesses, agencies, and sectors outside of health, such as finance, education, housing, employment, parks, and others.

The forces that shape living conditions also shape systems (e.g., transportation, energy, agriculture). These systems have global impacts on the environment (e.g., air and water pollution, ecosystems collapse, soil loss, climate change), creating significant public health threats (see Figure 5-1). Rudolph stressed that, in addition to its many direct health impacts, climate change threatens the systems on which human life depends. Health and social equity within the United States, global equity, and intergenerational equity cannot be achieved without very serious attention to ecosystems and climate change, she said.

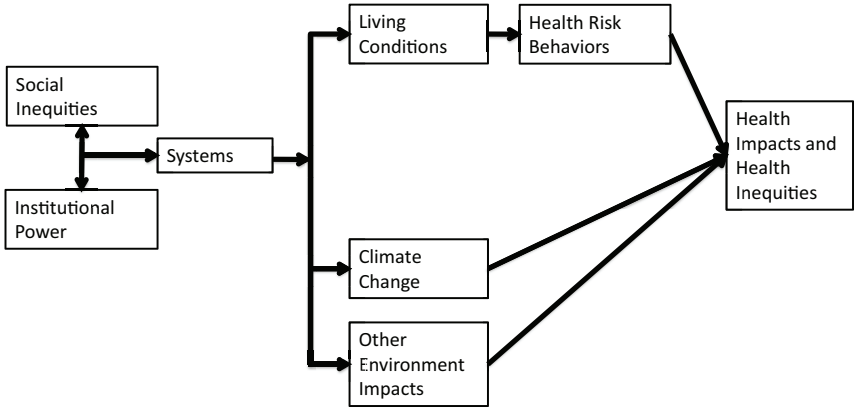

FIGURE 5-1 Health, equity, and sustainability.
SOURCE: Rudolph presentation (September 19, 2013).

The California HiAP Task Force identified five key elements for the implementation of HiAP approaches: health, equity, and sustainability; intersectoral collaboration; co-benefits; engaging community and stakeholders; and creating structural or procedural change. Rudolph noted that HiAP really means health, equity, and sustainability in all policies. One of the first challenges for the task force's 19 member agencies was to develop a shared understanding of health, and thus form a shared vision and goals for what a healthy community is (see Box 5-1).

Other key elements are collaboration and co-benefits. Rudolph reiterated the concept mentioned by others that when public health practitioners collaborate, they have to balance the fact that while health is their central goal, it is often not the central goal of others. Identifying and prioritizing strategies with health and sustainability co-benefits is one important way to promote collaboration. As an example, she described a study by the California Department of Public Health demonstrating the potentially significant health benefits gained by shifting from driving cars to active transportation such as walking or biking, as well as significant reduction in greenhouse gases (Maizlish et al., 2013).

Keeping the Momentum

HiAP, in many forms and under different names, is spreading across the United States and internationally, Rudolph said. However, the concept of HiAP and of cross-sectoral collaboration in health is not new, and many public health achievements have been the result of significant intersectoral collaboration (e.g., the Alma Ata Declaration of 1978, the Ottawa Charter for Health Promotion of 1986, and the Rio Political Declaration of 2011). As the nation faces dramatically rising social and economic inequality, and the urgent challenge of climate change, what will it take to maintain the HiAP momentum? Rudolph suggested that what is needed is

- structural and procedural change that embeds and institutionalizes the consideration of health equity and sustainability into the cultural organization and processes of government;
- support and opportunity for substantive community and stakeholder engagement that empowers participation of the most vulnerable;
- societal and government prioritization of health, equity, and sustainability;
- strong and visionary leadership and the political will to challenge the status quo; and
- robust democracy and social movements such as those our forbearers were involved in.

BOX 5-1
Healthy Communities Framework:
What Is a Healthy Community?

Meets basic needs of all

- Safe, sustainable, accessible, and affordable transportation options
- Affordable, accessible, and nutritious foods and safe drinkable water
- Affordable, high-quality, socially integrated, and location-efficient housing
- Affordable, accessible, and high-quality health care
- Complete and livable communities, including quality schools, parks and recreational facilities, child care, libraries, financial services, and other daily needs
- Access to affordable and safe opportunities for physical activity
- Able to adapt to changing environments, resilient, and prepared for emergencies
- Opportunities for engagement with arts, music, and culture

Quality and sustainability of environment

- Clean air, soil, and water, and environments free of excessive noise
- Tobacco- and smoke-free
- Green and open spaces, including healthy tree canopy and agricultural lands
- Minimized toxics, greenhouse gas emissions, and waste
- Affordable and sustainable energy use
- Aesthetically pleasing

Adequate levels of economic, social development

- Living wage, safe and healthy job opportunities for all, and a thriving economy
- Support for healthy development of children and adolescents
- Opportunities for high-quality and accessible education

Health and social equity

- Social relationships that are supportive and respectful
- Robust social and civic engagement
- Socially cohesive and supportive relationships, families, homes, and neighborhoods
- Safe communities free of crime and violence

SOURCE: Rudolph presentation (September 19, 2013) citing California HiAP Task Force (2010).

DISCUSSION

In the discussion that followed the presentations, the panelists, roundtable members, and other participants discussed how decision makers from different sectors can find co-benefits in cross-sector collaboration, what could be the first steps in building a movement or at least a "field of fields," the characteristics of conveners and leaders in this work, the contribution of social networks of different kinds in supporting the work of improving community health; and finally, what constitutes evidence for decision making.

