# Financing Population Health Improvement: Workshop Summary

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Joe Alper and Alina Baciu, Rapporteurs; IOM Roundtable on Population Health Improvement; Institute of Medicine

# FINANCING POPULATION HEALTH IMPROVEMENT

## WORKSHOP SUMMARY

Joe Alper and Alina Baciu, *Rapporteurs*

Roundtable on Population Health Improvement

Board on Population Health and Public Health Practice

INSTITUTE OF MEDICINE
*OF THE NATIONAL ACADEMIES*

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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:

**Janet Corrigan,** The Dartmouth Institute for Health Policy and Clinical Practice
**Robert Hughes,** Missouri Foundation for Health
**Glen Mays,** University of Kentucky
**Paul Stange,** Independent Consultant

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 **George C. Benjamin,** American Public Health

Association. Appointed by the Institute of Medicine, he 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 rapporteurs and the institution.

# Contents

# Acronyms

| | |
|---|---|
| ACA | Affordable Care Act |
| CDFI | community development financial institution |
| CMS | Centers for Medicare & Medicaid Services |
| EHR | electronic health record |
| HEPA | high-efficiency particulate air |
| HICCup | Health Initiative Coordinating Council |
| HUD | U.S. Department of Housing and Urban Development |
| IOM | Institute of Medicine |
| IRS | Internal Revenue Service |
| OECD | Organisation of Economic Co-operation and Development |
| TOD | transit-oriented development |
| TRF | The Reinvestment Fund |

# 1

# Introduction and Overview[1]

Despite spending far more on medical care than any other nation and despite having seen a century of unparalleled improvement in population health and longevity, the United States has fallen behind many of its global counterparts and competitors in such health outcomes as overall life expectancy and rates of preventable diseases and injuries. A fundamental but often overlooked driver of the imbalance between spending and outcomes is the nation's inadequate investment in nonclinical strategies that promote health and prevent disease and injury population-wide, strategies that fall under the rubric of "population health."

A previous report from the Institute of Medicine's (IOM's) Board on Population Health and Public Health Practice, *For the Public's Health: Investing in a Healthier Future*, concluded that "funding for governmental public health is inadequate, unstable, and unsustainable" and that "the underinvestment in public health has ramifications for the nation's overall health status, for its financially strained health care delivery system, and for its economic vitality and global competitiveness" (IOM, 2012, p. 14). Given that it is unlikely that government funding for governmental public health agencies, whether at the local, state, or federal levels, will see

[1]The planning committee's role was limited to planning the workshop, and the workshop summary has been prepared by the workshop rapporteurs as a factual summary of what occurred 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, and they should not be construed as reflecting any group consensus.

significant and sustained increases, there is interest in finding creative sources of funding for initiatives to improve population health, both through the work of public health agencies (the focus of the 2012 IOM report) and through the contributions of other sectors, including non-health entities.

To explore the range of resources that might be available to provide a secure funding stream for non-clinical actions to enhance health, the Roundtable on Population Health Improvement held a public workshop on February 6, 2014, that featured a number of presentations and discussions, beginning with an overview of the range of potential resources (e.g., financial, human, and community) and followed by an in-depth exploration of several dimensions related to financial resources. Examples of the topics covered included return on investment, the value of investing in population-based interventions, and possible sources of funding to improve population health.

## THE ROUNDTABLE ON POPULATION HEALTH IMPROVEMENT

The Roundtable on Population Health Improvement provides a trusted venue for leaders from the public and private sectors to meet and discuss leverage points and opportunities for achieving a more healthy population, which arise from changes in the social and political environment. The Roundtable's vision is of a strong, healthy, and productive society that cultivates human capital and equal opportunity. Fulfilling this vision begins with the recognition that outcomes such as improved life expectancy, quality of life, and health for all are shaped by interdependent social, economic, environmental, genetic, behavioral, and health care factors and that achieving these outcomes will require robust national and community-based policies and dependable resources.

In his introductory remarks, workshop co-chair and planning committee member George Isham, senior advisor to HealthPartners and senior fellow at the HealthPartners Institute for Education and Research, said that the Roundtable intends to "catalyze urgently needed action toward a stronger, [healthier], and [more] productive society and to facilitate sustainable collaborative action by a community of science-informed leaders and public health care, business, education, early childhood development, housing, agriculture, transportation, economic development, and nonprofit and faith-based organizations." To accomplish these goals, the Roundtable has identified six areas of activity on which it is working:

- identifying and informing the deployment of key population health **metrics**;

- providing insight and information on the allocation of adequate **resources** to achieve improved population health;
- identifying, evaluating, and informing the deployment of **research** to improve health;
- sharing insights and informing the development and implementation of public- and private-sector **policies** that can improve health;
- fostering and building **relationships** that will inspire stakeholder participation in the effort to improve population health; and
- reflecting on the design and implementation of effective **communication** strategies that inform stakeholders and decision makers about the forces that shape health.

## WORKSHOP SCOPE AND OBJECTIVES

To help advance knowledge and inform thinking about resources that can be used to improve population health, this workshop was held. The workshop planning committee was given the charge in Box 1-1.[2]

The workshop, the fifth in an ongoing series organized by the Roundtable, was divided into a series of sessions that each included an overview talk and a panel discussion. The workshop began with an introduction on how the nation might pay for health improvement interventions occurring outside the clinical arena, followed by a session on health care system investments in population health. That session was followed by sessions on the relationship between community development and population health and between pay-for-success financing and community health, and then a concluding panel on the implications of new and emerging sources of population health funding. The central purpose of each session was to provide a better understanding of the various resources needed to support improvements in population health. Although these resources could be financial resources, resources related to the workforce and associated education or training, informational resources, or the broad category of assets that communities bring to the table such as social capital and cultural diversity, this workshop focused on financial resources and, in particular, on the varied private sector funding sources and mechanisms that can help alter the social and environmental determinants of health.

[2]The planning committee's role was limited to planning 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, 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 that will feature presentations and discussion of the resources needed for population health improvement, beginning with an overview of a range of resources (e.g., financial, human, community) and followed by in-depth exploration of several dimensions related to financial resources. Examples include return on investment, the value of investing in population-based interventions, and possible sources of funding to improve population health. The committee will define the specific topics to be addressed, develop an agenda, identify and invite speakers and other participants, and moderate the discussions. An individually authored summary of the presentations and discussions at the workshop will be prepared by a designated rapporteur in accordance with institutional guidelines.

## ORGANIZATION OF THE SUMMARY

This publication summarizes the discussions that occurred throughout the workshop, highlighting the key lessons presented, practical strategies, and the needs and opportunities for improving future capacity to fund and implement effective interventions and to measure the outcomes of the interventions that have been implemented. Chapter 2 provides an overview of the financial resources that are available for population health improvement, and Chapter 3 considers how the health care delivery system itself can invest in effective population health interventions, including through partnership with other sectors, such as housing. Chapter 4 highlights examples where community development and health improvement interests align to the benefit of both practice communities, while Chapter 5 discusses three new pay-for-success financing schemes that are being used to fund population health interventions at scale. Chapter 6 summarizes the participants' reflections on what they learned from the day's proceedings.

# 2

# Paying for Population Health Improvement: An Overview

In 1997 David Kindig, co-chair of the Roundtable on Population Health Improvement and professor emeritus of population health sciences at the University of Wisconsin School of Medicine and Public Health, wrote that "population health improvement will not be achieved until appropriate financial incentives are designed for this outcome" (Kindig, 1997, p. 174). In his overview of the workshop he said that the statement is still true, but with an additional caveat: in order to improve overall health and to reduce or eliminate health disparities, significant new and reallocated resources of many kinds will be required. Yes, he said, philanthropy and public pilot funds are critical for testing new sources and ideas, but it is essential that partners in all health-promoting government agencies develop and align dependable, long-term revenue streams to fund effective population health efforts. "We cannot do this any other way," Kindig added.

The first step toward creating dependable and long-term revenue streams for population health will be to reallocate savings from ineffective health care expenditures, Kindig said, "but we will need to go beyond that to expand to 'health in all policy' investments as well, especially finding the sweet spots where the core missions of other sectors align with health improvement objectives." Doing so, he added, will require new evidence regarding the relative cost effectiveness of different investments, but waiting decades to gather that evidence and act is not acceptable. Where the Roundtable can add value to this effort, he said, is to "lead the call for the development of optimal cross-sectoral financial investment or policy

strength benchmarks that are tailored to individual community outcomes and [health] determinants profiles."

One key issue that population health approaches need to address is determining how much money is needed and where to invest funds for the biggest impact in terms of improving the health of the nation and reducing the enormous health disparities that exist in this country. This is not a new issue, Kindig said, but it is one that has yet to be adequately addressed, in part because the true size of the nation's health expenditures is masked by the way those costs are calculated. According to national health expenditure accounts, the United States spends about $2.7 trillion on health care and governmental public health (RWJF, 2014), but the true cost of promoting health is greater if the costs of nonmedical determinants are included, Kindig said. Without knowing this total cost, he added, it is difficult to set a figure for what the total health budget should be. The budget should apportion less funding to health care spending, he said, and instead include adequate resources for public health agencies as well as for other sector investments that promote health, such as education, housing, and economic development.

The 2012 IOM report *For the Public's Health: Investing in a Healthier Future* recommended that annual governmental public health spending should increase from $11.6 billion to $24 billion, which would at least partially address the $20 billion annual shortfall in governmental public health spending that Trust for America's Health highlighted in a 2008 report (Trust for America's Health, 2008). Kindig noted, echoing the previous IOM committee, that the ratio of nonmedical social service spending to medical care spending in Organisation for Economic Co-operation and Development (OECD) countries is 2.0, compared to 0.83 in the United States (Bradley et al., 2010). With regard to the fact that the United States spends more per capita on medical care than other developed nations while having poorer health outcomes, Kindig suggested that the relatively lesser spending on social services in the United States might point to some of the reasons for the relatively poor performance of the United States on health measures. He added that if he were in charge of setting spending on the public's health, he would take the 20 percent of health care expenditures thought to be ineffective, which is roughly $500 billion, and reallocate $100 billion to provide health insurance for the uninsured, $100 billion to prevention, and $300 billion to social factors, such as education and jobs, that are known to promote health.

Reallocating funds and setting overall budget priorities is just a start, though, because different parts of the country need different types of investment. To offer an example of such differences, Kindig looked at two states that rank highly in terms of health outcomes: North Dakota, at number 9, and Utah, at number 6 (United Health Foundation, 2013).

In North Dakota, the two biggest determinants of health are smoking and binge drinking, while in Utah, a lack of health insurance, failure to graduate from high school, and air quality are the three most important determinants of health. Realizing that such differences also exist at the community level complicates the matter of creating investment profiles that would achieve the biggest return on investment, Kindig said.

What would help set investment profiles, he said, is an analysis of how different patterns of financial investment and health-promoting policy strength over time correlate with the county-by-county disparities in health outcomes seen in the United States (see Figure 2-1). Somewhat surprisingly, the data do not exist to conduct such an analysis. A researcher in Wisconsin, for example, tried to conduct such an analysis by looking at per capita investments in Medicaid, Head Start, and other programs. He found that there was too much variation and too many imperfections in the relevant accounting systems. "That is a huge challenge for us to be able to move forward and dissect out what might really work," Kindig said. He suggested that the Roundtable could help in developing the means to standardize how investments in programs can be measured or estimated in order to help jurisdictions plan their health budgets and other budgets relavant to health (e.g., early childhood education).

In terms of where new investments will come from, Kindig cited four possible sources of dependable financial support. One source would be from savings in health care and the hospital community benefit requirement expanded by the Affordable Care Act.[1] Kindig explained that, contrary to the common perception that community benefit funds go primarily toward charity care, data from the Internal Revenue Service show that 25 percent of these funds go toward uncompensated services provided to patients who are unable to pay, 5 percent is spent on community health improvement, and almost 60 percent, or nearly $40 billion, goes toward Medicaid discounts or other money-losing services.[2] Kindig offered his opinion that some, though not all, of the approximately $40 billion, could be marginally redirected in more health-promoting ways.

A second source of support, he said, would be to get more health from what is already being spent in other sectors, including the community development opportunities that other speakers at the workshop would address in a subsequent session. Although governments and foundations will continue to be the third dependable sources of some funding, businesses that understand the business case for public health investments

[1]For more information on the community benefit requirement see http://kresge.org/news/kresge-supported-project-provides-easily-accessible-information-about-%E2%80%98community-benefit%E2%80%99-requi (accessed July 11, 2014).

[2]The exact figure is $37 million.

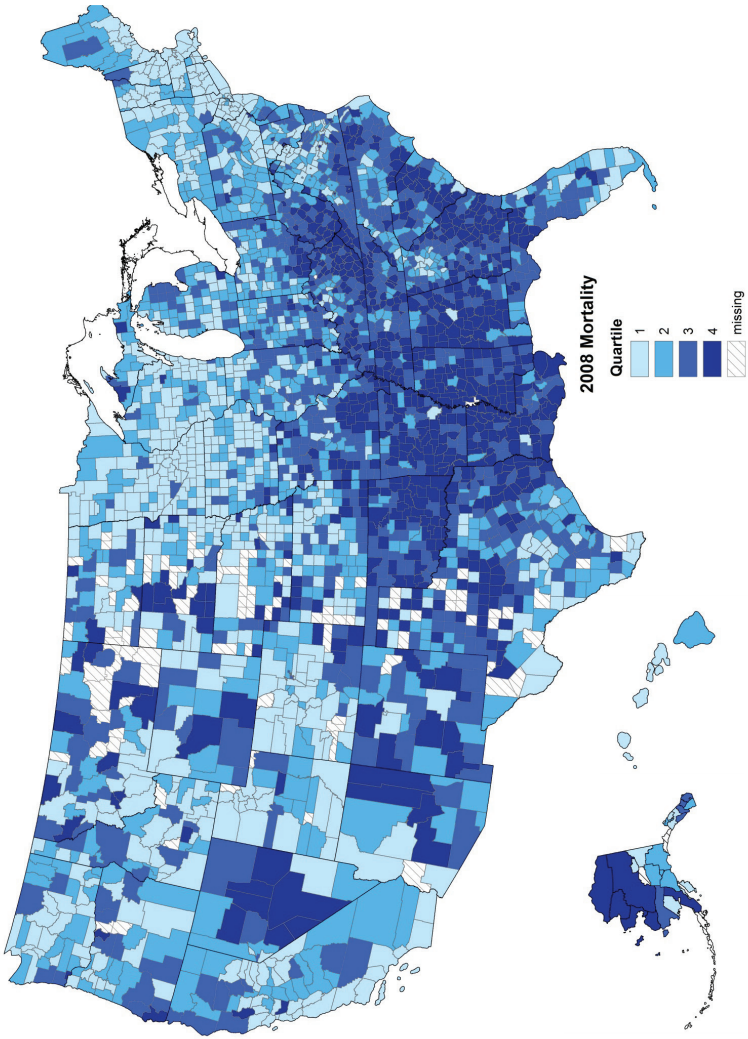


**FIGURE 2-1** Age-adjusted mortality by U.S. county.
NOTE: Counties are ranked by the per capita death rate, which is adjusted for the age distribution in each county.
SOURCE: Kindig presentation, 2014.

will also need to be considered as the fourth funding sources. The "sweet spots" for business go beyond health care costs and workforce productivity, Kindig said, and include the ability to attract and retain talent and to build a brand reputation.

