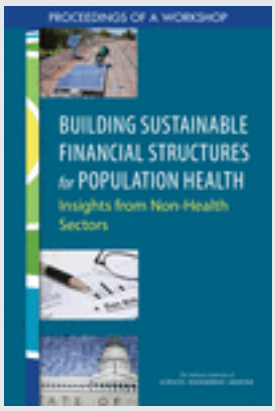

Building Sustainable Financial Structures for Population Health: Insights from Non-Health Sectors: Proceedings of a Workshop

DETAILS

90 pages | 6 x 9 | PAPERBACK
ISBN 978-0-309-45880-1 | DOI: 10.17226/24760

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Sustainable Financing Structures for Population Health: Historical Patterns and Insights for the Future: Commissioned Paper

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December 12, 2016

Improving population health and reducing health disparities requires identifying interventions that will cause people to make choices that result in positive health outcomes. However, success requires more than just knowing what to do. Importantly, there must be financing and institutional structures in place that support the implementation of the policies that are ultimately selected.

Policy can be delivered via multiple financing and institutional arrangements. Using a broad brush that is not intended to be fully exhaustive, one can categorize the ways that programs and policies can be funded according to who provides it and how. Governments can provide funding or resources through targeted appropriations, tax policy, programmatic expenditures, or mandates. Nongovernmental organizations can offer support through investments where either market-rate or below-market returns are expected, grants where no returns are expected, or the in-kind provision of expertise or services.[2]

From an institutional perspective, policy can obviously be implemented by public institutions at the federal, state, and local levels. However, in recent decades the policy action domain has expanded to include organizations in the private, nonprofit, and philanthropic sectors. In some cases, policy can be implemented solely by these nongovernmental organizations through contracts with government that establish performance guidelines and funding rules.[3] In other cases, policy can be implemented through the combined effort of organizations from multiple sectors, resulting in a web of possible institutional combinations through which policy can be delivered.

This paper provides an overview of these issues in the context of policies in non-health domains that promote public health. We first present a framework for thinking about the types of interventions that can promote improved public health. We then review four specific strategies

[1] Research support for Anthony Orlando was provided by the Low Income Investment Fund and the Roundtable on Population Health Improvement. The authors are responsible for the content of this article, which does not necessarily represent the views of the National Academies of Sciences, Engineering, and Medicine or those of the Roundtable on Population Health Improvement.
[2] ReThink Health has developed a useful framework for categorizing the various way that programs can be financed. ReThink Health. 2016. *Sustainable financing: A job for the field*, mimeograph.
[3] An example of this is job training, which in the United States is almost exclusively contracted out.

that have been found to be effective and analyze the combination of institutions and rules to determine which levers have been important for achieving the observed success. Our goal is to provide a range of examples of successful policies for mitigating the adverse effects of social determinants of health and for the financing and institutional structures that produced them. These should offer a jumping-off point for deliberations about the types of financing and institutional arrangements that are most likely to produce sustained activity at scale.

INTRODUCTION

By almost any measure population health in the United States has improved dramatically over history. For example, while the average male born in 1776 was expected to live to around 35 years (Steckel, 2002), the life expectancy of the average male born today is nearly 80 years (Steckel, 2002). Similarly, infant mortality in the United States was more than 20 times higher at the nation's beginning than it is today (Steckel, 2002). These gains have been truly remarkable.

Recent years, however, have produced a different, more troubling trend, one that has raised concerns. Over the past 50 years we have observed a widening gap between the health of certain segments of the U.S. population. For example, African-Americans are about 50 percent more likely to have heart failure than members of non-minority groups, are about twice as likely to have diabetes (and the same is true for Latinos), and are 68 percent more likely to be severely obese (Mead et al., 2008; Russell, 2010). We see similar relationships when we compare health outcomes between more affluent population groups and the poor.