Co-Benefits

Panelists discussed further what benefits would incentivize groups, organizations, or agencies to engage as partners, while acknowledging that that the answer depends on the needs and goals of the specific groups. From a community perspective, Solomon said that desired benefits are often about quality of life, such as the kinds of neighborhoods people want to live in, the ability to spend more time with family, or finding meaningful work that is close to home. Rudolph said that the health frame can add value to and support the goals that other sectors are trying to achieve. For example, the urban forestry program in California has benefitted from articulating the health perspective on the value of shade in the face of increased extreme heat associated with climate change, or the value of greenery in terms of the aesthetics and quality, and in the crime prevention aspects of urban forestry. Wernham reiterated that in Alaska, the Bureau of Land Management avoided costly and time-consuming litigation over land leasing through effective community and stakeholder engagement, and an HIA to address community concerns before the plan was implemented. Mitchell said that educational attainment is a social determinant of health, and school planners are becoming interested in revitalizing schools, and fostering parental participation and higher educational achievement. Transportation officials became interested in school revitalization when they found that 40 percent of the commuting in some areas of Los Angeles was attributed to transporting children to school, and saw reduction in greenhouse gas emission as a benefit. The community saw safety and walkable streets as a benefit of school revitalization. It is not only about how they benefit, she said, but the synergy effect that moves the project forward to the next level.

Building a Movement

The topic of whether there is, or needs to be, a social movement was again discussed in this session. Mitchell lamented that it is often a fight

to prove the legitimacy of this work, and to gain appropriate funding and staffing for it. There are many people who understand that health care reform is important, but it will fail if more effective prevention strategies are not identified, and if Americans do not make the sociocultural changes needed in their neighborhoods, she said. Wernham concurred that health inequity is a manifestation of economic inequity, racial inequity, and environmental injustice. He added that health care is not health. Public health workers and their partners need to communicate more effectively that medical care is for making people less sick, while health is what happens to people the rest of the hours of the year. Rudolph agreed that there is not a movement for social equity and justice, and added that there is not a movement to address climate change. These are tightly linked because climate change will make all of the other work around health and equity harder, and will take up more of the budget (e.g., to cover the costs of climate change related disasters such as the impacts of extreme weather). Solomon noted that different from building a movement is "building the field," as well as building a "field of fields," a group of professionals that can work across these many different areas. Rudolph said that there is limited engagement or involvement at a deep level of the people who live in the most vulnerable and disadvantaged communities. It is crucial to find ways to hear their voices and their solutions, and to empower and facilitate more active citizen participation in these discussions, she said.

Roundtable member Debbie Chang said that before there can be a social movement, there needs to be spread and scale. There is so much innovation going on (tools, solutions, technical assistance) that there should be intentional efforts to expand spread and scale of that knowledge. Solomon noted the challenges of addressing spread and scale of these approaches across different states, with different market dynamics, and different leadership personalities. It is not the same as scaling a disease prevention program. Co-benefits conversations are tailored to each specific group, and there are a lot of face-to-face conversations, and complex relationships and dynamics. Wernham noted that while there is much more interest in health and the built environment now than 15 years ago, there is still work to be done to draw attention to other fundamental inequities, and he noted specifically the lack of a climate change movement, or a movement around economic inequality. From a practical standpoint, it is important to make it easy and automatic for other sectors to integrate health into the way they do business, for example, through innovations in the form of tools that can help planners.

Rudolph said that the spread of the concept of HiAP is happening. However, there is not a network of people that are doing HiAP in the way there is an HIA network that can provide technical assistance. Mitchell added that efforts toward spread and scale must be done in a way that

aggregates resources and people around shared issues, rather than depleting resources.

Codd suggested that there is a generational aspect to many of these issues that could be interpreted as a movement. For example, the millennial generation is buying cars later, and while some of that may be due to the economy, many are hoping to live in the center of a community and be able to live car-free.

Conveners and Leaders

Panelists discussed the attributes of a good convener organization, and how they can sustain engagement and trust among different participants. Solomon said that a good convener has the ability to understand the complexity of this work, to live in the middle space and not drive a specific agenda, but drive a co-benefits agenda. The convener makes sure that information is translated and shared with other decision makers. Facilitation skills are essential. The ability to tell the difference between what is a distraction in the conversation and what is the true problem to be addressed, is a specialized skill. Solomon cited the role that Policy Link has played with the Convergence Partnership as an example of a successful convening organization. The Policy Link team understands enough of the depth in all of the different policy areas to have complete credibility with the various agencies they are working with, he said. Rudolph stressed the importance of taking the time to get to know each member agency individually, and demonstrate interest in understanding their concerns, fears, and priorities. Listening with humility and respect, and looking for the touch points in individual conversations that offer opportunities for bringing people together. Mitchell referred participants to a forthcoming guide on HiAP that answers some of the questions about the nature of the team and the specific skills needed to be an effective convener (Rudolph et al., 2013b).

Panelists were asked also about what constitutes successful leadership on these issues. Codd said that based on his experience, government leaders need to understand the importance of the field and how it interrelates to other sectors, and need to enable and encourage their staff to support HiAP efforts. Rudolph added her experience in working with government leaders who enabled health to be at the table with other sectors, and who were willing to listen, and who helped advance the work.

Social Networks

Roundtable member Sanne Magnan pointed out that many presentations throughout the day referred to the importance of social networks

and connections, for example, the role of HIAs in creating social cohesion in the community, or the role of supportive and respectful social relationships in fostering a sustainable community. She asked about the potential role of faith communities in planning. Solomon said that social cohesion has been shown to impact health in the sense that neighbors who know each other will check on each in times of need. Critical elements are whether settings or environments work in favor of people meeting each other on the street and getting to know each other, and how issues such as violence, street disconnectivity, or sprawl, keep people separated. He added that in the initiatives that Kaiser Permanente has been involved with, engaging the faith community has added a different voice to help express the hopes and aspirations of the community. Rudolph concurred and noted that the framework for a healthy community includes relationships among family members that are safe, respectful, and nurturing. There is clear evidence about the effect of adverse childhood experiences, including violence, on children's social, cognitive, and health development. Faith communities are an important part of building social support.