The most important factor going forward, he said, will be to make sure that revenue streams are dependable. "We're talking about one-sixth of the nation's economy," he said, "and a voluntary effort is not going to get this done. We need to move beyond grants and short-term appropriations and move to dependable formula sources such as those dedicated to crop subsidies, mortgage interest deductions, or Medicare medical education payments that are not annual grant renewal items." Kindig also remarked that the medical and public health practice community needs to use its political clout to support investments in other sectors, such as early childhood development, that also benefit public health. "Those are win–win opportunities," he said, echoing the 2012 IOM report *For the Public's Health: Investing in a Healthier Future*. He added that it will be important for governmental public health agencies to examine their own abilities and performance and make sure that they are using existing funds with utmost effectiveness.

The last point that Kindig made was that population health advocates need to move beyond benchmarks based on the determinants of health to benchmarks for effective national and community investments pertinent to health; at present the former benchmarks are better developed, while the latter are not. The field would benefit, he said, from efforts to develop "optimal cross-sectoral financial investment or policy strength benchmarks which are tailored to individual community outcomes and their determinants profiles." What the nation needs, he added, is a "pay-for-population health performance system, a system that has a coordinated effort across determinants [of health] between the public and private sectors, as well as the financial resources and incentives to make it work." He closed his comments by offering what he believes to be the key population health question that needs to be answered: "In a resource limited world, what is the optimal national and local per capita investment and policy strength across sectors for improving overall health and reducing disparities?" Answering that question is difficult, but essential.

## DISCUSSION

Robert Kaplan, from the National Institutes of Health, started the discussion by asking Kindig if the Roundtable was looking at metrics to judge the effectiveness of public health spending. Kindig replied that metrics are one of the drivers of the Roundtable and that the Roundtable has found that although there is a great deal of activity in this area, there

may still be opportunities to develop health disparity metrics and metrics for investment targets. Kaplan agreed that there are metrics available, but he said little has been done to implement them.

James Knickman, of the New York State Health Foundation, commented that one problem with many of the available metrics is that they are intended to show progress in the long run, but funding agencies want evidence that actions are working in the short term. As an example, he cited the Medicaid waiver process that enables states to experiment with different ways of reducing Medicaid spending and then receive a portion of the savings to reinvest in other actions that could save additional funds. Although this waiver process is a great idea in theory, those who engage in the process must demonstrate budget neutrality, and one of the metrics that the Centers for Medicare & Medicaid Services (CMS) uses to measure neutrality is the near-term reduction in hospital readmissions. This focus on short-term savings may prevent the implementation of other potentially money-saving ideas because their savings need to be measured over the long term, which does not fit within the CMS timeframe. Having a conversation about the criteria for Medicaid waivers and how to invest funds to support innovation could be valuable, Knickman suggested.

Jeffrey Levi of Trust for America's Health said that the governmental public health community has a real problem communicating the diversity of interventions that are being used successfully. As an example, he cited the challenge that arises in defending community transformation grant programs because there is no one intervention that all communities are using. He responded to Knickman's comments by saying that even within the narrow constraints of the CMS savings program, population health initiatives have begun and that being able to reinvest Medicaid savings in social determinants of health, such as housing support, is a promising opportunity.[3] He also said there is a need for a thorough and consistent accounting of governmental public health spending, a suggestion that was echoed by Michelle Larkin of the Robert Wood Johnson Foundation. Larkin mentioned that a group of public health experts is currently developing a standardized system to track resources, expenditures, and inputs.

Sanne Magnan of the Institute for Clinical Systems Improvement asked Kindig for his recommendations for improving financial incentives for population health at CMS. Kindig reiterated the idea of reinvesting savings into the social determinants of health and noted the bigger chal-

[3]Examples of innovative initiatives include the Michigan Public Health Institute's Pathways to Better Health (http://innovation.cms.gov/initiatives/Health-Care-Innovation-Awards/Michigan.html [accessed July 11, 2014]) and the Trustees of Dartmouth College's program named Engaging Patients Through Shared Decision Making: Using Patient and Family Activators to Meet the Triple Aim (http://innovation.cms.gov/initiatives/participant/Health-Care-Innovation-Awards/Trustees-Of-Dartmouth-College.html [accessed July 11, 2014]).

lenge of determining how to reduce health expenditures in general and where to reallocate the savings. George Isham of HealthPartners asked similar questions about how and where to reinvest from health care into social services. Kindig acknowledged that he does not have an answer for the amount of money needed, but he pointed to promising examples of investing in early childhood programs and involvement of the business community. He also noted the challenges that restrictive financial policies pose for moving money from one budget to another.

# 3

# Health Care System Investments in Population Health Improvement

The first panel of the day focused on two principal mechanisms that could provide financial support to health systems for improving population health. One mechanism is derived from the Internal Revenue Service (IRS) community benefit requirement, which calls on not-for-profit hospitals to provide a benefit to their communities commensurate with their tax exemption. A second mechanism involves redesigning the payment system and using health system financing to increase the service breadth of health systems as well as their connections with other actors.

Hospitals and health systems can be an important source of funding for population health programs, largely as a result of the community benefit provisions in the federal tax code, which were redefined by the Affordable Care Act (ACA). Four speakers discribed several issues regarding the funding that the health care system can provide for population health. Kevin Barnett, senior investigator at the Public Health Institute, provided an overview of the subject and spoke about opportunities to spread and scale the types of investments being undertaken by different health systems in order to direct them in a more strategic direction that will likely be more effective. He also discussed some of the policy tools that are available to promote such investments. Reverend Gary Gunderson, vice president of Faith and Health Ministries at Wake Forest Baptist Medical Center, and Teresa Cutts, associate professor in the Department of Social Sciences and Health Policy at Wake Forest School of Medicine, then gave a joint presentation on the lessons learned from both Stakeholder Health, a coalition of mission-driven health systems, and a community-driven program in Memphis, while Valerie Agostino, senior

vice president of health and housing operations with Mercy Housing, discussed the role that public housing can play as a partner in improving population health. A discussion, moderated by workshop planning committee member Debbie Chang, vice president of policy and prevention at Nemours, followed the presentations.

## OPPORTUNITIES, CHALLENGES, AND PRIORITIES

Over the course of his two-decade career studying the charitable obligations of tax-exempt hospitals, Kevin Barnett has seen a steady movement from what he characterized as random acts of kindness to a more strategic approach to investing in population health. Although many hospitals have what he views as outstanding practices regarding their investments in population health, many, if not most, hospitals are still early on the learning and action curve, he said. "Our challenge is: How do we bring those hospitals along in the context of the reforms and the kinds of transformation that we want to see?"

Help addressing this challenge comes from data that are now available from the IRS, thanks to the Form 990 Schedule H reporting requirements on community benefits. Barnett said that while these data are important for federal policy considerations, there is emerging evidence that it is local and regional stakeholders who will find the data particularly valuable because they allow them to determine what hospitals are doing in terms of providing community benefits and advancing the public's health. The data may also help researchers better understand the relationship between reimbursement shortfalls and community benefit efforts.

Barnett's work has focused on the relationship between the location of hospitals and the community benefits that they provide. He noted that research going back to the 1980s has clearly shown that a hospital's location is a major determinant of the funds that are available for community benefit purposes. Hospitals in more affluent areas tend to be better off than those in less affluent areas in terms of patient volumes and also in terms of the percentage of services that they provide that are less than optimally reimbursed. This means that the hospitals in the poorest neighborhoods have less money to invest in the community after covering uncompensated care. This creates an inequitable distribution of community benefit resources that can be used to improve community health. "That is a significant issue as it relates to the social determinants of health," Barnett said.

One important issue that hospitals need to address is how they define "community." The IRS encourages hospitals to use their geographic service area as the starting point for creating that definition. "We know

through a variety of sources, though, that there may be inconsistencies in the way that a hospital defines 'community' for community benefit purposes," Barnett said, adding that this is particularly true when there are geographic concentrations of health disparities that are not in a hospital's immediate backyard. In his experience engaging with representatives of hospitals, they believe that concentrations of disparities that are not in their immediate vicinity are outside their sphere of responsibility.

One of the tools that Barnett and his colleagues have developed to help local health departments and critical access hospitals—particularly those in rural areas where resources are limited—is what he calls the "vulnerable populations footprint map."[1] These maps can show which hospitals are located more closely to more affluent areas and more distant from where the concentrations of poverty are high. In one study completed for the Centers for Disease Control and Prevention, Barnett and his colleagues examined the community needs assessments for hospitals located in 15 randomly selected sites that had sub-county areas where at least 40 percent of the population was under the federal poverty level and 40 percent of the population had not completed high school. Their analysis of how these hospitals defined the community and its needs showed that less than one-quarter of the 44 hospitals studied identified the areas of concentrated poverty and health disparities in geographic terms, while one-third identified health disparities using racial or ethnic terms instead of location. "We cannot say at this juncture whether or not that was inadvertent or there was intent behind it," Barnett said, "but it highlights the need to begin to focus these efforts and to be more thoughtful about how the subsequent implementation strategies are designed to address these issues."

Another aspect of the IRS reporting rules for Form 990 Schedule H is that they require hospitals to consider input from community stakeholders when developing the community health needs assessment. The reporting rules do not, however, specify how community stakeholders should be engaged in setting priorities and how hospitals should determine where those priorities fit into planning or implementation processes. In fact, Barnett said that he and his colleagues have found that the priority-setting processes are generally poorly designed and implemented. What often happens, he explained, is that priorities are framed so broadly that it allows for the perpetuation of existing programs and leads to a lack of focus on the geographic concentration of health disparities.

There are a number of public policy tools that could be used to address some of these shortcomings. One example that Barnett suggested would be payment-in-lieu-of-taxes programs as exemplified by

[1]See http://assessment.communitycommons.org/Footprint (accessed July 24, 2014).

the Pennsylvania Community Benefit Law, which allows hospitals to get a tax credit equal to three times their cash contribution to a general fund as an alternative to investing in community benefit. Barnett said this type of program may be problematic because the money rarely gets allocated in a targeted manner toward health and prevention. An example of a different approach is Massachusetts's Determination of Needs program, which requires hospitals, when they construct new buildings, to invest a portion of money in prevention-related activities. Similarly, a growing number of areas are requiring that hospitals sign Community Benefit Agreements that include an obligation to address disparities in geographic regions that extend beyond a hospital's immediate neighborhood. The recently created Los Angeles Wellness Trust, for example, requires hospitals to contribute 1 percent of their general operating revenues into a prevention trust fund.

Barnett said that a problem with all of these programs is that they are essentially check-writing exercises that leave the hospitals on the sidelines. "Our challenge and our opportunity going forward is to make sure that hospitals are part of the process and part of the transformation," he said. Hospitals need to be at the table, working as partners with the community to build the necessary population health capacity that can move the agenda forward. Bringing hospitals to the table as partners will require that hospitals and health systems move from a compliance orientation to one that focuses on transformation. Barnett described guidelines developed by Sara Rosenbaum and her colleagues at George Washington University that describe how different actors define *community,* thus helping to characterize the differences between these two orientations. For example, IRS regulations define *community* as a hospital's service area, and hospitals are required to identify underserved populations and develop programs to address disparities at the service area level. A broader, transformation-focused orientation would identify geographic concentrations of health inequities that fall within a larger region so that hospitals focus their resources where those needs are greatest. Barnett said that the dialogue with hospitals has to be about more than how they comply with what they are required to do at the federal level. It should also be about how they can work together to ensure the economic survival of the hospital particularly as health budgets undergo change in the future.

In a brief comment on the issue of data pooling and data sharing, Barnett said that a recent study in California assessing the roles and contributions of community health workers and promotores (lay health advisors drawn from the Latino community) found that almost none of the community health centers could readily identify how these workers contribute

to advancing the Triple Aim.[2] "The core reason was that [the centers] lack analytical capacity and did not have access to hospital utilization data," Barnett said. As a result, the community health centers could not begin to understand the total cost of care and what their return on investment was. "This is a very specific area where we need to be thinking about alignment," Barnett said, and he noted that the same issue is a concern in the broader area of health care workforce development. "We have each of our hospitals in any particular region looking at what their immediate needs are in terms of their frontline workforce," he said, "but there is almost no funding available for regional approaches and for an infrastructure that will support an approach that optimally leverages the resources of the hospitals and the clinics and the other providers in those particular areas."

The fact that most hospitals still look at community benefit as a compliance issue gets in the way of how they think about focusing their resources, Barnett said. Another obstacle is that often local leaders of health systems do not have a good idea of what population health is. One approach to overcoming this barrier to progress is to get the leaders of local hospitals to talk to one another about how to collaborate and co-invest in a specific neighborhood or set of neighborhoods. In the past, such conversations were unlikely because cooperation was bad business, given the large number of uninsured in these underserved neighborhoods—a situation that may change as more people enroll in insurance programs or are covered by Medicaid under the ACA. Unfortunately, Barnett said, the results from his community benefit study showed that most hospitals focus their efforts on clinical care, rather than social, economic, or physical environment factors.