The widening gap in public health is largely due to factors that can be grouped into a number of broad categories. Clearly, differences in access to health care services and in the quality of those services is a contributing factor to observed disparities. But differences in four non-health categories—environment, neighborhood, home, and economics—also contribute to the widening differentials in public health that we observe between more affluent and the poor as well as between minorities and non-minorities. There is a vast and growing literature showing how these social determinants affect population health, yet far less attention has been paid to the design and financing of programs and policies that mitigate these factors. In the rest of this paper, we present four case studies of these types of effective interventions, and we document how institutional structures contributed to their success.

ENVIRONMENT

The environment is perhaps the most straightforward social determinant of health. Because human existence and survival relies upon natural resources—air, water, food, and climate—breakdowns in the environment will have clear links to degradations in health.

Broad-based attention to the link between environmental health and personal and public health began in the United States at the same time as technological innovations were changing how goods were produced. In the late 19th century, scientists began to discover that airborne and waterborne particulates in pollution generated by factory production and engine-powered vehicles had a variety of negative health effects, from respiratory illness to cancer to cholera (Davis, 2003; Ebenstein, 2012; Kampa and Castanas, 2008; Katsouyanni, 2003; Schwarzenbach et al., 2010; Thorsheim, 2006). Importantly, these effects were not equally distributed. In recent decades, a large "environmental justice" literature has documented that poor and minority

households are disproportionately exposed to these particulates and other environmental toxins (Ash et al., 2009; Cole and Foster, 2001; Mohai et al., 2009; Taylor, 2014).

When looking at policies that are designed to fix the environmental challenges, we see activities at multiple levels. The federal government, through multiple agencies, offers resources that can be used to reduce environmental degradation. For example, the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Housing and Urban Development (HUD) both offer grants to clean up brownfields (EPA).[4] At the state and local level, governments use their planning and grant resources to put in place infrastructure that reduces the need for driving and other activities that increase air pollutants. Finally, philanthropic organizations also provide resources that can help improve environmental conditions and thereby help to reduce health impacts.[5]

Arguably the clearest example of a successful intervention is the reduction of smog in Los Angeles, California. Significantly, the barrier to progress was not financial or human resources but rather political will. A century ago, air pollution in Los Angeles was so bad that one day residents mistakenly thought there was an eclipse (Rosenberg, 2012). By the 1970s the Los Angeles basin was exceeding federal health limits for ozone on more than 200 days per year. Schools were refusing to let students go outside, as ozone levels would reach peak "emergency levels" during the day. The brown skies in Los Angeles at that time closely resembled the skies of Beijing, China, today (Nichols, 2015). What changed? According to experts who studied and lived through the transformation, it was the Clean Air Act, signed into law by President Richard Nixon on December 31, 1970.

Three years earlier, Governor Ronald Reagan had created the California Air Resources Board (CARB), but it had very little impact at first. It had neither the legal authority nor the political will to regulate ozone strictly. The Clean Air Act (CAA) gave it both. The chairperson at the time was a chemistry professor named Arie Haagen-Smit. Having this scientific authority was necessary in the beginning, says communications expert Larry Pryor, in order to convince the public and the policy makers that regulations were necessary. The second key element was someone with the communications and political savvy to enact those regulations. That person was Haagen-Smit's successor, Tom Quinn, who had just finished a successful run as Governor Jerry Brown's campaign manager when he was appointed to the role. Haagen-Smit and Quinn pushed for mandatory smog tests in vehicles, the installation of catalytic converters, and cleaner natural gas in power plants (Nichols, 2015; Rosenberg, 2012).

The results have been dramatic. Angelenos can now count "red alert" smog days on one hand each year. Brown skies have virtually disappeared (Rosenberg, 2012). A recent study in the *New England Journal of Medicine* documents "significant improvements" in lung function, particularly for children with growing lungs. Pollutants like nitrogen dioxide and fine particles have declined over 50 percent in the last two decades alone (Gauderman et al., 2015). Meanwhile, the California economy has grown at a strong rate, often outpacing the national average.

Against these benefits, one must weigh the policy's costs. From a public sector perspective, the CAA and other CARB regulations were fiscally feasible in large part because

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[4] According to the Environmental Protection Agency, a brownfield is defined as "a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant."