What Constitutes Evidence for Decision Making?

A participant pointed out that some areas of policy and practice require randomized, controlled trials as evidence. To move policy forward and secure the necessary investments, is there a need for a common definition of evidence? Solomon agreed that there is a disconnect in the scientific community as to what constitutes evidence, and that for some disciplines, randomized trials are seen as the only level of evidence that is appropriate. That is actually the wrong standard of evidence for many of the phenomena to be studied, he said, in particular for understanding the impact of community context, which is frequently randomized away by randomized controlled rials. More broadly, there are complex interactions between these factors, and the right kind of study design depends on the phenomena studied and the questions asked. Wernham noted that many factors involved in decisions, such as politics, personal preferences, or culture, are not evidence. He also raised the concept of adaptive management, that is, taking actions and defining metrics, and then making adjustments to those actions based on feedback over time. Impact assessment is not about making definite predictions.

6

Closing Remarks

Roundtable co-chair Kindig brought the workshop to a close by asking each roundtable member to share their summary observations, and suggestions for how take these issues forward. Overall, roundtable members expressed optimism, and said they were encouraged by the innovative ideas and efforts to incorporate health into decision making in non-health sectors that were described over the course of the workshop. The following topics were highlighted by roundtable members as key takeaways from the presentations they heard.

POPULATION HEALTH AND EQUITY

A theme throughout many of the presentations was the close relationship between health and equity. Many participants made reference to Williams' keynote address and the ongoing impact of historical social policy on health. A roundtable member reiterated a point by Collier in discussing nutrition and obesity, that "the choices we make are based upon the choices that we have." What can be done to improve and expand the choices that people have? Another roundtable member summarized that sometimes our best intentions and efforts to improve communities might actually hasten some of the inequities. It is important to look at the work being done, she cautioned, and to be mindful of what the implications might be.

CONSTITUENCIES AND CROSS-SECTOR COLLABORATION

Roundtable members discussed further the concept that health is a bridge for cross-sector collaboration, and that successful collaboration requires a measured approach to advancing the health agenda. A member underscored the idea of convergent strategies even in the face of divergent missions and goals, and several members suggested the need for a list of win-wins or co-benefits and promising opportunities across the sectors to help drive collaboration.

One member reiterated the points made about how bringing health into the picture sometimes helps raise the acceptability or credibility of a non-health initiative, and that those health implications can be extra leverage to help other sectors move their policies or initiatives forward.

Several roundtable members observed that there was a lot of discussion about the public sector role in the Health in All Policies (HiAP) approach, and they suggested that further discussion is needed about the role of the private sector, as both stakeholder and partner. The important role of foundations was also mentioned, as was the engagement of faith communities.

THE CRITICAL ROLE OF THE CONVENER

Many roundtable members highlighted the critical role of the convener. It was noted that identifying the areas of overlap across different sectors, and understanding the motivations of different sectors for effecting changes that can impact health, is essential for moving population health forward. Several members noted the importance of a strategic messaging plan. How can the message about HiAP be framed so that it resonates with all stakeholders, and draws them together to work toward co-benefits? The convener can also play a role in gathering the scientific evidence and building the framework, including the business case, for the HiAP approach. Among the issues to be addressed is how to finance the role of the convener.

SPREAD AND SCALE

The topic of spread and scale was mentioned several times. There are examples of excellence, a roundtable member said, and yet there is inadequate effort to accelerate their implementation in communities. One member emphasized that there needs to be an intentional focus on harnessing these lessons learned and disseminating key elements to others.

Questions were raised about how best to approach these issues. Might it be best to focus on a particular topic? For example, a member asked if perhaps it might be easier to engage broadly on issues such as food,

exercise, and obesity, than on issues such as inequality or climate change (i.e., bike lanes are easier to talk about than income redistribution for getting communities and partners engaged). How might spread and scale activities be funded? It was pointed out that foundations play a key role in helping communities, but not to scale.

Workforce issues were also discussed relative to spread and scale. It was pointed out that moving HiAP from a concept to a "field of fields" will require a critical mass of people who can work across sectors. In this regard, it was suggested that the roundtable might take up a discussion about education and training opportunities and approaches (undergraduate, graduate, continuing education in the field) for spreading the messages, and sharing the skills and best practices for applying a health lens to non–health sector decision making. How can the skills, the abilities, and the resources be built or strengthened to enable people at the local level to do this work?

It was also suggested that the roundtable might undertake an inventory or develop a kind of catalog of the available tools, strategies, and resources that could help others in fostering cross-sector collaboration. It was pointed out that there is no place where people working on HiAP are convening, and a member suggested the roundtable might consider developing a virtual collaborative where people could engage each other for advice and support. A member added that people should be encouraged to publish their work in this area, so that promising practices and success stories can be shared.

Several individual participants raised concerns about a comment and example given by Ho indicating that, according to federal guidelines, a discretionary program that creates a cost savings in a mandatory program cannot use that as a justification for funding of the discretionary program. There was interest among the members learning more about this to gain a better understanding.

METRICS AND EVIDENCE

Several roundtable members discussed the challenges to defining metrics in the area of cross-sector collaboration. One member noted that in the face of limited resources, choices need to be made between approaches, and there is a lack of metrics or measures to compare efforts, to identify what works best, and develop "a learning system." It was suggested that examples of measures from other sectors might inform health-related measures. Specifically, the existence of models that can explain the relationships between the various outcomes, for example, the impact of health care on health, and health on the ability of people to be well educated, and so forth. A member stressed that just because the evidence base around

many of these issues is still developing does not mean decision makers should wait to have all the evidence before taking action.