Barnett listed three priorities for moving forward. First, he said, it will be important for the population health practice and research community to broadly disseminate the growing volume of exemplary practices and the tools to support local accountability and engagement across sectors and institutions. Barnett credited the Trust for America's Health with taking the lead in this area. Second, it will be critical to frame the problem in a way that appeals to hospitals. "If we want to work together with hospitals, we cannot start the conversation with 'How do we get into your pockets?'" Barnett said. "It has to be about how can we work together to solve this issue, to find a way to help hospitals leverage the limited resources that they have and to build an ethic of shared ownership in the community." Finally, he said, the field needs to focus on place. "There is no excuse any longer for the kind of fundamental disinvestment we have had in our low-income, predominately minority communities," he stated.

[2]The Institute for Healthcare Improvement introduced the concept of the Triple Aim in 2006, and it has since been adopted by many health care organizations and also adapted for use in the activities of the Centers for Medicare & Medicaid Services as the Three-Part Aim.

In concluding his presentation, Barnett cited two examples of health systems—Dignity Health and Catholic Health East Trinity Health—that have created what are in essence community health divisions that make very low interest rate loans of $1 million to $2 million that can be used to address the front-end risk that often prevents banks from investing in particular communities. "We are looking at ways to get other health systems to emulate these kinds of investment strategies," Barnett said. The key issue here will be to make sure that such strategies become integrated into a balanced portfolio of investments made by the broad spectrum of stakeholders.[3]

## HEALTH CARE SYSTEMS AS PARTNERS IN THE TRANSFORMATION OF COMMUNITY HEALTH

Moderator Debbie Chang asked the audience to consider three questions while listening to the next two panelists: How can effective investments be spread and scaled? What tools are already available to do this work? Who else needs to be at the table? Chang described how Nemours, as a children's health system and operating foundation, expanded its view of "its" population to the entire state of Delaware and how that shift has transformed every dimension of its work. Others around the nation are engaging in similar work, including the three panelists.

Stakeholder Health is a group of 43 mission-driven health care systems, including 36 nonprofit health systems that understand their mission to include population health improvement. For the past 2 years, Gary Gunderson said, senior staff members from a number of those systems, known collectively as the Health Systems Learning Group, have focused on the question of whether it is possible to succeed at that mission in the context of a policy framework that is still under construction, if not actively contested or sabotaged. "Our interest is not focused on whether we can meet the legal requirements of community benefit, as all of our participating systems are in compliance," Gunderson said, "but we are not satisfied at all with what those funds, which are spent almost entirely on emergency room care, are achieving." Gunderson said that, much as in the high-profile case of Jeffrey Brenner's "hotspotting" effort in Camden, New Jersey, which provides intensive social supports to help keep vulnerable patients from being readmitted to the hospital, Stakeholder Health focuses on keeping highly vulnerable patients out of the hospital by taking

[3]For additional information on the Dignity Health grants, see http://www.dignityhealth.org/Who_We_Are/Community_Health/STGSS044512 (accessed July 11, 2014). For more on the Catholic Health East Trinity Health Investment Program, see http://www.trinity-health.org/documents/2010AnnualReport.pdf (accessed July 11, 2014), p. 24.

steps to address nonclinical needs that are linked with health outcomes. The Health Systems Learning Group, in close collaboration with the White House and the U.S. Department of Health and Human Services, has produced a monograph that includes a number of examples of successful models and case studies (Health Systems Learning Group, 2013).

One discovery to come from the learning group's discussions is that health care systems have unique and timely data on the most vulnerable patients. Two members of Stakeholder Health, Dignity Health, and Loma Linda University Health, have shown other members the value of using social determinants data located on maps as a tool to guide their investment decisions, so they more carefully direct their health care assets in a manner that considers broader needs as articulated by their community partners, as they work together to transform health in their communities.

Focusing on the funding implications of the learning group's findings, Gunderson said that the case for proactive engagement with the neighborhoods that are most vulnerable to health challenges is simple. "The largest single line item in almost any not-for-profit health system is charity care," he said, with the second-largest item being bad debt resulting from high, uncollectable co-pays common in the new bronze insurance plan. Those two items are unmanageable once someone "crosses the sidewalk and becomes a patient," Gunderson said. "The only place for us to engage these financial challenges is on the other side of the sidewalk." The deliberations of the learning group suggest that it is possible to better engage people before they enter the health care system but that doing so will demand an entirely new set of competencies and practices that are unusual for health care systems.

The key insight to come from the learning group and from the experience of Stakeholder Health's members, Gunderson said, is that it is possible for private health care systems to be significant partners in transforming the health of their communities by embracing an ensemble of practices. Although this ensemble is quite straightforward and logical, it represents a major change from the way things are done now. First, he explained, it requires being focused on place and considering the most socially complex people who at different times in their lives may be patients in their socially complex neighborhoods.[4] Second, the ensemble of practices works best in large-scale partnerships that are focused on place-based tactics and that prioritize the most vulnerable neighborhoods.

[4]Social complexity is a way of articulating the complicated range of factors such as social and physical environment that produce health and reduce the risk of premature death. For more information on socially complex persons in socially complex neighborhoods see http://stakeholderhealth.org/wp-content/uploads/2013/09/HSLG-V11.pdf (accessed July 11, 2014), Chapter 5.

The third—and perhaps biggest—challenge will be to spend funds proactively rather than reactively. "Proactive mercy would be more decent and in fact far cheaper than reactive charity," Gunderson said, "but the reality is that the vast majority of community-benefit funds are currently frozen quite solidly in reactive paradigms."

For the purposes of reporting to the IRS, charity care and bad debt are separate line items that show up in different places in the financial accounts, but the reality is that they are indistinguishable in practice, Gunderson said. He also commented, as someone whose hospital is directly involved in charity care, on the perversity of a situation in which the biggest component of charity care involves emergency room costs associated with the poor and uninsured, but most hospitals—including his—focus a good amount of their marketing efforts on attracting patients to their emergency rooms, which are profitable for services provided to the insured and which represent a key transition to the hospitals becoming even more profitable through providing in-patient services. Stakeholder Health suggests, though, that health care systems can be important partners in community health despite this perversity. The key factor is that emergency room-based charity care is extraordinarily costly compared to proactive, place-based tactics. "Anything on the streets costs pennies compared to the dollars spent inside the walls," Gunderson said, "but communities are very large places and consume a great many pennies if they are not highly focused in their efforts."

One way to focus these efforts is to note that the recipients of charity care predictably and consistently can be found in certain locations and the data possessed by hospitals may be used to clearly identify the neighborhoods and even the streets where these recipients of charity care live. Hospital data can be mapped in real time to guide proactive strategies with great precision in terms of the range of services needed by people to address the social, biological, psychological, and spiritual components of their health, in part by building networks of partnerships and community webs of trust, Gunderson said. More importantly, he said, these data can be used to reveal to nonhospital partners the dynamics driving the behavior of patients, and these partners can then contribute additional intelligence that can, in turn, create powerful feedback loops that build trust and align networks.

As an example of such a process, Gunderson discussed some of the lessons learned from a population health–based, place-based strategy called Wellness Without Walls being carried out in Memphis. There, some 500 congregation-based partnerships are having a positive effect on the health of their communities—not by just simply informing congregations of the availability of clinical services or even public health services, but by combining the knowledge of the congregations about the journey of life

of their own members and neighbors with the knowledge of the medical professionals about the disease and injury conditions experienced along that journey. "At a very basic level, the congregational networks seem to be making it more likely that patients from their networks show up at the right door at the right time ready to be treated," Gunderson said.

Perhaps the most counterintuitive lesson from the Memphis experience, he said, is that when the most vulnerable are invited—and Gunderson emphasized the word "invited"—through networks of trusted relationships, they are more likely to accept that invitation into the health care system earlier, which results in a lower disease burden and lower cost of care. Gunderson noted that though the number of patient encounters may increase, the average cost of those individual encounters decreases by an even greater degree. "That is where the cost is saved, not by restricting access, but actually by inviting access at earlier stages when it is likely to be useful," he explained.

In discussing some of the details of the Memphis program, Teresa Cutts said that in 2010, the baseline year for the program, most of the charity care in Memphis was concentrated in a few zip codes and, in particular, in a specific neighborhood. It also turned out that the majority of the partnering congregations were in the areas where most of the charity care was concentrated. In 2011, charity costs had jumped, but when the program launched in 2012, the cost of charity care dropped by 7 percent from baseline and almost 9 percent in the targeted hotspot neighborhood.

A key to the success of this program was having "health navigators" on the ground in specific neighborhoods rather than being based out of the hospitals. The navigators were responsible for getting people into the health care system and making sure that they received the proper care from the proper providers. "We found that this has been very useful," Cutts said, "because with many of our folks there were trust issues that kept them from using existing safety net clinics and other resources."

Gunderson said that the Memphis program illustrates a key finding from Stakeholder Health—that an ensemble of practices sustained by enduring partnerships built on trust and focused on mercy and justice can improve access and thereby lower the overall cost of care in vulnerable neighborhoods. Most important, he said, this is not something that can be done *to* the community, but it can be done *with* the community, and it demands that health care systems and their public health agency partners change decades-old practices and learn to practice the art of humility that is required for the best working partnerships.[5]

[5]Details about the Congregational Health Network's Memphis program can be found at http://www.innovations.ahrq.gov/content.aspx?id=3354 (accessed July 11, 2014).

One of the lessons that Gunderson and his colleagues learned when they implemented this model in their North Carolina communities is that many of their own hospital employees lived in the most vulnerable communities. "We came to understand that we must cross-train some of our own employees as community health workers," he said, and, in fact, those workers have named themselves "supporters of health." Gunderson said that he expects that in the most critical census tracts there will be an increase in low-acuity care and a decrease in high-acuity care, which will reduce overall costs.

## THE ROLE OF AFFORDABLE HOUSING IN POPULATION HEALTH

Over the past 2.5 years, Valerie Agostino said, Mercy Housing has been thinking about affordable housing as health care and about organizations that provide affordable housing as viable health care partners. This journey into the world of health care has been frustrating because the health care world is complex and undergoing major changes. "I think the health care world is not quite ready to embrace affordable housing as a true partner yet," Agostino said, "but I think we are on the brink of something happening in this area." In her opinion, there is an opportunity for affordable housing providers to engage in well-defined program models that are tied to community wellness in their properties and that have them partner with health care providers to ensure that their tenants have good access to care and good adherence to care plans.

Currently, Mercy Housing is working on developing service models that would provide reimbursement for some of those services, but over the long-term Agostino would like to be able to partner with health care organizations to provide more units of affordable housing as a component of population health. Health care organizations, however, have not found the connection between affordable housing and population to be compelling enough to be interested in forming partnerships, she said. As a result, she and her colleagues are working to reframe their arguments around the fact that the value of some of the services provided in an affordable housing setting is high.

Agostino also discussed the Mission Creek project, an affordable housing community in the Mission Bay neighborhood of San Francisco. Located in an area that was previously a rail yard and is now a vibrant community, the 140-unit Mission Creek building is adjacent to public transportation, a multi-use recreational path, and a supermarket, and it houses a library and numerous indoor and outdoor activity spaces with natural light. Mission Creek has an adult day health care center on the premises, and it has a strong partnership with the San Francisco Depart-

ment of Public Health. What makes this facility particularly noteworthy is that there is access to a physician and a licensed case manager present at all times and that the residents have created a caring and engaged community. The residents are all low-income, frail seniors who were referred by the Department of Public Health and who came from other facilities or were previously homeless. Agostino said that her physician partner in the department of public health claims that there is a $30,000 savings for each participant living in the building, which is due to a reduction in hospitalizations and skilled nursing stays, but Agostino does not believe that the data are robust enough at this point to make that claim.

She acknowledged that this approach is constrained by the fact that funds to build public housing are in short supply and that Medicaid does not currently pay to support housing as an alternative to providing skilled nursing. However, Agostino said she is hopeful that the shifts occurring today in health care will provide further opportunities for funding affordable housing.

## DISCUSSION

Debbie Chang asked how to better engage payers as partners in linking clinical care to population health, given that reducing hospital admissions can be a disincentive to engage in population health, because the payment system does not reward health systems for such reductions. There were several suggestions in response. Gunderson pointed out that charity care creates a context for innovation, because when a hospital is spending its own dollars, it is highly motivated to make its investments more effective. Cutts added that, in Memphis, Cigna became interested in being a partner in community engagement when it realized that the specific zip code being targeted had the highest inappropriate use of emergency room services in the nation and that Cigna therefore "had a dog in the fight." Agostino offered that traditional health care payers may be more open to the concept if a pilot project—funded by the public health department, for example—results in promising data. Barnett said that while payers have to become partners in these efforts, today many of them will not even consider getting involved. "We have to find a way in the broader community to bring the payers to the table and find some way to light a little fire to get them engaged in this dialogue," he said. He added, though, that in the California community health work study that he discussed, only two entities were able to demonstrate a significant return on investment, and both were health insurance plans who had the necessary claims data.

Chang then asked each panelist to name one breakthrough action that would increase the spread and scale of population health initiatives.

Gunderson replied that he would treat health care marketing like tobacco marketing. "There are social phenomena that we are allowing to be driven by marketing dollars," he said, "and it is not just pharmaceutical companies that are doing it." Cutts said that she would like to find ways to better share risks and potential savings among all of the stakeholders, particularly those working at the frontline of community engagement such as the pastors of the Memphis congregations. Agostino and Barnett seconded that idea, and Agostino added that she would like to see silos broken down so that all of the different players in a given community would operate with the interest of the community in mind rather than their own self-interests. Barnett said that he would like to see ways of getting more data to the local level as a way of creating a broader coalition of partners.

Paula Lantz of George Washington University shared a concern that health care systems and payers use the term "population health" to refer to medical care, instead of viewing it from the perspective of the social determinants of health (i.e., considering underlying, high-level factors such as income and education). Gunderson echoed that concern and said that changing the mindset will be a great challenge. Mary Pittman of the Public Health Institute asked what characteristics are most likely to make a health systems leader amenable to the population health mindset. Gunderson responded that humility is a key characteristic because the leader has to acknowledge the complexities and be willing to learn through experience, and he added that this quality cannot be taught. Furthermore, the leader must already believe that money is not being spent to its greatest potential. Cutts added a leader must be willing to take risks, and Barnett said that people with these qualities and mindsets do exist in hospital systems, but they are not necessarily the top decision makers. Andrew Webber of Maine Health Management Coalition told the workshop that incremental changes are occurring in Maine, where chief executive officers of health care systems are investing in primary and integrated care and have an understanding of the business incentives of population health management.