[5] We recognize that there are also legal remedies that can be used to minimize environmental impacts, such as enforcement of the clean air and clean water acts, but we did not emphasize those in this paper.

they shifted the direct costs on the automobile, electric utility, and other industries that were forced to adapt to the new reduced level of emissions. Pollution abatement raised the cost of investment required per unit of output, though some of these costs would be recovered in the future. It is infeasible to estimate the costs of the CAA in the context of Los Angeles alone, given that industry adjustments were frequently applied to goods sold nationwide. However, many have attempted to estimate the cost of the CAA overall. Some have argued that its costs are substantial (in the tens of billions of dollars annually) and likely outweigh benefits, while others argue that the costs are small relative to the size of U.S. industry (Greenstone, 2002; Krupnick and Portney, 1991; Melnick, 2010). The EPA has estimated that the CAA initially cost producers and consumers one-third of one percent of their income, with the percentage declining over time. This is not trivial, but it is important to note that the long-term benefits by some estimates has been far greater (EPA, 1997). A 2011 March EPA report estimated that the benefits of the CAA between 1990 and 2020 will outweigh costs on the order of 30 to 1 (EPA, 2011).

The political environment has changed significantly since the 1970s. It is not clear whether a "policy window" will open for another reform on the scale of the CAA.[6] For such a large-scale transformation to occur, the authors of this paper assert, a coalition of both scientific experts and political strategists will be needed to convince the public that it is in their interest, both in terms of health and economics, to enact regulations that come with a short-term cost and a long-term benefit. It is also necessary for state policy makers to have federal support in order to make sweeping changes, especially in today's tight budgetary environment. For this social determinant in particular, local and philanthropic efforts have never been scalable enough to address the grand scope of environmental problems. Federal–state partnerships provide a much more promising way forward.

NEIGHBORHOOD

In addition to the broader environment, the environment in a person's immediate neighborhood is also a social determinant of health. Concentrated poverty, crime, and food deserts, among other factors, have all been shown to be associated with poorer health outcomes. For example, the latest research shows that concentrated poverty devastates children who grow up in it. The cognitive development of children living in the midst of concentrated poverty is stunted, their physical safety is threatened, their mental health is damaged, they resort to violence, and they succumb to substance abuse and hopelessness (Bostic, 2016a, 2016c; Goffman, 2015; Kneebone and Holmes, 2016). Because these conditions are place-based, meaning that they concentrate more in some areas than in others, some populations—poorer, and often minority—are more at risk of these health ailments than others.

As in the case with the environment, policies of the federal, state, local, and nongovernmental levels have been brought to bear on challenges associated with neighborhoods. In some regards, nongovernmental organizations have taken a more visible role in trying to improve neighborhood trajectories. For example, MacArthur Foundation, the Annie E. Casey Foundation, and The California Endowment, among others, have initiatives that are focused on

[6] For more on the importance of "policy windows," see the classic work: Kingdon, John W. 2010. *Agendas, alternatives, and public policies: Updated second edition*. London: Pearson Education.

bringing back specific communities.[7] This area has seen considerable policy innovation, such as stop and frisk as a policing strategy, urban gardens as a healthy food effort, and moving to opportunity as a strategy to move people to neighborhoods that have better amenities.[8]

We use this last example as a case study. In 1994 HUD began an experiment known as Moving to Opportunity, or MTO. Motivated by the deterioration of public housing and the increasing concentration of poverty, HUD partnered with Abt Associates to randomly issue $70 million in vouchers. Some came with the requirement that the recipients move from their public housing in high-poverty neighborhoods to low-poverty neighborhoods, while some came with no requirements. The experiment also included a control group that did not receive a voucher (Shroder and Orr, 2012).