BUILDING A MOVEMENT

The question of whether there is now, or needs to be a social movement around HiAP was raised in the open discussions throughout the workshop, and highlighted again by members as a key issue in the closing session. There were differing opinions as to whether there was a movement under way, and if so, what kind of movement it was. A roundtable member observed that over the past decade there has been a shift in expectations at the community level of what people want and demand for their quality of life, and suggested that there are small movements at the community level throughout the country.

The point was made that the problem needs to be clearly defined, as does exactly what any movement is trying to achieve. Also, several individual participants commented that there is much focus on the physical determinants of health, when perhaps what is needed is more focus on the social, economic, and environmental policies that ultimately impact health.

A

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B

Agenda

WORKSHOP #3: APPLYING A HEALTH LENS TO DECISION MAKING IN NON-HEALTH SECTORS
SEPTEMBER 19, 2013

WORKSHOP GOALS

1. Build new cross-sector partnerships and communication.
2. Understand the health impacts of decision making and policy development in other sectors.
3. Understand the differential health impacts of decision making and policy development in other sectors on different populations and consequences for increasing or reducing disparities in health.
4. Identify potential areas of opportunity to enhance partnerships, develop relationships, and improve health impact across sectors.

8:30 am Welcome and Context
George Isham, Co-Chair, Roundtable on Population Health Improvement

8:45 am Workshop Overview and Opening Remarks
Pamela Russo, Senior Program Officer, Robert Wood Johnson Foundation; chair, workshop planning committee; member, Roundtable on Population Health Improvement

9:00 am Keynote presentation: "How Social Policies Shape Health: Evidence and Opportunities"

David Williams
Florence Sprague Norman and Laura Smart Norman
Professor of Public Health
Harvard School of Public Health
Professor of African and African American Studies
Professor of Sociology
Harvard University

9:30 am Discussion with the Roundtable

9:45 am Panel I: Highlights from the work of federal departments and agencies

OBJECTIVE: To identify and discuss facilitators and barriers to federal-level cross-sector efforts to improve the conditions for population health.

Moderator: *Dawn Alley, Senior Policy Advisor, Office of the Surgeon General, U.S. Department of Health and Human Services; member, workshop planning committee*

Florence A. Fulk
Chief Molecular Ecology Research Branch
Ecological Exposure Research Division
National Exposure Research Laboratory
Office of Research and Development
U.S. Environmental Protection Agency

Beth Osborne
Deputy Assistant Secretary for Transportation Policy
U.S. Department of Transportation

CAPT Kimberly Elenberg
Deputy Director for Population Health and Medical Management
Office of the Assistant Secretary of Defense for Health Affairs
Office of the Chief Medical Officer
U.S. Department of Defense

Jennifer Ho
Senior Advisor, Housing and Services
Office of the Secretary
U.S. Department of Housing and Urban Development

10:45 am Break

10:50 am Panel I discussion with roundtable members
Moderator: *Dawn Alley*

11:50 am Lunch

12:30 pm Panel II: Highlights from the work of state and local governments

OBJECTIVE: Identify and discuss lessons learned at the state and local level by partners implementing cross-sector efforts to improve the conditions for health.

Moderator: *James Knickman, President, New York State Health Foundation; member, workshop planning committee; member, Roundtable on Population Health Improvement*

Ned Codd
Director of Project-Oriented Planning
Office of Transportation Planning
Massachusetts Department of Transportation

Freddy L. Collier, Jr.
Assistant Director
Cleveland Planning Commission

Rochelle Davis
President and CEO
Healthy Schools Campaign

Kathleen Dickhut
Deputy Commissioner
Department of Zoning and Land Use Planning
City of Chicago

1:40 pm Panel II discussion with roundtable members
Moderator: *James Knickman*

2:30 pm Panel III: Key requirements in working across sectors to improve health

OBJECTIVE: Identify and discuss issues related to language, leadership, timing, strategies, and tools for decision making in cross-sector efforts to improve the conditions for health.

Moderator: *Phyllis Meadows, Senior Fellow, The Kresge Foundation; and member, workshop planning committee; member, Roundtable on Population Health Improvement*

Aaron Wernham
Director
The Health Impact Project
The Pew Charitable Trusts

Loel Solomon
Vice President, Community Health
Kaiser Permanente

On the experience of California's Health in All Policies Task force:

Linda Rudolph
Co-Director of the Climate Change and Public Health Project
Center for Climate Change and Public Health
Public Health Institute

Connie Mitchell (via videoconference)
Chief, Policy Unit
Office of Health Equity
California Department of Public Health

3:40 pm Panel III discussion with roundtable members
Moderator: *Phyllis Meadows*

4:40 pm Reflections on the day, discussion, and opportunity for public comment
David Kindig, Co-Chair of the Roundtable on Population Health Improvement

5:00 pm Adjourn

Project website for the Roundtable on Population Health Improvement: www.iom.edu/pophealthrt. The website provides listserv sign-up, information on upcoming meetings, meeting materials such as presentations, webcasts, and roundtable products. Project e-mail: pophealthrt@nas.edu

C

Biosketches of Speakers and Planning Committee Members

Dawn Alley, Ph.D., is Senior Policy Advisor, Office of the Surgeon General, U.S. Department of Health and Human Services. She is also an Assistant Professor in the Department of Epidemiology and Public Health at the University of Maryland School of Medicine, where her research examines two important determinants of disability at older ages: socioeconomic status and obesity. Her work combines an understanding of biological mechanisms of frailty with a demographic approach. In recent projects, Dr. Alley has examined the association between financial strain and health in older adults, the changing association between obesity and disability over time, and the effects of muscle weakness (sarcopenia) on disability. Her work has been published in a range of journals, including *Journal of the American Medical Association*, *American Journal of Public Health*, *The Gerontologist*, *Journal of the American Geriatrics Society*, and *American Journal of Epidemiology*. Dr. Alley holds a Ph.D. in Gerontology from the University of Southern California and received post-doctoral training in population health from the University of Pennsylvania as a Robert Wood Johnson Foundation Health & Society Scholar. From 2011 to 2012, she served as a Health and Aging Policy Fellow in the U.S. Office of the Surgeon General.