# 4

# Community Development and Population Health

As the discussion about how to modify the social determinants of population health at the community level continues, it is clear that the field needs to have clear definitions of what needs to change, clear understandings of the expectations for change, and a clear idea of where the investments will come from to make those changes. In this session, three speakers provided their perspectives on these issues as they relate to the role that community development can play in population health.[1] The first presenter was Raphael Bostic, the Judith and John Bedrosian Chair in Governance and the Public Enterprise at the Sol Price School of Public Policy at the University of Southern California, who offered an overview of the history of community development's tie to population health and described some opportunities for leveraging

[1]The Community Reinvestment Act defines community development as investments by banks in affordable housing and community services directed at low- or moderate-income individuals. Revitalization and stabilization activities should address communities, including those designated as "distressed or underserved nonmetropolitan middle-income geographies" by relevant federal agencies based on factors that include poverty rates, unemployment, population loss, population size, density, and dispersion (http://www.fdic.gov/regulations/laws/rules/2000-6500.html#fdic2000part345.11 [accessed July 11, 2014]).

In addition to investing in quality affordable housing, community development may also focus on improving the quality of life in terms of "physical, economic, and social conditions." This can be done by building health care clinics and early childhood education centers, investing in safe spaces for walking and playing, and increasing access to healthy foods (http://www.countyhealthrankings.org/roadmaps/action-center/community-development [accessed July 11, 2014]).

existing federal resources to accelerate progress. Donald Hinkle-Brown, president and chief executive officer of The Reinvestment Fund (TRF), and Nancy Andrews, president and chief executive officer of the Low Income Investment Fund, then discussed some of the lessons that their organizations have learned from the programs they administer. These presentations were followed by a discussion moderated by José Montero, a member of the workshop planning committee and director of the New Hampshire Division of Public Health Services.

## HISTORY, DIMENSIONS, AND OPPORTUNITIES

Raphael Bostic said that an important consideration for being successful and effective in the space of community development and population health will be generating an evidence base concerning what works and does not work. A solid body of evidence will be key for making the kind of sound policy decisions that can provide a consistent level of funding for initiatives in this area. For example, he said, funding for programs that prevent homelessness has not been subject to budget cuts precisely because there is a broad understanding about the value of these programs. Bostic also commented that while policies and rules have to change in order to enable success in this area, there must also be a bottom-up effort to identify what policies and rules need to be changed and how they need to be changed. He recognized the potential of groups such as the Roundtable to create a place where all the different stakeholders can have a voice, to ensure that information flows among all the necessary parties, and to create a common conception of the problems that need to be addressed. Another factor that plays a major role in whether a program will get funded, he said, is the type of governance structure. As examples, Bostic pointed to San Francisco, where the boundaries of the city and county are aligned and thus savings from county investments in city programs are all realized internally, and Los Angeles, where savings generated from a city program will accrue to the county, which is a much larger geographic entity. This latter type of governance structure discourages the city from designing programs.

Although the scale of change that needs to occur is large, Bostic said that he is optimistic that proactive behavior to create new partnerships will lead to progress on the social determinants of health and result in better population health. “I think there are signs and examples of this all over the country,” he said, “but we need to be particularly sensitive to the fact that it takes proactive action. You have to plan, you have to anticipate, and you have to design.” The programs highlighted in the workshop did not happen suddenly, he noted; they evolved over time.

Community development and population health have a long history,

and in the United States that history started in the 1890s, when cities began clearing and upgrading slums as a public health initiative. The National Housing Act of 1949, which was the federal government's first foray into housing policy, provided $1 billion in loans to acquire slums and blighted areas for public and private development, and it also funded public housing. What was even more important, Bostic said, was that the act marked the appearance of a divergence in housing and urban policy and health policy—a divide that the nation still struggles with today. Nonetheless, despite this divide, he said, progress has occurred in a number of areas, such as the relatively rapid reduction in the incidence of childhood lead poisoning that resulted from federal regulatory actions and funding.

What is needed for more rapid and extensive progress, Bostic said, is a reset in the way that people think about community development and population health—a reset that he believes is happening. One reason for this change in how people think is that the largest effects coming out of the biggest demonstration projects in the housing and urban development area have been health benefits. For example, the Moving to Opportunity program, in which low-income families were given vouchers that enabled them to move out of areas with concentrated poverty, produced marked improvements in stress-related outcomes, depression, obesity, and diabetes. "That was a wake-up call," Bostic said. "When the demonstration started, health was not even on the radar screen."

Another factor driving this reset, he said, has been the growing recognition that social and economic factors can drive population health outcomes. Budget pressures are also pushing this reset, he added, because housing and urban policy programs and population health programs are having to broaden their funding base and to better leverage existing resources. Bostic listed a number of federal agencies that fund programs that are not purposefully linked to health outcomes but that could be. These agencies include the U.S. Department of Housing and Urban Development (HUD), which spends about $30 billion on housing and community development; the U.S. Department of Justice, which funds community-based violence and substance abuse prevention programs; the U.S. Department of Transportation and the Environmental Protection Agency, both of which provide sustainable community and neighborhood grants; and the U.S. Treasury Department, which offers such programs as the Community Reinvestment Act. There are also various education-oriented programs funded by multiple agencies that could be tied into population health initiatives.

The bottom line, Bostic said, is that there is money available that can be leveraged in effective ways in order to make positive change—with "effective" being the key. He said that to be effective, the field will need

to take a decidedly multi-sectoral and multidisciplinary approach based on a common language and a common understanding of goals and possible outcomes. Partnerships will need to link organizations from varied sectors, including those that have not been part of the discussion up to now. As an example, Bostic cited the recent decision by the CVS pharmacy chain to stop selling all tobacco products in all of its stores. "That should make all of us step back and think about who else out there is thinking about these issues and that we should be engaging and talking with," he said. "If this company is willing to take those sorts of steps, that would suggest that there are other resources that are available to be leveraged in this way."

Bostic closed his remarks by saying that it is important for the field to develop a vision. "We need to have some clarity on where it is we are trying to get to, what are the outcomes we want to achieve, what are the processes, and what are the metrics," he said. "That vision will allow us to build a narrative, and that narrative is what you use to build allies and partners that allow you to make change."

## LESSON FROM THE REINVESTMENT FUND

TRF is a community development financial institution (CDFI) that is based in Philadelphia and that primarily serves the mid-Atlantic region.[2] It has deployed $1.3 billion in cumulative investments and currently manages $709.0 million in funds with more than 850 investors. Donald Hinkle-Brown explained that, as a CDFI, TRF serves as the last mile of the credit chain of the financial industry, reaching those who are otherwise disconnected from that industry. "We work at the nexus of organized people and organized communities," he said. "We organize money to deliver it to those communities, we organize capacity in those communities, and we organize data and use that in our work. We're very committed to the interplay of smart data advising smart subsidy decisions and smart capital allocation decisions."

TRF finances a variety of projects and activities that are germane to population health, including food access, health care, education, and housing, in order to build healthy communities in underinvested places. As examples of its activities, Hinkle-Brown listed several targeted funds that it manages, including the Baltimore Integration Partnership, the New Jersey Food Access Initiative, and the Pennsylvania Fresh Food Financing Initiative. He noted that TRF has worked hard to make sure that the

[2]CDFIs use federal resources in order to serve low-income people and communities that do not have access to affordable financial services and products. See http://www.cdfifund.gov (accessed July 22, 2014).

new farm bill includes a food access program at the U.S. Department of Agriculture, and it even has a policy solutions team that uses analytics to advise the fund and its clients on where to invest money for the biggest impact. TRF, for example, conducted the data-driven analysis that quantified the nature of the food desert concept, which holds that lower-income individuals travel farther for their groceries than do their middle-income peers.

The goal of these analyses is not to develop strategy itself, but rather, as Hinkle-Brown explained, "to give communities or the local HUD office the framework from which to more efficiently develop a strategy that makes sense in their geography." From this work, TRF has developed PolicyMap.com, a national website that displays about 8,000 data layers of public policy–related information and that is now being used in a number of colleges and universities. "What we're really interested in," he said, "is reaching the next generation of decision makers and making them [comfortable] with the idea that easily used and easily manipulated analytics can help them make a smart decision."

In its real estate development work, TRF Development Partners makes its housing investments based on three tenets, Hinkle-Brown said. The first is to use the mapping data to examine an area and identify nodes of strength and weakness in marketplace activity. This allows the partners to invest in weak areas that are adjacent to strong neighborhoods, such as the area between Johns Hopkins Medical Center and Penn Station in Baltimore. TRF is taking the same approach in Jersey City, New Jersey; Camden, New Jersey; and Wilmington, Delaware. "That is a more efficient use of subsidy," he said, "because if you go to a place totally insulated from the marketplace, it is hugely expensive to build enough activity to then create its own marketplace."

Hinkle-Brown noted that there is a great deal of activity in the housing arena today that goes beyond providing a safe, high-quality space to live. Housing organizations are now using spatial analyses of human and health care services of various kinds to do such things as match supply and demand. Transit-oriented development that increases livability, walkability, and access to fresh food is important not only for quality of life issues, but also for health issues. Hinkle-Brown commented, too, on how the availability of data from an increasing number of sources is influencing decisions that may ultimately affect health. To further enable that trend, PolicyMap is making an effort this year—2014—to greatly increase the amount of health-relevant data that it makes available.

There is movement within both the community development world and the public health world that Hinkle-Brown believes could be fruitful. The community development world, he said, is becoming less focused on deals and more concerned with the longitudinal effects of its work.

The primary outcomes it is interested in are related to affordable housing, but those working in community development are now beginning to view health benefits—which were once just unintentional byproducts—as being a purposeful part of an investment program. "We're becoming much more focused on the broader impacts of our work, and we're beginning to study those impacts in interesting ways," he said. At the same time, the public health practice community is moving from a reactive position to a proactive approach in how it thinks about the social determinants of health, and it is now showing a willingness to move beyond broad macroeconomic correlations to a granular level that can produce specific, actionable interventions, which is where community development works best.

Access to fresh and healthy foods has been an increasingly important aspect of TRF's work, and since 2004 TRF has financed 130 healthy food projects across the mid-Atlantic region, totaling more than $180 million. This was an economic development and equity initiative, not one driven by health considerations, and the overall health effects of having supermarkets in previously underserved rural and urban areas are still not completely clear. While the data so far indicate that these supermarkets have not had an impact on obesity, there still may be an opportunity to change behavior that will ultimately benefit health. Hinkle-Brown said that TRF has partnered with the CDFI Fund and the Opportunity Finance Network to train other CDFIs to launch food access programs. In closing, he noted that TRF is working to develop a national methodology to assess community health disparities, just as it did for disparities in food access, with the goal of creating a roadmap for those people who work at the intersection of community development activities and the social determinants of health.

## COMMUNITY DEVELOPMENT STRATEGIES FOR IMPROVING POPULATION HEALTH

The primary mission of the Low Income Investment Fund, as Nancy Andrews explained, is to alleviate poverty by breaking down large chunks of capital provided by the fund's primary investors on Wall Street into smaller, neighborhood project–sized pieces. For example, the Fund recently closed on a $25 million loan from a large investment bank that it will break down into loans ranging from $500,000 to $2 million. Individually these loans are too small for a major investment bank, but they are the right sizes for community-based projects. And, because the Low Income Investment Fund is a CDFI, it can operate on a break-even basis rather than a for-profit basis. Over the approximately 30 years of its existence, the fund has deployed about $1.5 billion dollars and has served 1.7 mil-

lion people in 31 states around the nation. Andrews said that by the fund's calculations, this $1.5 billion investment has generated about $31 billion in social return. Equally important, the fund has achieved this return with a loss rate of 0.68 percent, a track record that creates a level of comfort among its Wall Street and philanthropic partners.

Andrews said that over the past approximately 2 years, she has become "personally passionate about the intersection between health and community development. If you had asked me 2 years ago what our work has to do with health," she said, "I would have said we fund health clinics, and I wouldn't have really had the concept of going upstream and thinking about the social determinants and what causes people to get sick." Today, the Low Income Investment Fund is using a framework of "healthy communities" as an umbrella for all of its programs and as the way in which it wants to measure the value of its programs going forward. Andrews said that what has been happening in practice is that the places where the fund has been working and investing money are the same places where public health agencies are working. "What's happening now is we are getting to know potential partners who are working in some of the very same places," she said. As a result of this change in focus, the Low Income Investment Fund is taking a more holistic approach that involves not only building affordable housing in a neighborhood but also building and supporting high-performing schools, health clinics, and recreational facilities with access to public transit.

Andrews stressed that the Low Income Investment Fund is just one piece of the puzzle in terms of the integrated approach that is necessary to address poverty and population at a scale that will transform communities. Together with David Erickson, a colleague at the Federal Reserve Bank of San Francisco, Andrews has compiled ideas that work in a book titled *Investing in What Works for America's Communities* (available free at www.whatworksforamerica.org). One of the big ideas that came through in the book is what she calls the quarterback—an entity that is accountable for actually accomplishing positive outcomes. "This is not just about outputs, not just about creating access to services, but literally being accountable for creating outcomes," Andrews said. An analogous position in the technology world would be the lead systems integrator, the person who oversees the development of the modules that form the basis of large computer programs and models. Without a lead systems integrator, the modules are not likely to be well harmonized.

As an example of the types of programs that the fund invests in and some of the surprising impacts that they can have, Andrews described the Booth Memorial Child Development Center in Oakland, California, which serves 63 low-income children. The fund made an $80,000 grant that the center leveraged with another $78,000 from other sources to replace its

20-year-old carpet with child-friendly flooring and to install toddler-level hand-washing sinks and new changing tables that the toddlers could get on themselves so that the teachers would not have to lift them. Not unexpectedly, the children started washing their hands more; what was surprising, however, was that because of the removal of the old carpet, there was a sudden drop in asthma attacks among the children and teachers at the center, which resulted in fewer emergency room visits, less lost work time for parents, and fewer disability claims. The attendance rate at the center also increased by 15 to 20 percent, which improved the financial viability of the center.