MTO was not an unqualified success. It was initially believed that the largest benefits would be economic, but the evidence consistently showed that families who used the vouchers did not reap immediate monetary benefits. While this was puzzling at first, more recent evidence has made clear that the economic consequences of these changes can take time to manifest themselves. It was only in the last year that researchers discovered that children living in those families had significantly higher rates of college attendance, higher earnings, and lower single parenthood rates (Chetty et al., 2016a). Viewed from a health perspective, however, the findings were less surprising. In the short run, the most significant outcomes were improvements in mental health and safety. Families who used the vouchers moved to neighborhoods with less crime and experienced much better cognitive outcomes (Kling et al., 2007; Ludwig et al., 2008). On balance, the short- and long-term benefits of MTO have been significant and persistent.

One underappreciated driver of this success, however, has been private philanthropy. Approximately one-third of the cost for data collection was funded by private foundations (HUD, 2011). Rather than being a top-down solution in the model of the CAA, the MTO demonstration represented a different and innovative institutional approach: a partnership between the federal government and private charitable organizations. It is clear that charities could not have undertaken such a large experiment on their own, but it is less well known that the government did not venture into this enterprise unassisted. It relied on the expertise of Abt Associates and the matching funds of private foundations. In this era of budgetary restrictiveness, these relationships pose a useful option to scalable assistance for targeted populations.

The cost of the data collection was much smaller than the $70 million allocated to the vouchers themselves. According to the final evaluation conducted by the National Bureau of Economic Research, the federal government spent approximately $12 million collecting and evaluating the data from 1994 to 2011 (National Bureau of Economic Research and University of Michigan—ISR (Institute of Social Research), 2011). While this is nontrivial, this total amount pales when compared with the $45 billion *annual* budget for HUD(0.027 percent) or the trillions

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[7]See, for example, MacArthur Foundation, *Chicago commitment*, https://www.macfound.org/programs/chicago/strategy (accessed July 7, 2017) ; Annie E. Casey Foundation, *Baltimore Civic Site*, http://www.aecf.org/work/community-change/civic-sites/baltimore-civic-site (accessed July 7, 2017); California Endowment, *Investing in place,* http://www.calendow.org/places (accessed July 7, 2017).

[8] For more details on stop-and-frisk, see: Matthews, Dylan. 2013. Here's what you need to know about stop and frisk—and why the courts shut it down, *Washington Post*, Wonkblog, August 13, https://www.washingtonpost.com/news/wonk/wp/2013/08/13/heres-what-you-need-to-know-about-stop-and-frisk-and-why-the-courts-shut-it-down (accessed July 7, 2017). For more details on urban gardens, see: Ward, Donnajean. 2015. Urban farms, gardens, and food desert myths, USC Bedrosian Center, June 5, http://bedrosian.usc.edu/blog/urban-farms-gardens-and-food-desert-myths (accessed July 7, 2017).

spent by the federal government during that time (0.0000003 percent).[9] The resources for continuing such an expansion of housing vouchers exist, though it is important to remember that the cost of making it an entitlement available to all qualifying households across America would be orders of magnitude higher. Experts estimate that the cost of a universal housing voucher program would be an additional $20 to $40 billion; of course, a less generous expansion could improve population health at much lower cost, as MTO has demonstrated (Blumgart, 2016).

HOUSING

The average American spends more time in his or her home than in any other location. Housing is therefore one of the greatest sources of opportunity and challenge in improving population health. Housing affects population health through two channels: housing quality and housing affordability. Together, they constitute one of the United Nation's basic human rights, "adequate housing" (Office of the United Nations High Commissioner for Human Rights).

The earliest housing policy interventions arose because of public health concerns associated with poor housing quality. The tenement homes that were common in cities during the industrial revolution of the late 1800s exposed residents to contaminated water, raw sewage, bacteria, and contagious illnesses, and concern about these dangers sparked the establishment of building codes (Shaw, 2004). While the codes did produce progress in reducing exposure to pathogens and toxins, the recent revelations in Flint, Michigan, and the book *Evicted* show that this remains an issue for many today (Bostic, 2016b; Desmond, 2016). Living in the presence of lead, for example, is highly detrimental, particularly for children, who can suffer permanent significant cognitive and physiological damage as a result of the exposure (Coley et al., 2013; Orlando, 2014). A second channel by which housing quality affects public health is through the interior climate it creates. Poor quality housing results in people living in homes that are damp and cold in the winter and, depending on where one lives, too hot and humid or dusty in the summer. This exacerbates difficulties for people with respiratory conditions such as asthma and for those with compromised immune systems, among others (Shaw, 2004).