Ned Codd, M.S., is the Director of Project-Oriented Planning for the Massachusetts Department of Transportation (MassDOT). Mr. Codd oversees the regional planning, corridor planning, and private development review groups in MassDOT's planning unit, with a focus on

project development and programming, multi-modal transportation planning, transportation impacts on public health and climate change, travel demand management, and smart growth development. Prior to joining MassDOT, Mr. Codd worked as a project manager for Rizzo Associates, an engineering design/consulting firm in Framingham, Massachussetts, and before that he worked as a transportation planner for the City of Boston Transportation Department. His work in these positions focused on a broad range of urban multi-modal transportation planning issues. Mr. Codd has a bachelor's degree in Civil Engineering and Architecture from Princeton University, a master's degree in Civil Engineering from the University of Texas at Austin, and master's of business administration from Northeastern University. Mr. Codd is a registered Professional Engineer in the Commonwealth of Massachusetts.

Freddy L. Collier, Jr., is the Assistant Director of the Cleveland City Planning Commission. He holds a B.A. in Urban Studies with an emphasis in urban planning and a master's degree in Public Administration. Prior to his current role, Mr. Collier served as Chief City Planner and project manager of the Connecting Cleveland 2020 Citywide Plan. Other initiatives that Mr. Collier has been engaged in include Re-imagining a More Sustainable Cleveland, the Northeast Ohio Sustainable Communities Consortium, and the Cuyahoga County Place Matters team, which seeks to improve the health of communities by working with policy makers and organizations to focus on the social determinants of health to create viable sustainable communities.

Rochelle Davis brings broad experience as a leader in children's wellness and environmental health to her role as President and CEO of the Healthy Schools Campaign (HSC), a national not-for-profit organization she founded in 2002. HSC advocates for national, state and local policies and programs that make schools healthy places to learn and work. Ms. Davis has led change on numerous public policy issues affecting children's health, from environmental toxins to nutrition and fitness. Her role at HSC includes engaging diverse coalitions of stakeholders to promote healthy eating, physical activity, and environmental health in schools. Ms. Davis has been instrumental in the development of national healthy school food advocacy initiatives such as the Cooking up Change healthy cooking contest and school environmental health resources such as HSC's Quick & Easy Guide to Green Cleaning in Schools. She also served as the Principal Investigator for HSC's National Institutes of Health funded Partnership to Reduce Disparities in Asthma and Obesity in Latino Schools. Ms. Davis is a member of the U.S. Environmental Protection Agency's Committee for the Protection of Children's Health and a

founding member of the Green Cleaning Network. She served as a judge for *Health* Magazine's Healthiest Schools Contest and American School and University's Green Clean Award. She is co-author of the cookbook *Fresh Choices*, and was the recipient of the *Chicago Tribune*'s 2007 Good Eating Award.

Kathleen Dickhut, M.S., is Deputy Commissioner of the Sustainability and Open Space Division of the City of Chicago Department of Housing and Economic Development. The division implements the CitySpace and Chicago River plans, led the development, and coordinates implementation of the Calumet plans, Logan Square Open Space Plan, Chicago Eat Local Live Healthy, A Recipe for Healthy Places and Adding Green to Urban Design. Plans nearing completion are a citywide manufacturing plan and a land-use plan for five city neighborhoods that has undergone a large population loss. To implement the plans the Division acquires and funds new parks, community gardens, and urban agriculture sites and develops policies and programs for green infrastructure, manufacturing, and local food systems. Ms. Dickhut has a master's of science in Landscape Architecture from the University of Wisconsin, Madison, and a bachelor's degree in psychology and anthropology.

CAPT Kimberly Elenberg, R.N., DNP, works with the Office of the Assistant Secretary of Defense for Health Affairs Office of the Chief Medical Officer as the Deputy Director of Population Health and Medical Management. Previously, she was Director of Training and Manager of Medical Readiness in the Office of Force Readiness and Deployment, Office of the Surgeon General. She was responsible for teaching the multiple disciplines within the U.S. Public Health Service Commissioned Corps how to strengthen and build health infrastructure following manmade or natural disasters. CAPT Elenberg also has served as Director for Biosurveillance and Emergency response at the U.S. Department of Agriculture, where she orchestrated the design and development of nationwide electronic food safety and security systems in addition to assisting with the design of the U.S. Department of Homeland Security's National Biosurveillance Information System. She also served on the Homeland Security Council National Security Subcommittee to evaluate and make recommendations to the president on matters related to medical and public health information sharing. CAPT Elenberg earned a bachelor's degree in nursing at Temple University, Philadelphia, on a 4-year ROTC scholarship and a master's degree in informatics from the University of Maryland, and graduated summa cum laude with a doctorate in nursing practice from Johns Hopkins University, Baltimore. During her career, she has responded to many disasters. For her leadership during deployments

in 2007 and 2009, CAPT Elenberg received the Surgeon General's Exemplary Service Medal. In 2008, she served aboard the USS Boxer in Central America as part of Operation Continuing Promise.