Andrews also described recent research on the health benefits of transportation services. In Charlotte, North Carolina, people using the city's new light rail system were found to experience a 6.7-pound weight loss, compared with a control group. Although the Low Income Investment Fund got involved with transit-oriented development (TOD) because of the better access to jobs and amenities that TOD provided, it turns out that TOD has important health outcomes as well. One example of how the Low Income Investment Fund has put ideas into action is that it has led a capital program for TOD in the San Francisco Bay area. The program started with $10 million seed investment by the Bay Area Metropolitan Transportation Commission. "When you manage to convince the transportation agency to invest in affordable housing and other social amenities, that's pretty good silo busting," Andrews said, adding that the fund is developing a partnership with two community development groups, Living Cities and the Enterprise Community Partners, together with the National Resources Defense Council, an environmental organization, to replicate this idea in multiple locations around the United States. "We hope we're making a compelling case for those in the health industry to begin to come together around these kinds of models," she said.

Looking to the future, Andrews said that one thing that her community is not good at yet—and which it hopes the health sector can help with—is determining how to get the evidence needed to make the case for joint investments even more compelling. She also wants to take the idea of the quarterback for healthy communities and begin to design programs around that idea to show how it works. "We do believe that this will open the opportunity for collaboration between our two sectors," she said in closing. Toward that end, Citibank's foundation recently provided the Low Income Investment Fund with $3.25 million to make grants to lead integrators at 13 organizations in 12 cities around the nation.[3]

[3]See http://partnersinprogressproject.org (accessed July 11, 2014).

## DISCUSSION

In opening the short discussion period, José Montero said it would be useful for those like him who are in the health sector to have a better understanding of how other sectors are investing in areas that affect population health. He also said that he thought the health sector would benefit from learning how to measure the large social impact of its programs using the tools and analytic methodologies that the community development sector has developed.

The panelists answered questions about why Wall Street banks would bother investing in these projects, given that they could probably get a larger return on their capital by loaning their money to straight commercial projects. Andrews explained that these banks are motivated by the Community Reinvestment Act, a federal law passed in the 1970s that requires that banks reinvest in the low-income communities from which they take deposits. Banks receive grades on how well they are doing, and they want to receive "satisfactory" to "outstanding" ratings.[4]

Part of the discussion related to the concept of quarterbacks for healthy communities and the sources of funding to promote these types of organizations. Andrews emphasized that quarterbacks are critical pieces for integrating different sectors and forming partnerships. She mentioned examples of groups that have been funded by banks and philanthropic organizations that may not have health as their primary goal but that end up with positive health outcomes. Other funding streams include tax credits and block grants.

In response to a question from Catherine Baase of Dow Chemical Company on how the community development sites are chosen, Hinkle-Brown explained that the sites must provide a healthy return on investment. Isham asked how much financial capital is needed to maximize health benefits for the whole nation. Hinkle-Brown responded that the calculation was overwhelming and probably infinite, and Bostic replied that currently we do not have enough capital to realize those outcomes. Andrews offered a different perspective, saying that she did not view the availability of private capital as a constraint because the savings can be continually reinvested.

[4]Performance evaluations are conducted by four federal agencies: the Office of the Comptroller of the Currency, the Office of Thrift Supervision, the Federal Deposit Insurance Corporation, and the Federal Reserve Board. Financial institutions that do not receive satisfactory evaluations are prevented from opening additional branches, participating in mergers, or otherwise expanding their services (http://www.ncrc.org/programs-a-services-mainmenu-109/policy-and-legislation-mainmenu-110/the-community-reinvestment-act-mainmenu-80/a-brief-description-of-cra-mainmenu-136 [accessed July 11, 2014]).

# 5

# Pay-for-Success Financing and Population Health

Continuing the theme of finding creative ways to finance population health and align incentives to focus on performance, the workshop's third panel discussed a relatively new approach that is being put into action to fund population health: using social impact bonds to provide capital in a scheme known as pay-for-success financing. Social impact bonds allow philanthropic funders and private investors to pool capital for social programs, with the loans repaid by the government only if the funded initiative achieves agreed-on results. Megan Golden, a fellow at New York University Wagner School's Innovation Labs and the Institute for Child Success, provided an overview of the role that pay-for-success financing can play in population health. Robert Dugger, founder and managing partner of Hanover Provident Capital, LLC, and Rick Brush, founder and chief executive officer of Collective Health, then gave their perspectives on this new approach to financing population health and discussed examples of how it has been used so far. The presentations were followed by an open discussion period, moderated by Andrew Webber, a member of the workshop planning committee and chief executive officer of the Maine Health Management Coalition.

## OVERVIEW

The idea of paying for success in the population health field is not new—David Kindig introduced the idea in 1997 in the book *Purchasing Population Health*—but according to Megan Golden two trends and one

problem came together to produce the field's current focus on this new financing mechanism. The first trend was the rise of impact investing, the potential of which was quantified in a 2010 report from J.P. Morgan and the Rockefeller Foundation that estimated that some $400 billion to $1 trillion would be available to achieve results in social programs (O'Donohoe et al., 2010). The second trend was the increasing interest among foundations, government, and service providers in measuring the impact of spending. The problem, Golden said, was the same one that this workshop had been discussing, which is that government is spending a great deal of money reacting to problems after they have happened and has little money left over to spend on preventing those problems from arising in the first place (Golden and Waters, 2014).

Golden explained how pay-for-success financing works. Investors put up money to implement cost-effective programs on a large scale, and then the government contracts to pay back the investors with a small premium after the programs have demonstrated that they achieve some predetermined outcomes. She further explained that there may be an intermediary that manages the project and contracts with the investors, the government, and service providers to implement the interventions. There is also an impartial evaluator who determines whether the outcomes are achieved by using accepted research evaluation methodology and comparing those outcomes to some kind of a matched comparison or control group. "The result is a win-win-win-win situation," Golden said. Communities and individuals benefit from more effective services yielding better results. Nonprofit groups benefit by having access to upfront funding that enables them to scale programs. Government wins with the development of more cost-effective services and better results. And investors win by having the ability to make a positive impact on a community while achieving modest returns on their investment.

The first example of pay-for-success financing in the United States was launched in 2012 to fund a New York City program aimed at reducing recidivism among 16- to 18-year-olds leaving city jails. For this project, social impact bonds were used to fund implementation of a proven cognitive behavioral intervention for the 3,000 or so young people passing through the city's jail each year. Goldman Sachs invested $9.6 million with a 6-year loan, and the degree of reduction in recidivism will determine what the city will pay back to the investor. For example, if recidivism falls by 20 percent or more, the city will make the maximum payment of $11.7 million. The breakeven point is a 10 percent reduction in recidivism, while the city would only pay $4.8 million if the reduction in recidivism only reaches 8.5 percent. While these payment terms provide a reasonable return if the program is successful, the risk on the downside was too high,

so a foundation provided a $7.2 million loan guarantee so that the most Goldman Sachs will lose is $2.4 million.

Currently, nine pay-for-success projects have been completed worldwide—four in the United States, four in the United Kingdom, and one in Australia. No final results are available for any of these projects. Nonetheless, Golden said that population health seems to be a good candidate for this type of financing because there is a strong evidence base for at least some interventions and their benefits exceed their costs, producing harvestable cost savings. Recently, she completed a feasibility study for a South Carolina–based organization called the Institute for Child Success that wants to scale the Nurse–Family Partnership program, which aims to improve outcomes for young children in that state (Institute for Child Success, 2012). Because the study supported the feasibility of such a program, South Carolina is now working to put together a pay-for-success scheme to finance it.

South Carolina is particularly interested in improving the lives of its youngest citizens, Golden said, because the state ranks 45th in overall child well-being. Home-visiting programs have demonstrated improved outcomes for children in a number of studies, and South Carolina, with federal funding, has implemented several of these visitation programs but not at a scale that would produce a big impact. According to Golden's assessment, 11,500 very poor women in the state could benefit each year, but even after an expansion in 2012 the state's program could only serve 568 new families annually. By examining the available data and working with providers on the ground, Golden developed an expansion strategy that could realistically come to serve 2,750 new families phased in over 3 years at a cost of $21 million and with a projected savings of $52 million. About two-thirds of those savings would come from Medicaid funds. "That's about $5 in savings for every $2 invested," Golden said, "which makes for a pretty attractive investment opportunity."

Putting together a pay-for-success arrangement requires a specific metric on which to condition payments, so Golden focused specifically on health outcomes even though other benefits were expected in areas such as child abuse, education, and criminal justice. In the home visiting feasibility study, the metric Golden and colleagues chose to use was the reduction in preterm birth rates—a selection that was based an examination of the available state Medicaid data on adverse birth outcomes and other health outcomes for the first 2 years of life. Based on the research, Golden and colleagues plan to phase in the program over 3 years, with a focus on one to two health outcomes chosen by the state, which will only pay if there are improvements in the participant group, in comparison to others. At the time of the workshop, the pay-for-success transaction to finance this program was in the process of being put together, and the

deal is expected to involve a mix of commercial and philanthropic capital. Golden said that while a reduction in preterm births will not by itself pay for the program in the short term, there are enough data available on the longer-term savings that come from reducing preterm births to indicate that this investment will be worthwhile for South Carolina (IOM, 2006).

In closing, Golden said that there are challenges to using this financing mechanism but that there are also many reasons for enthusiasm. "The reason I'm excited about it," she said, "is that it gets multiple sectors together to focus on and be accountable for outcomes, and it's a mechanism to operationalize that shift of funding from remediation to a place farther upstream."

## SOCIAL IMPACT INVESTMENT AND POPULATION HEALTH

What is the most important product of our society? "A ready-for-life 18-year-old," said Robert Dugger in stating the central tenet underlying pay-for-success financing for early childhood health and development projects. He noted that two organizations that he helped establish, the Human Capital Economic Opportunity Working Group and ReadyNation, are particularly interested in supporting these kinds of projects. The Human Capital Economic Opportunity Working Group comprises about 400 researchers across all fields of health, psychology, behavior, and economics who are concerned about producing ready-for-life 18-year-olds, while ReadyNation focuses on building business leadership support for this type of work. Both groups operate from a conclusively demonstrated premise that investments in children at the earliest months and years of life have higher returns than investments made later in life and that these returns continue to accumulate over very long periods of time. "The breakthrough that has occurred over the last few years," Dugger said, "is the awareness that you don't have to wait 15 years until you get drops in teen pregnancy, drug use, and adolescent crime, to get higher rates of return." The South Carolina program that Golden discussed is one example of how this idea is being translated into practice.

Although there is a significant body of research showing that early interventions can produce satisfactory rates of return on investment, Dugger questioned the time frame over which those returns are actually realized. For example, a study of a program to create strong nurse–family relationships for high-risk pregnant mothers in Virginia calculated that this program had a 1-year return of 26 percent based on a reduction in the need for neonatal care (Greene, 2008). But are the savings realized immediately? "You know almost immediately that neonatal intensive care use is going to drop, but we still have a neonatal intensive care unit that is being amortized and nurses and doctors that are under multiple-year

contracts," Dugger said. "So even though we reduce intensive care use immediately, we don't really get the full savings immediately." This is one aspect of pay-for-success financing that has not been completely worked out yet, he said.

Turning to the specifics of how pay-for-success projects are developed and implemented, Dugger explained that they start with a feasibility study that underlies the entire transaction for a specific intervention in a specific population. "A pay-for-success project is like a mortgage financing," he said. "You don't do a mortgage financing on the average house; you do it for a specific house. And just as you do for a mortgage, there has to be an appraisal, not for the average house, but for that specific house in that neighborhood." Conducting a feasibility study requires data detailing past performance of the specific intervention in a community similar to the one that will receive the intervention, and the lack of these data is the first problem encountered when trying to put together a pay-for-success project. "The data demands for social impact financing are very high, and the later in a child's life that the intervention is occurring, the higher the data challenges are," Dugger said.

Assuming that the data are available and that the feasibility study provides a good case for funding an intervention, the next step in the process involves many contracts. In most cases, there are contracts with the state, contracts with a third party evaluator, and contracts with the organizations that will realize the savings."There are important contractual issues here that are only now beginning to be understood," Dugger said. "This is an important reason why there are so few social impact finance transactions."

Dugger spoke about his own experience, helping to finance a project in Utah that aims to expand quality pre-kindergarten programs for 600 children. The United Way of Salt Lake City provided the regional vision; Voices for Utah Children conducted the feasibility study; and Goldman Sachs, the United Way, and a group of philanthropists, including Dugger and the Pritzker Family Foundation, provided $20 million in financing. Financial engineering was done by Voices for Utah Children, Goldman Sachs, Imperium Capital, and the Pritzker Children's Initiative, while the United Way of Salt Lake City, acting as the intermediary, managed the funds. The project was launched in June 2013.

## IMPACT INVESTING FOR BETTER HEALTH AND FINANCIAL OUTCOMES

One of the challenges that come with investing in health, Rick Brush said, "is that what really matters to health is a very complex, intertwined constellation of factors that are embedded in our communities, our social

life, our economic fabric, and our culture. So how do we invest when we know, for example, that education matters more to health than health care, when we know that relationships, social connections with our friends and families, and our support networks, and our community matter so much to health that they outweigh risk factors like obesity? How do we realign the health care financing system to begin to address these larger factors?"

One way to think about this challenge is to view it through the lens of an investor with $2.7 trillion—the amount of the nation's annual health care expenditures—to invest. The first step would be to use data to identify what really matters to health and what initiatives would create the greatest impact, after which one would place strategic bets based on estimated return on investment. Ideally, there would be a portfolio of short- and long-term investments, each with specific metrics for improvement and each evaluated using sound methodologies that can attribute outcomes to these investments.