The policies to address housing-related factors that affect individual and public health span the public–private continuum. The public sector at both the federal and local level provides grants to improve housing quality, including grants for improved energy efficiency and climate control, and local communities are continually revising zoning and building codes to reflect new understandings gained about the costs and potential remedies of adverse housing quality.[10]

There has been an emergent movement to use social impact investing to raise funds to mitigate poor housing quality (Clay, 2013). On the affordability side, HUD provides rental assistance to help those whose income is not sufficient to avoid being housing cost burdened, though this assistance is available for only about one-third of all eligible households (Dreier and

[9] Calculated using Table 1.1—Summary of receipts, outlays, and surpluses or deficits:1789–2021, from the Office of Management and Budget, Historical Tables, https://www.whitehouse.gov/omb/budget/Historicals (accessed July 7, 2017).

[10] Improvements in warmth and energy efficiency tend to yield significant improvement in respiratory health, especially asthma. They also have the ancillary economic benefit of reducing fuel bills, improving social cohesion, and increasing work hours, all of which have indirect health benefits. See, for example, Thomson, Hilary, Sian Thomas, Eva Sellstrom, and Mark Petticrew. 2009. The health impacts of housing improvement: A systematic review of intervention studies from 1887 to 2007, *American Journal of Public Health* 99(S3):S681–S692.

Bostic, forthcoming). HUD and the tax code also provide incentives for capital to flow to the development of affordable housing through grants and programs such as the Low Income Housing Tax Credit (Bostic and Rodnyansky, 2016).

For our home-related policy example, we highlight housing quality and lead in particular. Though lead contamination has received marked attention recently, we look to the lead aspect of the built environment not because it is so problematic, but rather because it used to be so much worse (Fox, 2016). Lead reduction is an example of a *successful* investment that has some consistent scale, though it could be scaled even further.

Nearly a century and a half ago, when America's cities were swimming in pollutants, the vast majority of cities used lead pipes. The lead level in New York City was more than 100 times higher than the EPA now allows. One in 10 Massachusetts residents suffered from lead poisoning. What changed? Better construction materials played an important role. New buildings do not use lead pipes and paint anymore. As recently as 1976, though, 13.5 million children under the age of 5 had an unhealthy incidence of lead in their blood. New development, it seemed, was not replacing existing infrastructure fast enough. Meanwhile, the old pipes and paint corroded over time, increasingly exposing residents to the lead contained within them.

What changed was the Residential Lead-Based Paint Hazard Reduction Act, also known as Title X of the Housing and Community Development Act of 1992, which was signed into law by President George H. W. Bush.[11] It created the Office of Lead Hazard Control, which issued grants to communities reduce lead in residential housing. The office currently has four main programs. Two competitive grant programs—the Lead Hazard Control (LHC) and Lead Hazard Reduction Demonstration grant programs—provide small grants (usually $3 million for the LHC program and up to $4 million for the demonstration program) to local communities, which must provide a local match and devote the bulk of funds to activities directly associated with the removal of lead. LHC grant funds must be devoted to private housing, and demonstration grant funds are reserved for the 100 highest-risk cities in terms of lead exposure (Malone, 2014). The demonstration grants alone have made 200,000 homes lead-safe (Malone, 2014). They have also spurred local governments, including those in Boston, Milwaukee, and Rochester, to fund their own lead hazard control initiatives. Studies have found all these programs to be successful in making homes safer and children healthier (CGR, 2008; Litt et al., 2002; Strauss et al., 2004; The National Center for Healthy Housing and The University of Cincinnati Department of Environmental Health, 2004). The third program the office operates is the Healthy Homes Initiative, which expands the focus beyond lead to include a wider array of health and safety hazards, including allergens, carbon monoxide, mold, pesticides, and radon. Finally, there are resources reserved for conducting research in this area.