Florence Fulk, M.S., has worked with the U.S. Environmental Protection Agency's (EPA's) Office of Research and Development (ORD) since 1990 and has gained extensive experience with the application of experimental design and statistical analysis of data across numerous scientific disciplines, including ecology, biology, microbiology, virology, engineering, chemistry, and quality assurance. Due to her activities in support of the EPA's use of whole effluent toxicity testing in regulatory decisions, she received the designation of national expert in environmental statistics and their application to environmental decision making from ORD in 2002. Currently, Ms. Fulk is Chief of the Molecular Ecology Research Branch within ORD's National Exposure Research Laboratory in Cincinnati, Ohio. Her current areas of interest are development of new DNA-based methods to support exposure assessment and the bioassessment of surface waters; and improvement of the linkage of public health to ecosystem health. Ms. Fulk also serves as a task lead for EPA's Sustainability and Healthy Communities Research Program where she promotes the use of Health Impact Assessment by regional, state and community decision makers as an approach to enhance public health. She is currently a Ph.D. candidate in Epidemiology at the University of Cincinnati.

Jennifer Ho is Senior Advisor for Housing and Services at the U.S. Department of Housing and Urban Development. In this role, Ms. Ho manages the Department's work to connect housing with health and social services. From February 2010 to February 2013, Ms. Ho was a Deputy Director at the United States Interagency Council on Homelessness (USICH). She shepherded the development of the Opening Doors, the nation's first-ever comprehensive federal plan to prevent and end homelessness. She facilitated development of the USICH youth framework, and served as point person on issues related to families and chronic homelessness. She has helped communities across the country translate the opportunities inherent in the Affordable Care Act to the work of ending homelessness. From 1999 to 2010, Ms. Ho was the first Executive Director of a nonprofit organization called Hearth Connection, which managed a nationally recognized demonstration project on long-term homelessness for single adults and families in Minnesota. She was Vice President of New Product Development at United Health Group's Ovations Division and Director of Government Programs at Blue Cross and Blue Shield of Minnesota.

George J. Isham, M.D., M.S., is Senior Advisor, HealthPartners, Inc., and Senior Policy Fellow, HealthPartners Research Foundation. As Senior Advisor, Dr. Isham is responsible for working with the board of directors and the senior management team on health and quality of care improvement for patients, members, and the community. He is also Senior Fellow, HealthPartners Research Foundation and facilitates forward progress at the intersection of population health research and public policy. Dr. Isham is active nationally and currently co-chairs the National Quality Forum convened Measurement Application Partnership, chairs the National Committee for Quality Assurance's (NCQA's) clinical program committee and a is member of NCQA's committee on performance measurement. Dr. Isham is chair of the Institute of Medicine's (IOM's) Roundtable on Health Literacy and has chaired three studies in addition to serving on a number of IOM studies related to health and quality of care. In 2003, Dr. Isham was appointed as a lifetime National Associate of the National Academy of Sciences in recognition of his contributions to the work of the IOM. He is a former member of the Centers for Disease Control and Prevention (CDC) Task Force on Community Preventive Services and the Agency for Healthcare Research and Quality's U.S. Preventive Services Task Force and currently serves on the advisory committee to the director of CDC. His practice experience as a general internist was with the U.S. Navy, at the Freeport Clinic in Freeport, Illinois, and as a clinical assistant professor of medicine at the University of Wisconsin Hospitals and Clinics in Madison, Wisconsin.

David A. Kindig, M.D., Ph.D., is Professor Emeritus of Population Health Sciences, Emeritus Vice Chancellor for Health Sciences at the School of Medicine, University of Wisconsin, Madison. Dr. Kindig received a B.A. from Carleton College in 1962 and M.D. and Ph.D. degrees from the University of Chicago School of Medicine in 1968. He completed residency training in Social Pediatrics at Montefiore Hospital in 1971. Dr. Kindig served as Professor of Preventive Medicine/Population Health Sciences at the University of Wisconsin from 1980 to 2003, where he developed a unique distance education graduate degree in medical management. He was Vice Chancellor for Health Sciences at the University of Wisconsin, Madison, from 1980 to 1985, Director of Montefiore Hospital and Medical Center (1976-1980), Deputy Director of the Bureau of Health Manpower, U.S. Department of Health, Education and Welfare (1974-1976), and the First Medical Director of the National Health Services Corps (1971-1973). He was National President of the Student American Medical Association in 1967-1968. He served as Chair of the federal Council of Graduate Medical Education (1995-1997), President of the Association for Health Services Research (1997-1998), a ProPAC Commissioner from 1991-1994 and as

Senior Advisor to Donna Shalala, Secretary of Health and Human Services from 1993-1995. In 1996 he was elected to the Institute of Medicine, National Academy of Sciences. He received the Distinguished Service Award, University of Chicago School of Medicine 2003. He chaired the Institute of Medicine Committee on Health Literacy in 2002-2004, chaired Wisconsin Governor Doyle's Healthy Wisconsin Task Force in 2006, and received the 2007 Wisconsin Public Health Association's Distinguished Service to Public Health Award.

James Knickman, Ph.D., is President and Chief Executive Officer of the New York State Health Foundation (NYSHealth), a private foundation dedicated to improving the health of all New Yorkers. Under Dr. Knickman's leadership, NYSHealth has invested more than $85 million since 2006 in initiatives to improve health care and the public health system in New York State. Today, the Foundation focuses its efforts in three priority areas: reducing the number of New Yorkers without health insurance coverage; improving prevention and management of diabetes; and advance primary care to develop innovative approaches and meet growing demand. Immediately prior to joining the Foundation, Dr. Knickman was the Vice President of Research and Evaluation at the Robert Wood Johnson Foundation in Princeton, New Jersey. Between 1976 and 1992, he served on the faculty of New York University's Robert F. Wagner Graduate School of Public Service; earlier, he worked at the New York City Office of Management and Budget. Dr. Knickman serves as a board member of the Center for Effective Philanthropy in Cambridge, Massachusetts; the National Council on Aging in Washington, DC; and Philanthropy New York, in New York City. He is a past chair of the New Jersey Department of Health's Cardiac Health Advisory Council, a past board member of AcademyHealth in Washington, DC, a past board member of the New York Catholic Health Care System, and a past board member of the Robert Wood Johnson Health System in New Brunswick, New Jersey. Dr. Knickman received a bachelor of arts degree in sociology and psychology from Fordham University and his Ph.D. in public policy analysis from the University of Pennsylvania.