Brush noted that the Memphis program that Gunderson and Cutts described earlier in the workshop was supported by Cigna, a major insurer in the Memphis area, and he suggested that companies in the insurance industry should be seen as potential financial partners in pay-for-success programs. Other potential partners include self-insured employers, which actually account for a large percentage of the health care dollars being spent; foundations that are looking to make philanthropic contributions and returns on investment; high-net-worth individuals; and commercial investors. In bringing all of these different sources of investment together, it will be important to use a progressive reinvestment strategy that can take short-term cost savings out of the health care system and dedicate a portion to paying back investors through shared agreements among all of the payers that are benefitting from these savings. "So as we reduce Medicaid costs or we reduce costs for a self-insured employer," Brush said, "they keep some of the savings, pay back a portion of savings to investors that provided the upfront capital, and, ideally, reinvest a portion of savings in expanded or longer-term health improvement programs."

As an example of a potential application of health impact financing, Brush described an effort to reduce costs associated with childhood asthma in Fresno, California, that is being supported by the California Endowment. Previous studies have shown that a home-based intervention can return $5.30 to $14 for each dollar invested (Nurmagambetov et al., 2011) and decrease asthma-related emergency room visits by 68 percent and hospitalizations by 84.8 percent (Woods et al., 2012). Brush said that while this demonstration project will aim to benefit 200 children, the estimated population of children in Fresno that would benefit from its widespread implementation would be around 16,000 children, given that about 20 percent of children in Fresno have been diagnosed with asthma,

with the actual percentage likely to be even higher. The demonstration targets specific neighborhoods where the incidence rate is as high as 40 percent.

Fortunately, Brush said, there are easily implemented home-based strategies to improve air quality that have demonstrated dramatic reductions in asthma-related emergencies for children. In the current project, the evaluators are using insurance claims data to measure the actual cost savings to the state's Medi-Cal program, which have been estimated to be between $1,000 and $5,000 per year per child enrolled in the program. The project has engaged Clinica Sierra Vista, a network of federally qualified health clinics, as its clinical partner and the Central California Asthma Collaborative as its community partner. The program pays for a range of services, including home visits by community health workers, repairs to fix leaky roofs and to remove and prevent mold at an average of cost of $850 per home, HEPA (high-efficiency particulate air) vacuum cleaners, and integrated pest management, and it replaces asthma-triggering home cleaners with less caustic cleaning products.

Brush closed his comments by describing the work of a new nonprofit organization called HICCup, the Health Initiative Coordinating Council, which was founded by angel investor Esther Dyson. HICCup is launching a national competition in 2014 called The Way to Wellville, in which five communities with populations under 100,000 will compete to win the HICCup Prize for the greatest cost-effective improvement in five measures of health over 5 years. HICCup will support the five Wellville communities with a network of partners and investment models that produce better health with financial returns.

## DISCUSSION

Session moderator Andrew Webber opened the discussion by asking the panel how quickly the tipping point might come—if it ever will—for pay-for-success financing to gain critical mass and become an important and widely used mechanism for funding projects to improve the public's health. He noted that the nation has been waiting for at least 15 years for the transition to a pay-for-performance medical system to reach a tipping point, and that has yet to happen. Brush answered that "it is still early in the application of pay-for-success and impact investing in health care," and he noted that there are still many complexities that have to be addressed, such as whether benefits will aggregate to a single payer or a dozen payers in a community, how to attribute an outcome to an intervention, and how to capture and access sources of repayment. He noted that the complexities are particularly challenging when dealing with govern-

ments, which is why he believes that self-insured employers may be an important test bed for this mechanism.

In contrast, Dugger said he has no doubt that pay-for-success financing has reached the tipping point and that it will take off as an important mechanism for health improvement efforts because of the increasing availability of data that can be used to complete the feasibility studies needed to set up this type of financing scheme. "The Affordable Care Act is making many things clear that were not clear before, such as the discrepancy between the contributors to health and what we actually pay for," he said. He also said that managed care companies are already using interventions to reduce their own costs and pocket the savings and that he considers such efforts to be examples of internally funded pay-for-success financings. He acknowledged that the contractual infrastructure needed to facilitate these transactions is still in its infancy, and he predicted that it will take at least a decade to assemble the legal architecture that will enable pay-for-success to become widespread.

Golden added that there is a huge pipeline of projects in the works, with many states and counties having issued requests for information or requests for proposals to procure pay-for-success contracts. "I think there's a wave coming," she said. "The first several deals will focus on programs that have a rock solid evidence base." She cautioned, though, that the field will have to expand its focus from those programs with a substantial supportive evidence base to the kind of work that Brush is doing with demonstration projects or to projects that examine multiple outcomes. Golden also said the White House, the Office of Management and Budget, and the U.S. Department of Treasury have all expressed great interest in this financing mechanism and have instructed all federal agencies to try to take advantage of it.

Given the need for data to demonstrate the feasibility of projects, David Kindig asked, is there some way to use public–private partnerships to broaden the financing base for the research that needs to be done to develop the evidence base for the next generation of initiatives? Both Brush and Dugger thought that would be possible, particularly for specific feasibility studies. "I think we can put together packages of investors, philanthropists, and state and federal funding for feasibility studies," Dugger said. In fact, he said he believes that there will be a proliferation of such arrangements. "I can see many organizations coming into existence to solve different parts of this problem."

Dugger said he got involved in social investing because of the realization that other countries, such as those in East Asia and Northern Europe, invest far more in human capital than the United States does and that we are not producing enough "life-ready 18-year-olds" to sustain our gross

domestic product. As a result, he formed a partnership and developed the Invest in Kids Working Groups to promote investments in human capital.

Marthe Gold of the City College of New York asked about the necessity of randomized clinical trials to convince businesses and investment firms to enter pay-for-success contracts. Both Dugger and Golden said that not all businesses or existing pay-for-success programs require trials before deciding to invest. Dugger went on to say that some of the investors are compelled enough by moral aspirations and thus do not rely solely on data analysis.

# 6

# Implications of New and Emerging Sources of Population Health Funding

In the workshop's concluding panel, two members of the workshop planning committee—James Hester, an independent consultant and the former acting director of the Population Health Models Group at the Innovation Center in the Centers for Medicare & Medicaid Services (CMS), and Jeffrey Levi, executive director of Trust for America's Health—put the day's presentations and discussions into perspective. Each panelist made a short summary presentation, and then moderator Mary Lou Goeke, a member of the workshop planning committee and executive director of the United Way of Santa Cruz County (California), opened the floor for discussion.

Hester commented that when the organizing committee was developing the workshop agenda, its members wanted to provide a sense of the innovative financing vehicles that are being developed to support population health initiatives. With that in mind, the committee decided to focus on three specific financing schemes, but the committee recognized, he said, that there are other promising approaches being developed and tested. Examples of these other approaches include the work being done to revise payment models for clinical services that will support population health and demonstration projects that CMS has approved for work related to Medicaid waivers. "There is a very dynamic environment for vehicles to support the work that we are talking about," Hester said.

One important feature shared by all of the efforts discussed at the workshop, he remarked, is that they are tied to specific interventions in defined populations in specific communities. To move beyond talking

about individual vehicles and funding individual initiatives, Hester said, it will be important to create some entity that can integrate these different programs so that they reinforce each other. By doing so, it may be possible to reach what he called the "elusive Holy Grail" of a sustainable financial model for population health. "What we're talking about is a balanced portfolio of interventions with partial capture of savings to create that virtuous cycle of money for reinvestment," Hester explained. Such a portfolio would be balanced in terms of time frame—it would include interventions with short-, medium-, and long-term results—and it would be balanced in terms of risk profile. A portfolio approach could create an environment in which savings from interventions with a substantial body of supportive evidence are used to fund demonstration projects of additional interventions for which a body of evidence has yet to be accumulated. "I believe that these community-based structures are laboratories, and we should view them as laboratories for the development of evidence," Hester said.

An integrator organization, he added, would serve to aggregate and align revenue streams and capital to meet the needs of the community. The integrator would also work to leverage both private and public funds to achieve greater impact over time and to establish a continuous quality improvement program that would monitor performance of the portfolio programs and make adjustments based on how the programs are performing in the community. In addition to program management skills, the organization serving as an integrator would need to possess fairly sophisticated broker and financial management capabilities so as to be able to conduct and sponsor feasibility studies, identify the potential partners that could do the execution, and identify an appropriate financing vehicle with a risk profile and time horizon that matched with the intervention. Hester said that there are prototypes for this type of organization, including the Rippel Foundation's ReThink Health, which works with communities in places such as Pueblo, Colorado, to help them develop leadership and redesign their health and health care systems.[1] Another is the Robert Wood Johnson Foundation's Aligning Forces for Quality program, which involves 16 communities in creating models of reform for the reduction of racial and ethnic disparities and the improvement of health and health care.[2] Hester concluded his comments by saying that it is important for the field to clearly define this integrator role in the near future. "If we don't, we run the danger of the financing vehicles actually outrunning our capability to integrate them at the community level in an effective way."

In his comments, Levi agreed that the social financing field is moving

[1]See http://rippelfoundation.org/rethink-health (accessed July 22, 2014).
[2]See http://forces4quality.org (accessed July 11, 2014).

rapidly and that public health officials need to consider the points that Hester raised now if they want to be able to take advantage of these new financing mechanisms. "Those making social investments are probably neutral about whether they're investing in housing, community development, or public health [interventions], and so [public health agencies] need to be ready to compete in this environment," Levi said.

One of the challenges that governmental public health agencies face in taking advantage of these new financing mechanisms is that using the mechanisms will require developing the language to work with new partners. An opportunity for governmental public health lies in its potential role as chief health strategist for a community. In that role, Levi said, it is possible that public health agencies would not actually collect data because the health care delivery system generates far more data than public health agencies would ever be able to collect; instead, the agencies would take on the role of analyzing the data and creating the health impact assessments that can be used to drive a community's efforts. Filling this role will require becoming comfortable with some level of accountability without necessarily having line responsibility, which Levi acknowledged will be a little scary. "I'm going to be held accountable by my mayor, my governor, and my county executive for the health of the community, but I'm depending on these other people to improve the health of the community, and I don't have any direct authority over them," he said. Indeed, playing the role of chief health strategist will require exercising soft power rather than direct power.

Another challenge going forward, Levi said, will be accounting for how much money is being invested in public health interventions (aside from the interventions funded by public health agencies). "As we convince more people, more investments, and more programs to give a public health purpose to what they are doing, accounting for those investments is going to be more complicated," he said. As an example of the complexities, he cited the Oakland daycare center's experience when it replaced its old carpeting. "We would never have thought to count as a public health investment removing the carpet in that daycare center, and yet it was," he said. "Maybe we shouldn't even try to do that level of accounting."

Noting that much of the discussion at the workshop had focused on community-level action, Levi said that the federal government will also have a critical role to play in motivating these partnerships and making it easier to work across sectors. He was encouraged, he said, that during the confirmation hearings for the president's nominee for Surgeon General, Senator Harkin and Senator Mikulski both wanted to know what was going to be done to make the National Prevention Council more effective. "This is the place where 20 or so federal agencies and offices come together, and they could be talking about not just removing barriers but

providing incentives for these different programs to be working together," Levi said.

## FINAL REFLECTIONS AND COMMENTS

The workshop planning committee co-chair, Terry Allan, offered his reflections on the important messages of the day. One speaker's message was that it is essential to determine what the total health budget is and to develop a strategic plan for how to capture a percentage of those dollars to create a stable source of funding for health improvement strategies. Another message was that there is a need for some models that would help all of the disparate players in a community better coordinate their activities to reduce redundancies, particularly in terms of community health needs assessments. Allan said that the concept of creating a prevention trust fund using a small percentage of the general operating funds of hospitals, as is being done in Los Angeles, was an interesting idea for creating a sustainable funding source for population health.

Another important point, he said, was the need to think beyond the borders of the health care system and to look at community development, education, and transportation as natural partners when it comes to prevention and population health. He also cited the repeated message that collecting data to demonstrate both effectiveness and cost-effectiveness had to become a central part of every governmental public health initiative and that there needs to be an integrator or quarterback to oversee these types of initiatives and coordinate data collection. As a final comment, Allan said that public health agencies will need to step up in terms of accountability and preparedness if they want to compete with all of the other groups that will be tapping into social investing.

In his own summary remarks, workshop planning committee co-chair George Isham noted that while philanthropic and public pilot funds are crucial for testing, developing, and aligning interventions, public health agencies need a dependable long-term revenue stream to undertake the kinds of initiatives that are needed to improve population health and realize cost savings. Isham said it should be possible to change the waste reduction paradigm from one of taking resources away from the different parts of the health system to one of incentivizing progress through shared savings opportunities. He also commented that there is a real opportunity for the field to rethink the gold standard of the randomized clinical trial as the means to demonstrate effectiveness and value regarding social investments and to pursue the development of optimal cross-sectoral financial investment for policy strength benchmarks.

Isham then asked for comments from the Roundtable members and the remaining workshop attendees. Jon Ebbert of the Mayo Clinic echoed

previous concerns about how to attract investors in population health improvement, especially when the intervention is not garnering as much media attention as, for example, obesity. Both Isham and Kindig remarked that the current state of knowledge has "just scratched the surface," and many of the discussion comments touched on the need for more robust data on performance measures specific to geographic areas and for financial calculations of needed spending as well as potential savings. On the issue of social impact investing, Pamela Russo of the Robert Wood Johnson Foundation asked what happens after the investment contract is finished. Dugger replied that with successful interventions, governments realize that they can continue the programs by seeking more economical sources of funding, such as issuing bonds at a lower interest than what is given to investment firms. Finally, Dugger acknowledged that his world of finance is unfamiliar with the world of governmental public health agencies and said that this means there is an opportunity for further discussion and intersection. With no further comments or questions, Isham adjourned the workshop.

# Appendix A

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# Appendix B

# Workshop Agenda

Roundtable on Population Health Improvement
Workshop #5: Resources for Population Health Improvement

February 6, 2014

Location: Keck Center, Room 100
500 Fifth Street, NW, Washington, DC

"Resources" refers to many different kinds of essential ingredients needed to support the improvement of population health. Resources could be financial, human (workforce and associated education and training needs), or informational (referring to data, technology, networks, etc.) and could also refer to the broad category of assets that communities bring to the table, from social capital to cultural diversity.

The workshop will focus on financial resources and especially on varied private-sector funding sources and mechanisms that can help alter the social and environmental determinants of health.