A key characteristic of this suite of programs is its emphasis on the local implementation of federal policy priorities. This has at least three benefits. First, it promotes increased collaboration through the public–private partnerships that result from the program.[12] Second, the competitive structure of the main programs ensures that resources are directed to the institutions that are best positioned to effectively use them. Third, they produce a local buy-in that expands

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[11] Title X was not the first federal action taken to try and reduce exposure to lead in the home, but it was a reaction to the ineffectiveness of policies enacted through its predecessors, such as the Lead-Based Paint Poisoning Prevention Act. Alliance to End Childhood Lead Poisoning. 1993, *Understanding Title X: A practical guide to the Residential Lead-Based Paint Hazard Reduction Act of 1992*, Alliance to End Childhood Lead Poisoning report, http://rst2.edu/ties/lead/university/resources/leadsuite/Manuals/14FTITX.pdf (accessed July 7, 2017).

[12] In some instances, funds must be used in conjunction with a nongovernmental service provider. (Malone, 2014).

the political coalition and enhances the resilience of the program and its ability to weather funding threats.

The passage of the act was driven by several factors. First, the focus on children was critical. Federal policy has historically been more generous in providing support to poor children than poor adults, and the evidence was clear that the lead in units was stunting their physical and cognitive development. The poor condition of public and low-cost housing—and its adverse impact on developmental health—allowed advocates to point to governmental policy, as opposed to personal responsibility, as a main driver of the cycle of poverty. Finally, a considerable fraction of the funds is earmarked for private housing as opposed to public housing, which is widely viewed as being poorly managed.

This combination of factors has proven to be potent politically. The Office of Lead Hazard Control, now called the Office of Lead Hazard Control and Healthy Homes, has consistently secured significant funding from the Congress with bipartisan support. Over $1 billion in grants to has been awarded over the life of the program. Annual funding has varied since its enactment, but it has averaged about $120 million over the past 7 years, with recent proposed significant cuts by either the administration or Congress successfully rebuffed on a consistent basis.[13]

ECONOMICS

The richest percentile of American women live 10 years longer, on average, than the poorest percentile of women. For men, the life expectancy gap is 15 years (Chetty et al., 2016b). By this measure, economic factors dwarf all other drivers of health inequity. One factor that affects those in the lower percentiles is the stress and distraction that comes from burdensome expenses. A factor relevant to those in the upper percentiles, which is related to the factors above, is the ability to live in a neighborhood that fosters good health, which typically requires nontrivial wealth. These indirect reasons only partly explain the life expectancy gap, however. Research suggests that the economics itself matters. Specifically, having a job and having the pay and benefits of a "good" job are directly related to a person's health (Forstater, 2015; Pharr et al., 2011; Rosen, 2014; Strully, 2009). And even among the employed, economic circumstances are starkly unequal. The majority of poor people who can work, in fact, have a job. But, they are either working part-time or earning a wage so low that they cannot escape poverty (Gould, 2015). The result is worse health outcomes. Many studies confirm the causal effect of income on health—and vice versa, reinforcing the problem as worse health leads to worse economic outcomes, which lead to worse health (Frijters et al., 2005; Lindahl, 2005; Thomas and Strauss, 1997).

The economics-based health gap begins early. By the time they are two years old, children start to display significant cognitive differences. These differences—between black and white, rich and poor—grow wider with each passing year of childhood (Dobbie et al., 2011). Closing the gap at later ages becomes an increasingly difficult and costly endeavor. Economists have come to the conclusion that pre-kindergarten intervention is one of the most cost-effective

[13] For example, in fiscal year 2016, while the House initially voted to reduce funding for this program by one-third, the final appropriation was for 92 percent of the President's request. National Center for Healthy Housing, Policy: *Federal Appropriations – FY 17,* http://www.nchh.org/Policy/National-Policy/Federal-Appropriations.aspx (accessed July 7, 2017).

ways to address poverty and inequality. For example, the Nobel Prize–winning work of James Heckman has shown that high-quality preschool programs generate high rates of return, both to the individual in terms of lifetime earnings and to society in terms of less crime, more productivity, and better health (Elango et al., 2016; Heckman et al., 2010). The authors of this paper believe that these findings have rightfully served as a catalyst for large urban metropolitan areas, including Los Angeles and New York City, to expand their publicly funded pre-kindergarten programs and schooling (Goldstein, 2016; Kohli, 2015). Early childhood education has also become a high priority for national policy makers, including presidential candidates.