Phyllis W. Meadows, Ph.D., R.N., M.S.N., is Senior Fellow, Health Program, The Kresge Foundation. At The Kresge Foundation, Dr. Meadows engages in all levels of grant-making activity. Since joining Kresge in 2009, she has advised the health team on the development of its overall strategic direction and provided leadership in the design and implementation of grantmaking initiatives and projects. Dr. Meadows' 30-year career spans the nursing, public health, academic, and philanthropic sectors. She is associate dean for practice at the University of Michigan's School of Public Health and has lectured at Wayne State University's School of Nursing,

Oakland University's School of Nursing, and Marygrove College. From 2004 to 2009, Dr. Meadows served as deputy director, director, and public health officer at the Detroit Department of Health and Wellness Promotion. In the early 1990s, she traveled abroad as a Kellogg International Leadership Fellow and subsequently joined the W.K. Kellogg Foundation as a program director. She also served as director of nursing for The Medical Team-Michigan.

Connie Mitchell, M.D., M.P.H., has a career that has spanned the spectrum from the highest acuity intervention to health policy for primary prevention. After completing her residency training in Emergency Medicine in Chicago, Illinois, she was a fellow in International Health and consultant to the U.S. Agency for International Development to help establish an emergency medical system system in Costa Rica. From 1989-2005, Dr. Mitchell was a faculty member in the University of California, Davis, School of Medicine with a joint appointment in Pediatrics and Emergency Medicine and supervised training of residents and students in a Level I trauma center. During this time period her academic focus was on the precursors to intentional injury and more effective strategies for prevention and intervention. She is the Editor-in-Chief of the textbook *Intimate Partner Violence: A Health-Based Perspective* published by Oxford University Press and continues to serve on national advisory councils to prevent violence and abuse. She returned to school to add a master's degree in Public Health with an emphasis on health policy and then transitioned to the California Department of Public Health to become the Branch Chief for Policy in Maternal, Child and Adolescent Health and now the Chief of Policy in California's new Office of Health Equity. Dr. Mitchell oversees the Health in All Policies Task Force, whose primary goal is to promote health equity by addressing the social determinants of health using a multi-sectoral approach. She credits her strengths in strategic planning and relationship building for practice and policy achievements she has helped to implement for victims of family violence, maternal and infant care, and now in regard to the challenge of ending health disparities.

Beth Osborne, J.D., joined the U.S. Department of Transportation (DOT) as the Deputy Assistant Secretary for Transportation Policy in 2009. She has worked on the development of the surface transportation reauthorization, and currently is focusing on the Transportation Investment Generating Economic Recovery Discretionary Grant program, the Secretary's livability initiative as well as safety and environment issues. Before joining DOT, Ms. Osborne worked for Senator Tom Carper (D-DE) as his legislative assistant for transportation, trade and labor policy, including work on SAFETEA-LU and the Energy Independence and Security Act

of 2007. Previously, Ms. Osborne worked as the policy director for Smart Growth America and as legislative director for environmental policy at the Southern Governors' Association. She began her career in Washington, DC, in the House of Representatives working as a legislative assistant for Rep. Ron Klink (PA-04) and as legislative director for Rep. Brian Baird (WA-03). Ms. Osborne grew up in New Orleans and graduated with a B.A. and J.D. from Louisiana State University.

Linda Rudolph, M.D., M.P.H., is the co-director of the Climate Change and Public Health Project in Public Health Institute's (PHI's) Center for Climate Change and Public Health. She is also the principal investigator on a PHI project to advance the integration of Health in All Policies in local jurisdictions around California. Previously, Dr. Rudolph served as the deputy director of the California Department of Public Health's (CDPH's) Center for Chronic Disease Prevention and Public Health and the health officer and public health director for the City of Berkeley, California. While at CDPH, Dr. Rudolph chaired the Strategic Growth Council Health in All Policies Task Force and the California Climate Action Team Public Health Work Group. Dr. Rudolph has also been the chief medical officer for Medi-Cal Managed Care, medical director for the California Division of Workers' Compensation, executive medical director for the Industrial Medical Council, staff physician in the CDPH Occupational Health program, and a physician for the Oil, Chemical, and Atomic Workers' International Union. Dr. Rudolph received her doctorate in medicine and clinical training in pediatrics and emergency medicine from the University of California, San Francisco. She holds a master's in public health from the University of California, Berkeley. Dr. Rudolph is board certified in occupational medicine.

Pamela Russo, M.D., M.P.H., is a member of the Public Health team at the Robert Wood Johnson Foundation. The team is committed to improving the health of communities and strengthening the public health system's ability to prevent illness, injury, and premature death. Public health provides protection from threats such as bioterrorism and emerging infectious diseases, and also seeks to provide equitable opportunities for people to live long, healthy lives. Achieving these goals requires partnerships across different sectors of the community, and collaborative actions that address the root causes of disease and injury. The Public Health team views health as the result of interactions among social, environmental, behavioral, health care, and biological/genetic factors. Dr. Russo's programmatic areas of focus on the Public Health team include health impact assessment; quality improvement in public health; accreditation of public health agencies at the local, state, and tribal level; and leader-

ship development in public health. In addition to being a member of the Public Health team, Dr. Russo serves as the senior program officer for the Robert Wood Johnson Foundation Health & Society Scholars, a national Foundation program that enables outstanding individuals who have completed doctoral training to engage in an intensive 2-year program in population health at one of six nationally prominent universities. This innovative program seeks to produce leaders in population health who will work across disciplines and across sectors to change the questions asked, the methods employed to analyze problems, and the range of solutions offered to improve population health and reduce disparities in health. Dr. Russo came to the Foundation in November 2000 from the Cornell University Medical Center in New York City, where she was an associate professor of medicine, director of the clinical outcomes section, and program co-director for the master's program and fellowship in clinical epidemiology and health services research. Her education includes a B.S. from Harvard College, M.D. from the University of California, San Francisco, and an M.P.H. in epidemiology from the University of California, Berkeley, School of Public Health. She did a residency in primary care general internal medicine at the Hospital of the University of Pennsylvania, followed by a fellowship in clinical epidemiology and rheumatology at Cornell University Medical Center and the Hospital for Special Surgery.