8:30 a.m. Welcome and Introductions

*George Isham, co-chair, Workshop Planning Committee; co-chair, Roundtable on Population Health Improvement; senior advisor, HealthPartners, senior fellow, HealthPartners Institute for Education and Research*

*Terry Allan, co-chair, Workshop Planning Committee; president, National Association of County and City Health Officials; health commissioner, Cuyahoga County Board of Health*

8:45 a.m. Paying for Population Health Improvement
*David Kindig, co-chair, Roundtable on Population Health Improvement; professor emeritus of population health sciences, emeritus vice chancellor for health sciences, University of Wisconsin School of Medicine*

9:05 a.m. Discussion

9:30 a.m. Health Care System Investments in Population Health Improvement: Opportunities, Challenges, and Priorities

*Kevin Barnett, senior investigator, Public Health Institute*

10:00 a.m. Break

10:15 a.m. Panel I: Health Care System Investments in Population Health Improvement

*Moderator: Debbie Chang, member, Workshop Planning Committee; vice president, Policy and Prevention, Nemours*

*Rev. Gary Gunderson, vice president, Faith and Health Ministries, Wake Forest Baptist Medical Center*

*Teresa Cutts, associate professor, Department of Social Sciences and Health Policy, Wake Forest School of Medicine*

*Valerie Agostino, senior vice president, Health and Housing Operations Initiatives, Mercy Housing*

11:00 a.m. Discussion

11:30 a.m. Community Development and Population Health: An Overview
*Raphael Bostic, Judith and John Bedrosian Chair in Governance and the Public Enterprise, Sol Price School of Public Policy at the University of Southern California*

12:00 p.m. Lunch

1:00 p.m. Panel II: Community Development and Population Health

*Moderator: José Montero, member, Workshop Planning Committee; director, New Hampshire Division of Public Health Services*

*Donald Hinkle-Brown, president and chief executive officer, The Reinvestment Fund*

*Nancy O. Andrews, president and chief executive officer, Low Income Investment Fund*

1:45 p.m. Discussion

2:15 p.m. Pay-for-Success Financing and Population Health: An Overview of the Field
*Megan Golden, fellow, New York University Wagner Innovation Labs*

2:45 p.m. Break

3:00 p.m. Panel III: Pay-for-Success Financing and Population Health

*Moderator: Andrew Webber, member, Workshop Planning Committee; chief executive officer, Maine Health Management Coalition*

*Robert H. Dugger, founder and managing partner, Hanover Provident Capital, LLC*

*Rick Brush, founder and chief executive officer, Collective Health*

3:45 p.m. Discussion

4:15 p.m. Concluding Panel: Implications of New and Emerging Sources of Population Health Funding for Governmental Public Health, Community Groups, and Others
*Moderator: Mary Lou Goeke, member, Workshop Planning Committee; executive director, United Way of Santa Cruz County*

*James A. Hester, member, Workshop Planning Committee; independent consultant, Vermont; former acting director, Population Health Models Group Innovation Center, Centers for Medicare & Medicaid Services*

*Glen P. Mays, member, Workshop Planning Committee; F. Douglas Scutchfield Endowed Professor in Health Services and Systems Research, University of Kentucky College of Public Health*

*Jeffrey Levi, member, Workshop Planning Committee; executive director, Trust for America's Health*

4:45 p.m. Reflections on the Day, Discussion, and an Opportunity for Public Comment
*Terry Allan*
*George Isham*

5:15 p.m. Adjourn

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

# Appendix C

# Biographical Sketches of Workshop Speakers and Moderators[1]

**Valerie Agostino** is the senior vice president of health care and housing for Mercy Housing, a national nonprofit affordable housing organization. She was recently promoted to her current position and is focused on affordable housing as a platform for improved health outcomes for residents. Ms. Agostino also currently serves as commissioner for the Housing Authority for the City of Berkeley, commissioner for the City of San Francisco's Long Term Care Coordinating Council, and member of the City of San Francisco's Dementia Task Force. Ms. Agostino began her career in affordable housing and community services in San Francisco in the late 1970s with Catholic Charities, developing opportunities for very low-income, frail elders to live independently in a service-enriched supportive community setting. In 1994 Ms. Agostino joined the staff of Mercy Housing California as the director of property management for the then nascent California organization. In 2001 she was named chief operating officer for Mercy Housing California and spent the following 12 years overseeing various community development, real estate, and resident service activities throughout the state of California. Ms. Agostino has a B.A. from the University of Massachusetts and completed the Achieving Excellence in Community Development Program at the Kennedy School of Government, a Program of Harvard University and Neighborworks.

[1]Notes: Names appear in alphabetical order; * = member of the Institute of Medicine Roundtable on Population Health Improvement; † = member of the workshop planning committee.

**Terry Allan, M.P.H.,**[*†] has been the health commissioner at the Cuyahoga County Board of Health since 2004, which serves as the local public health authority for 885,000 citizens in 57 Greater Cleveland communities. He holds a bachelor of science degree in biology from Bowling Green State University and a master of public health degree from the University of Hawaii. Mr. Allan is an adjunct faculty member at Case Western Reserve University's School of Medicine and was a Year 13 Scholar of the National Public Health Leadership Institute. He is the immediate past president of Ohio's SACCHO, the Association of Ohio Health Commissioners, and has served as an at-large member of the National Association of County and City Health Officials (NACCHO) board of directors since 2007. In 2009 Mr. Allan was a member of NACCHO's Structure and Governance Workgroup, which was charged with reviewing the association's bylaws and making recommendations for improvement to the board of directors. He currently serves as a member of NACCHO's marketing committee and is an active member of NACCHO's Congressional Action Network. Mr. Allan served as a representative of NACCHO on the Standards Development Workgroup for the National Public Health Accreditation Board (PHAB) and chaired a local health department site visit team during the beta test of the PHAB standards. In May 2009, he testified before the U.S. House of Representatives Government Oversight and Reform Committee concerning public health pandemic influenza preparedness and resource needs, and he participated in a White House meeting on the national response to novel H1N1 influenza in September 2009. In June 2010, Mr. Allan participated on behalf of NACCHO in a Congressional briefing on local public health job losses. He presented in May 2010 before the Institute of Medicine's Committee on Public Health Strategies to Improve Health on funding state and local public health systems.

**Nancy O. Andrews, M.S.,** is the president and chief executive officer of the Low Income Investment Fund (LIIF). LIIF is an approximately $800 million community development financial institution (CDFI) that has invested $1.4 billion in community projects. LIIF's investments have leveraged $7.3 billion in private capital for poor communities in 31 states across the United States and have generated more than $32 billion in benefits for families and society. Established 30 years ago, LIIF has served 1.6 million low-income people by providing capital for 60,000 affordable homes for families and children, 241,000 spaces of child care, and 70,000 spaces in school facilities. LIIF is a national CDFI with staff and offices in San Francisco, Los Angeles, New York City, and Washington, DC. Ms. Andrews' career spans 30 years in the community development field. In addition to her work at LIIF, she serves on numerous boards and committees, including the Housing Partnership Network, Bank of America's

National Community Advisory Council, Morgan Stanley's Community Development Advisory Committee, Capital One's Community Advisory Council, and the National Housing Law Project. Ms. Andrews was also previously a member of the Federal Reserve Board's Consumer Advisory Council. She is a recognized expert on the challenges facing America's neighborhoods and is frequently asked to testify before Congress and speak at conferences and events. Her most recent book, jointly edited with David Erickson, is titled *Investing in What Works for America's Communities: Essays on People, Place, and Purpose*. It is available at http://whatworksforamerica.org. Previously, Ms. Andrews served as the deputy director of the Ford Foundation's Office of Program Related Investments, where she assisted in the management of a $130 million social investment portfolio. She also designed and launched the foundation's housing policy program. Ms. Andrews was the chief financial officer of the International Water Management Institute, a World Bank–supported international development organization. Additionally, Ms. Andrews has been an independent consultant on community development, social investment, financial analysis, and housing policy. In this capacity, she consulted for the U.S. Department of Housing and Urban Development and the U.S. Department of the Treasury during the Clinton administration. Ms. Andrews received an M.S. in urban planning with a concentration in real estate finance from Columbia University.

**Raphael Bostic, Ph.D.,** is the Judith and John Bedrosian Chair in Governance and the Public Enterprise at the Sol Price School of Public Policy at the University of Southern California (USC). He recently returned to USC after serving for 3 years in the Obama Administration as the Assistant Secretary for Policy Development and Research (PD&R) at the U.S. Department of Housing and Urban Development (HUD). In that Senate-confirmed position, Dr. Bostic was a principal advisor to the Secretary on policy and research, with the goal of helping the Secretary and other principal staff make informed decisions on HUD policies and programs as well as on budget and legislative proposals. Dr. Bostic led an interdisciplinary team of 150, which had expertise in all policy areas of importance to the department, including housing, housing finance, rental assistance, community development, economic development, sustainability, and homelessness, among others. During his tenure and with his leadership, PD&R funded more than $150 million in new research, became an important advisory voice on departmental budget and prioritization decisions, and reestablished its position as a thought leader on policies associated with housing and urban development. Dr. Bostic arrived at USC in 2001, where he served as a professor in USC's School of Policy, Planning, and Development. His work spans many fields, including home ownership,

housing finance, neighborhood change, and the role of institutions in shaping policy effectiveness. A particular emphasis has been on how the private, public, and nonprofit sectors interact to influence household access to economic and social amenities. His work has appeared in the leading economic, public policy, and planning journals. He was director of USC's master of real estate development degree program and was the founding director of the Casden Real Estate Economics Forecast. Prior to that, he worked at the Federal Reserve Board of Governors, where his work on the Community Reinvestment Act earned him a Special Achievement Award. In an earlier stint at HUD, Dr. Bostic served as a special assistant to Susan Wachter when she served as the Assistant Secretary for PD&R. He earned his Ph.D. in economics from Stanford University and his B.A. from Harvard University.

**Rick Brush** founded Collective Health in 2011 to address the underlying causes of poor health and sustainably reduce costs. He has led strategic innovation at large corporations and startups for more than 20 years, primarily in the health care and financial services sectors. Most recently, Mr. Brush was chief strategy and marketing officer for the large-employer segment at Cigna, the fourth-largest U.S. health insurer, where he served in a variety of executive roles from 2002 to 2011. While at Cigna, he co-founded the company's Communities of Health venture, launched new business units and products, and led multi-stakeholder initiatives around the country to improve population health. He has held executive positions at Ford Motor Credit Company, Bank One, KPMG, and a marketing consulting firm and has worked extensively with communities and nonprofits to improve social and financial impact. Mr. Brush is a graduate of the University of Massachusetts Amherst.

**Debbie Chang, M.P.H.,**[*†] is vice president of policy and prevention at Nemours Foundation where she is leveraging expertise and innovating to spread what works through national policy and practice changes with the goal of impacting the health and well-being of children nationwide. She serves as a corporate officer of Nemours, an operating foundation focused on children's health and health care. Previously at Nemours, Ms. Chang was the founding executive director of Nemours Health & Prevention Services, an operating division devoted to improving children's health through a comprehensive multi-sector, place-based model in Delaware. Strategic initiatives include spreading and scaling Nemours' early care and education learning collaborative approach to obesity prevention through an up to $20 million cooperative agreement with the Centers on Disease Control and Prevention (CDC); working with federal partners on integrating population health and clinical care and providing

strategic direction on Nemours' Center for Medicare & Medicaid Innovation Health Care Innovation Challenge award that integrates population health and the medical home for children with asthma in three primary care pilot sites in Delaware; and collaborating with the First Lady's Let's Move! Campaign on Let's Move Child Care, a website that Nemours created and hosts. Ms. Chang has more than 26 years of federal and state government and private-sector experience in the health field. She has worked on a range of key health programs and issues including Medicaid, State Children's Health Insurance Program (SCHIP), Medicare, maternal and child health, national health care reform, and financing coverage for the uninsured. She has held the following federal and state positions: deputy secretary of health care financing at the Maryland Department of Health and Mental Hygiene, with oversight for the State of Maryland's Medicaid program and the Maryland Children's Health Program; national director of SCHIP when it was first implemented in 1997; director of the Office of Legislation and Policy for the Health Care Financing Administration (now the Centers for Medicare & Medicaid Services); and senior health policy advisor to former U.S. Senator Donald W. Riegle, Jr., former chair of the Senate Finance Subcommittee on Health for Families and the Uninsured. She serves on the Institute of Medicine (IOM) Board on Children, Youth, and Families and the IOM Roundtables on Population Health and Improvement and Obesity Solutions; the Agency for Healthcare Research and Quality Health Care Innovation Exchange Board; the Winter Park Health Foundation Board; and the University of Michigan Griffith Leadership Center Board. She has published work on population health, child health systems transformation, Medicaid, SCHIP, and Nemours' prevention-oriented health system, including its CDC Pioneering Innovation Award–winning statewide childhood obesity program. Nemours is a founding member of the Partnership for a Healthier America and the National Convergence Partnership, a unique collaboration of leading foundations focused on healthy people and healthy places. Ms. Chang holds a master's degree in public health policy and administration from the University of Michigan School of Public Health and a bachelor's degree in chemical engineering from the Massachusetts Institute of Technology.

**Teresa Cutts, Ph.D.,** is an associate professor in the Department of Social Sciences and Health Policy at Wake Forest School of Medicine. Before this position, she served as director of research for innovation at the Center of Excellence in Faith and Health at Methodist LeBonheur Healthcare in Memphis, Tennessee. At Wake Forest School of Medicine, she is the academic liaison to its international global faith health partners and leads the evaluation efforts of the Congregational Health Network, integrated

health, community health assets mapping, and clergy/congregational training work. Dr. Cutts has a Ph.D. in psychology and holds adjunct faculty appointments at the University of Tennessee College of Medicine and the University of Memphis School of Public Health and Memphis Theological Seminary as well as a visiting associate position at University of Cape Town's School of Public Health and Family Medicine.