The caveat is that these programs must be "high quality." The push for universal preschool has much to learn from the U.S. experience with universal elementary, middle, and high school, where economic gaps are often exacerbated, rather than ameliorated by differences in school spending.[14] Schools in the wealthiest districts spend up to nine times as much per pupil as schools at the bottom of the socioeconomic distribution (Orlando, 2013). These economic differences—both in family wealth and school spending—account for the vast majority of the gap between student achievement, far more than school qualities like class size or teacher experience (Ravitch, 2010). Still, recent research gives reason for hope. There *are* proven strategies to raise student achievement, even for the most disadvantaged children.

More generally, policies to reduce economic-based inequities focus on improving a person's specific or general job skills. Programs designed to improve specific skills include job training programs run or sponsored by the U.S. Department of Labor, local public and private vocational school programs, community college specialized training courses, and apprenticeship programs run by unions, often in conjunction with employers (Holzer, 2014). General skills development is supported by funds designed to make education available (Head Start) or more accessible (Pell grants). There has also been innovation among providers of education, such that private and nonprofit education providers, often supported with public funds, are now more prevalent in the marketplace (Schwartz, 2014).

Perhaps the most prominent example of the latter type of education reform has been the Harlem Children's Zone (HCZ). A 97-block area in this historically low-income minority neighborhood in New York City, HCZ pairs two interventions: (1) Promise Academy charter schools serving more than 1,000 students and (2) community services to support all 5,000-plus children living within the zone from birth through college. The Promise Academy operates under the "No Excuses" philosophy of education, so called because they "make no excuses based on students' background." The community services include early childhood programs, after-school tutoring, extracurricular activities, college preparation, and even tax assistance. This model has been notably successful in narrowing the achievement gap, especially in math test scores. These results have been most pronounced for the students in the school itself, leading researchers to conclude that the "No Excuses" model was most responsible for HCZ's success (Dobbie et al., 2011). To further test this conclusion, the researchers investigated 39 charter schools across New York City to see if other high achievers were doing what HCZ was doing. Consistent with previous literature, they found that traditional school characteristics such as class size and teacher certification did not improve test scores. Rather, they found that the "No Excuses" policies—"frequent teacher feedback, data driven instruction, high-dosage tutoring, increased instructional time, and a relentless focus on academic achievement"—were strong predictors of

[14] Research has identified some concrete practices that constitute "high-quality," as exemplified by the "No Excuses" charter schools we describe below.

success (Dobbie and Fryer Jr, 2013). They took these lessons out of New York City and implemented all five policies in 20 low-performing schools in Houston, Texas, where they found that the results continued to hold (Fryer Jr, 2014). In every case, the achievement gap narrowed significantly.

HCZ did not achieve such success from the very beginning. In fact, it took several decades to reach this pinnacle of student achievement. If one is looking for a catalyst in this transformation, it would be hard to ignore the fact that HCZ's budget rocketed from $12 million to $95 billion in the first decade of the 21st century. Big-donor philanthropy has been the driving force behind the HCZ revolution (Callahan, 2014). With assets in the vicinity of $200 million, HCZ has been criticized for its lack of scalability (Otterman, 2010). If there were such a mechanism, the authors of this paper assert that America's public schools would undoubtedly be better equipped to compete on the global stage, given the impressive test scores that HCZ has generated.