Loel Solomon, Ph.D., M.P.P., joined Kaiser Permanente's Community Benefit Program in 2003 and currently serves as Vice President for Community Health. In that position, Dr. Solomon works with other health plan and medical group leaders to establish the strategic direction for Kaiser Permanente's multifaceted approach to prevention and community health and develops national partnerships to advance those ends. He was a co-founder of the Healthy Eating/Active Living Convergence Partnership, a collaborative of national funders working to advance policy and environmental approaches to community health and currently serves on the Convergence Partnership's steering committee. Dr. Solomon also convenes Kaiser Permanente's Community Benefit leaders and oversees the program's evaluation and community health needs assessment activities. Prior to coming to Kaiser Permanente, Dr. Solomon served as Deputy Director of the California Office of Statewide Health Planning and Development for Healthcare Quality and Analysis where he oversaw the state's hospital outcomes reporting program, analyses of racial and ethnic health disparities and dissemination of health care data to researchers and members of the public. He served as a senior manager at the Lewin Group in Washington, DC, and as a member of Senator Edward Kennedy's health staff. Dr. Solomon received his Ph.D. in health policy from Harvard Uni-

versity and a master of public policy degree at University of California, Berkeley.

Aaron Wernham, M.D., M.S., is the director of the Health Impact Project, a collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts, established to promote and support the use of health impact assessment (HIA) in the United States. Dr. Wernham was a member of the National Research Council's Committee on HIA, led multiple HIAs and HIA trainings, and collaborated with and advised numerous state and federal agencies on HIA. Prior to joining Pew, Dr. Wernham served as a senior policy analyst with the Alaska Native Tribal Health Consortium where he headed a joint state-tribal-federal working group that developed HIA guidance for federal and state environmental regulatory and permitting efforts. Dr. Wernham received his medical degree from the University of California, San Francisco , and his master's degree in health and medical sciences from the University of California, Berkeley. He is board certified in family medicine, and served as clinical faculty in a University of California, Davis, family practice residency program.

David R. Williams, Ph.D., M.P.H., is the Florence and Laura Norman Professor of Public Health at the Harvard School of Public Health, Professor of African and African American Studies and of Sociology at Harvard University. His first 6 years as a faculty member were at Yale University where he held appointments in both Sociology and Public Health. The next 14 years were at the University of Michigan where he was the Harold Cruse Collegiate Professor of Sociology, a Senior Research Scientist at the Institute of Social Research and a Professor of Epidemiology in the School of Public Health. Dr. Williams holds a master's degree in public health from Loma Linda University and a Ph.D. in Sociology from the University of Michigan. He is internationally recognized as a leading social scientist focused on social influences on health. His research has enhanced understanding of the complex ways in which race, stress, racial discrimination, socioeconomic status, and religious involvement can affect physical and mental health. The Everyday Discrimination scale that he developed is currently one of the most widely used measures to assess perceived discrimination in health studies. He is the author of more than 325 scholarly papers in scientific journals and edited collections and his research has appeared in leading journals in sociology, psychology, medicine, public health, and epidemiology. He has served on the editorial board of 12 scientific journals and as a reviewer for more than 60 journals. According to Information Sciences Institute (ISI) Essential Science Indicators, he was one of the Top 10 Most Cited Researchers in the Social Sciences during the decade 1995 to 2005. The *Journal of Black Issues in Higher Education*,

ranked him as the Most Cited Black Scholar in the Social Sciences in 2008. In 2001, he was elected to the Institute of Medicine (IOM) of the National Academy of Sciences. In 2004, he received one of the inaugural Decade of Behavior Research Awards, and in 2007, he was elected to membership in the American Academy of Arts and Sciences. Dr. Williams has been involved in the development of health policy at the national level in the United States. He has served on the U.S. Department of Health and Human Services' National Committee on Vital and Health Statistics and on eight committees for the IOM, including the committee that prepared the *Unequal Treatment* report. He has held elected and appointed positions in professional organizations, such as the American Sociological Association, the American Public Health Association, and Academy Health. He also served as a member of the of the MacArthur Foundation's Research Network on Socioeconomic Status and Health. Dr. Williams has also played a visible, national leadership role in raising awareness levels of the problem of health disparities and identifying interventions to address them. From 2007, he has served as the staff director of the Robert Wood Johnson Foundation's Commission to Build a Healthier America. This national, independent, and nonpartisan health commission has focused on identifying evidence-based non-medical strategies that can improve the health of all Americans and reduce racial and socioeconomic gaps in health. With funding from the National Institutes of Health and the sponsorship of the World Health Organization, Dr. Williams also directed the South African Stress and Health Study, the first nationally representative study of the prevalence and correlates of psychiatric disorders in sub-Saharan Africa. This study assessed the effects of HIV/AIDS, exposure to racial discrimination and torture during apartheid, on the health of the South African population. He was also a key member of the team that conducted the National Study of American Life, the largest study of mental health disorders in the African American population in the United States and the first health study to include a large national sample of Blacks of Caribbean ancestry.