**Robert H. Dugger, Ph.D.,** is an expert on assessing the effects of government policy on domestic and global markets and financial institutions. He is the founder and managing partner of Hanover Investment Group, a firm specializing in helping business and government clients navigate significant changes in fiscal conditions. Prior to his work at Hanover, Dr. Dugger was a partner in Tudor Investment Corporation for 15 years. Tudor is a hedge fund active in currency, bond, equity, and commodity market trading and venture capital investment worldwide. Prior to his time at Tudor, Dr. Dugger served as policy director at the American Bankers Association, where he facilitated a panel of bank officials in developing a plan that became the Resolution Trust Corporation and the solution to the U.S. savings and loan problem. Dr. Dugger began his career at the Federal Reserve Board of Governors in the early 1970s and served as a senior staff member of both the House Financial Services Committee and the Senate Banking Committee in the 1980s. To improve the quality of economic research and analysis, he participated in founding the Institute for New Economic Thinking (INET), and he serves as vice chairman of INET's governing board and as a member of the advisory board. Together with James Heckman, a University of Chicago professor and Nobel Prize winner, Dr. Dugger co-heads INET's task force on human capital and economic development. To help achieve fiscal sustainability through U.S. workforce strengthening, Mr. Dugger co-founded the Partnership for America's Economic Success, an organization dedicated to increasing business support for investing in early child development. He is a trustee of the Committee for Economic Development, a board member of the Virginia Early Childhood Foundation, and chairman of the Alexandria/Arlington Smart Beginnings Leadership Council. Dr. Dugger helped establish Grumeti Reserves Ltd. and served as its board chairman for 8 years. Grumeti is a Tanzanian eco-tourism company organized to preserve the wildebeest migration route in a 450,000-acre game reserve adjacent to the Serengeti National Park in Tanzania. Grumeti's commercial tourism activities are done in partnership with the world's number-one rated hospitality company, Singita Game Reserves. Dr. Dugger served as vice chairman of its nongovernmental affiliate, the Grumeti Community and Conservation Fund. Dr. Dugger received his B.A. from Davidson

College and his Ph.D. in economics from the University of North Carolina at Chapel Hill on a Federal Reserve Dissertation Fellowship.

**Mary Lou Goeke, M.S.W.,**[*†] has held the position of executive director of United Way of Santa Cruz County from 1992 to the present. She is responsible for overall management and administration for the organization, including strategic planning, new program development, financial oversight, and liaison with funded community agencies, the business community, and government partners. She founded and staffs the Community Assessment Project, the internationally recognized, second oldest community progress report in the United States. From 1981 to 1992 she held positions of increasing responsibility with Catholic Charities of the Archdiocese of San Francisco, the San Francisco Bay Area's largest private human services and community development agency. Initially hired as director of aging services in the San Francisco County branch agency, she then became director of parish and community services in that agency and then executive director of the San Francisco County agency. She then held the position of general director and chief executive officer of the three county agencies in San Francisco, Marin, and San Mateo counties. In addition, as general director she held two other related positions: archdiocesan director for Catholic relief services and archdiocesan director for the Campaign for Human Development. Prior to working for Catholic Charities, she served from 1979 to 1981 with the American Society for Aging as the policy and legislation coordinator. Before that, she worked from 1975 to 1979 for the State of Missouri Department of Aging, starting as a field representative and being promoted to the position of director of planning, research, and evaluation.

**Megan Golden, J.D.,** is currently a fellow at the New York University (NYU) Wagner Innovation Labs and a consultant to nonprofit organizations and governments seeking to increase their impact. She specializes in performance management, innovation, and innovative financing mechanisms for scaling and sustaining effective interventions. She recently conducted a feasibility study for South Carolina on pay-for-success financing for early childhood interventions and served on the advisory group for McKinsey & Company's work on social impact bonds. From 1999 to 2011, Ms. Golden was the director of planning and government innovation at the Vera Institute of Justice, where she worked in partnership with government to implement innovations in criminal justice, juvenile justice, child welfare, school safety, mental health, and elder care. In addition to creating and launching eight innovative programs, she led a major reform of New Orleans's criminal justice system and helped Chinese academics and officials pilot criminal justice reforms. In addition to her work at

Vera, Ms. Golden directed the Fellowship for Emerging Leaders in Public Service at NYU Wagner from 2006 to 2009. Ms. Golden practiced law from 1992 to 1994 as a Skadden Fellow at the Neighborhood Defender Service of Harlem. In 1994 she was awarded a White House Fellowship. Ms. Golden began her career working for New York City government as an urban fellow. She has a B.A. in political science from Brown University and a J.D. magna cum laude from the NYU School of Law.

**Rev. Gary Gunderson** is the vice president of the Division of Faith and Health Ministries at Wake Forest Baptist Medical Center and professor of faith and health of the public at the School of Divinity. Rev. Gunderson earned a B.A. in history from Wake Forest University and an M.Div., D.Min, and D.Div (Honorary) from Emory University. On graduation he initiated a ministry in the basement of Oakhurst Baptist Church called Seeds, which mobilized and equipped congregations and religious networks around hunger. That led his curiosity to focus on Africa and ways of generating socially relevant economic development. This led to the Carter Center and its Africa program of democratization. The center established the Interfaith Health Program in 1992, which under Rev. Gunderson's leadership developed a new paradigm for religion and the health of the public. Rev. Gunderson was one of the three principals who in 2002 launched the Africa Religious Health Assets Program, which has developed a new language and logic finding traction among global organizations from World Health Organization (WHO) to the Gates Foundation. He served 7 years as senior vice president of Methodist LeBonheur Healthcare in Memphis, Tennessee, and helped invent the "Memphis model" of very large scale congregational networks, which has attracted interest from the White House and the U.S. Department of Health and Human Services as it now serves as the secretariat for a network of health systems, including Wake Forest Baptist Medical Center, seeking to serve the poor and transform their communities. He became vice president at the Wake Forest Baptist Medical Center in July 2012. He has authored five books, most recently *Religion and the Health of the Public: Shifting the Paradigm* (Palgrave, 2012). He is a professor of public health science at the Medical Center and professor of faith and the health of the public in the School of Divinity.

**James A. Hester, Ph.D., M.S.,**† has been active in health reform and population health for almost four decades. His most recent position was the acting director of the Population Health Models Group at the Innovation Center of the Centers for Medicare & Medicaid Services (CMS) assisting in the development of delivery system transformation and payment reform initiatives such as Pioneer accountable care organizations (ACOs), medi-

cal homes, and population health models. Prior to joining CMS, he was the director of the Health Care Reform Commission for the Vermont state legislature. The commission was charged with developing a comprehensive package of health reform legislation and recommending a long-term strategy to ensure that all Vermonters have access to affordable, quality health care. The delivery system reforms included a statewide enhanced medical home program and the development of pilot community health systems based on the ACO concept. Dr. Hester has held senior management positions with MVP Healthcare in Vermont, ChoiceCare in Cincinnati, Pilgrim Health Care in Boston, and Tufts Medical Center in Boston. He began his managed care career as director of applied research for the Kaiser Permanente Medical Care Program in Los Angeles, California. His initial introduction to analyzing complex systems came in the aerospace industry through work on the Apollo project's rocket engines and high-powered gas dynamic lasers. Dr. Hester earned his Ph.D. in urban studies and his M.S. and B.S. degrees in aeronautics and astronautics, all from the Massachusetts Institute of Technology. He has a continuing interest in health services research and teaching, and he has held faculty appointments at the University of Vermont, the University of Cincinnati, the Harvard School of Public Health, and the University of Massachusetts. He has served on the boards of Vermont Information Technology Leaders, the Vermont Program for Quality Health Care, and the University of Vermont's College of Nursing and Health Science.

**George Isham, M.D., M.S.,**[*†] is senior advisor to HealthPartners, 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. Dr. Isham is also a senior fellow at the HealthPartners Research Foundation where he facilitates 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 is a 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's (CDC's) Task Force on Community Preventive Services and of the Agency for Healthcare Research and Quality's U.S. Preventive Services Task Force, and he 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.

**Jeffrey Levi, Ph.D.,**[*†] is executive director of the Trust for America's Health (TFAH), where he leads the organization's advocacy efforts on behalf of a modernized public health system. He oversees TFAH's work on a range of public health policy issues, including implementation of the public health provisions of the Affordable Care Act (ACA) and annual reports assessing the nation's public health preparedness, investment in public health infrastructure, and response to chronic diseases such as obesity. TFAH led the public health community's efforts to enact—and now defend—the prevention provisions of the ACA, including the Prevention and Public Health Fund and the new Community Transformation Grants. In January 2011, President Obama appointed Dr. Levi to serve as a member of the Advisory Group on Prevention, Health Promotion, and Integrative and Public Health. In April 2011, Surgeon General Benjamin appointed him chair of the Advisory Group. Dr. Levi is also a professor of health policy in George Washington University's School of Public Health, where his research has focused on HIV/AIDS, Medicaid, and integrating public health with the health care delivery system. In the past he has also served as an associate editor of the *American Journal of Public Health* and deputy director of the White House Office of National AIDS Policy. Beginning in the early 1980s, he held various leadership positions in the lesbian, gay, bisexual, and transsexual and the HIV communities, helping to frame the early response to the HIV epidemic. Dr. Levi received a B.A. from Oberlin College, an M.A. from Cornell University, and a Ph.D. from George Washington University.

**Glen P. Mays, Ph.D., M.P.H.,**[†] serves as the F. Douglas Scutchfield Endowed Professor of Health Services and Systems Research at the University of Kentucky College of Public Health. Prior to joining the University of Kentucky in August 2011, he served as professor and chairman of the Department of Health Policy and Management in the Fay W. Boozman College of Public Health at the University of Arkansas for Medical Sciences (UAMS), where he also directed the Ph.D. program in health systems research at UAMS. Dr. Mays's research focuses on strategies for organizing and financing public health services, preventive care, and chronic disease management for underserved populations. Currently he directs the Public Health Practice-Based Research Networks Program, funded by the Robert Wood Johnson Foundation (RWJF), which brings together public health agencies and researchers from around the nation

to study innovations in public health practice. Dr. Mays also serves as co-principal investigator of the RWJF-funded National Coordinating Center for Public Health Services and Systems Research at the University of Kentucky. Dr. Mays is also co-principal investigator of the North Carolina Preparedness and Emergency Response Research Center, funded by the Centers for Disease Control and Prevention and conducted in collaboration with the University of North Carolina (UNC) at Chapel Hill. Dr. Mays earned an undergraduate degree in political science from Brown University, earned M.P.H. and Ph.D. degrees in health policy and administration from UNC at Chapel Hill, and completed a postdoctoral fellowship in health economics at Harvard Medical School

**José Montero, M.D., MHDCS,**[*†] is director of the Division of Public Health Services at the New Hampshire Department of Health and Human Services, and he was elected president of the Association of State and Territorial Health Officials in September 2012. Dr. Montero began his medical and public health career in Colombia, where he served on several public health and academic positions and as Colombia's public health director. He began his New Hampshire service in 1999 as chief of the New Hampshire Communicable Disease Section within the Division of Public Health. Before becoming director of the New Hampshire Division of Public Health Services, Dr. Montero held the position of state epidemiologist. Dr. Montero also has several national roles. He is the president of the Association of State and Territorial Health Officers (ASTHO). He serves on several committees, including the federal Advisory Committee on Immunization Practices (as ASTHO liaison), and he has been recently appointed to the board of scientific councilors for the Office of Infectious Diseases at the Centers for Disease Control and Prevention. Dr. Montero served as a board member on the New Hampshire Foundation for Healthy Communities, was co-chair of the health promotion/disease prevention group of the New Hampshire Citizen Initiative, and was a member of the Dartmouth Medical School Leadership Preventive Medicine Residency Advisory Committee. He received his M.D. from the Universidad Nacional de Colombia. He specialized in family medicine, receiving his degree from the Universidad del Valle in Cali Colombia, and he received a degree in epidemiology from the Pontificia Universidad Javeriana in Bogota, Colombia. Recently he completed his master's degree in health care delivery science at Dartmouth University.

**Andrea Phillips, M.A.,** is the chief operating officer of 10,000 Small Businesses and a vice president in the Urban Investment Group of Goldman Sachs. She has more than 20 years of experience in developing small business, workforce, and community development programs. Most

recently she was a consultant providing strategic and operational planning services to a variety of public- and private-sector clients. Previously, Ms. Phillips was interim president of Seedco Financial, a $54 million community development financial institution that provides affordable capital to small businesses and nonprofit organizations in disadvantaged communities. Prior to that she was executive vice president for programs at Seedco, where she was responsible for developing strategies for and overseeing the implementation of all Seedco programs, totaling nearly $50 million in funding annually. Prior to her time at Seedco, she served as deputy director for research and evaluation for New York City's Victim Services Agency and as a program director at the Local Initiatives Support Corporation. Ms. Phillips holds a B.A. from Tufts University and an M.A. in public policy from the Kennedy School of Government at Harvard University.

**Andrew Webber**[*†] joined the Maine Health Management Coalition as chief executive officer in August 2013 and has been a long-time advocate for health care improvement. Before taking this position, he served the National Business Coalition on Health (NBCH) as president and chief executive officer from June 2003 to July 2013. NBCH is a national, not-for-profit membership organization of 56 purchaser-based coalitions on health that is dedicated to improving health and transforming health care, community by community. As president and chief executive officer of NBCH, Mr. Webber was responsible for overseeing all association activities, including value-based purchasing programs, government and external relations, educational programs, member communications, technical assistance, and research and evaluation. Mr. Webber currently is vice chair and a board member of the National Quality Forum. He sits on the board of directors for the Patient Centered Primary Care Collaborative, the Alliance to Make US Healthiest, and the Health Care Incentives Improvement Institute—the combined Bridges to Excellence and Prometheus Payment organizations. He is a principal of the Quality Alliance Steering Committee, and NBCH is a member of the Ambulatory Quality Alliance. Mr. Webber is also a member of the purchaser/business advisory councils for the National Committee for Quality Assurance, the Joint Commission for the Accreditation of Healthcare Organizations, and the eHealth Initiative. Prior to joining NBCH, Mr. Webber was a vice president for external relations and public policy at the National Committee for Quality Assurance. In this role, he directed all government relation activities and outreach efforts to the employer and consumer communities. Previous positions also include senior associate for the Consumer Coalition for Quality Health Care and executive vice president for the American Medical Peer Review Association (currently named the American Health

Quality Association). Mr. Webber started his health policy career in 1978 as an employee of the Washington Business Group on Health (currently named the National Business Group on Health), rising to the position of vice president for public policy. He is a frequent speaker and lecturer on health policy issues. He is a graduate of Harvard University.