Whether these results last, however, is the question that matters for long-run health. Here, researchers have encountered mixed evidence. HCZ students continue to outperform in math years after they win the lottery to enter the Promise Academy. They are also more likely to enroll in college after high school, though their peers eventually catch up. HCZ students are less likely to get pregnant in their teenage years, less likely to be incarcerated, and more likely to eat healthfully, but they do not perform any better in terms of drug and alcohol use, criminal behavior, asthma, obesity, or mental health (Dobbie and Fryer Jr, 2015). Most concerning, however, is the recent discovery that students who attended high-achieving "No Excuses" charter schools in Texas did not experience any significant increase in earnings after they graduated—and charter school students as a whole actually experienced a *decrease* in earnings relative to their peers who attended public schools (Dobbie and Fryer Jr, 2016). This finding is consistent with a large body of evidence indicating that charter schools do *not* perform better, on average, than public schools (Dobbie et al., 2011; Fryer Jr, 2014; Ravitch, 2010). It is only a small subset that consists of significantly high achievers—and, as this evidence suggests, even they cannot claim to be closing most of the gap in the long run.

Recent research has suggested that it is the schools that improve the students' test scores, not the social services (see, for example, (Dobbie and Fryer Jr, 2015)[15]). While this finding may be empirically valid, it does not answer our overarching question about population health. The evidence documented in this paper suggests that social services are at least as important social determinants of health as education. HCZ thus poses an important model for reasons beyond its educational significance. It represents a powerful opportunity to investigate a holistic approach—blending neighborhood and education—to expand our frame of measurement beyond educational outcomes. The more "co-benefits" we can find, adopting programs that tackle multiple social determinants of health at once, the more cost-effectively we can achieve our goal of a healthy population.

[15] Because students are chosen for the Promise Academy by lottery, the researchers can isolate the effect of the school versus the neighborhood programs, which are experienced by all students living in the Harlem Children's Zone.

CONCLUSION

In the context of a framework for categorizing social determinants of health, this paper has tried to provide examples of successful policy interventions with some focus on the financing and institutional arrangements that facilitated their effectiveness. The case studies span a broad space:

- a federal government program, with funds given to local jurisdictions who then establish contracts or partnerships with nongovernmental entities to provide services (lead abatement in the home);
- a local program bolstered by philanthropic support, whose success generates interest at higher levels of government (education reform [and community services] to improve economic prospects);
- a political mandate that empowered an existing state agency to impose policies that impose broad costs that are collectively agreed upon (clear air initiative to better the environment); and
- a demonstration project that evolves into a partnership between government and philanthropy, with the results triggering consideration of new programs such as the Small Area Fair Market Rents program (effort to increase access to opportunity via moving to a neighborhood with better amenities).

Each of these represents a potential model for success in other contexts and offers lessons that should be internalized by those considering options. For example, the smog reduction in the Los Angeles basin shows that a health challenge that is considered to be sufficiently serious can be tackled, even in the face of significant costs. Similarly, the MTO experiment shows that interventions intended to serve non-health purposes can have significant co-benefits for population health.

Unfortunately, the budgetary and administrative structures of our public institutions often give them little incentive to invest in ways that benefit other sectors. Federal budget rules explicitly forbid agencies from getting credit—in the form of either direct supplemental resources or credits against future expenditures—if their investments provide savings or improve outcomes in another domain (Karabell, 2014). This has inhibited cooperation between agencies and also likely limits the range of policy options that agency policy makers consider.

This dynamic extends to state, regional, and local governments as well. A concrete example in the case of homelessness demonstrates this. It is widely recognized that much of the cost of homelessness occurs in the health sector, meaning that housing interventions will generate savings to the public health system (Gladwell, 2006). Yet in many regions public health is managed at the county or regional level, while housing resources are available through central cities. In such geographies where the county and central city do not coincide, the expenditures and savings are associated with different governmental bodies. Hence, we see housing-health cooperation occur more readily in San Francisco, which is both a county and city, than in Los Angeles, where Los Angeles County includes 88 cities in addition to the City of Los Angeles. This is because the expenditures and savings appear on the same effective budget in San Francisco, while in Los Angeles an intergovernmental agreement needs to be established between the county and city. Such agreements are very difficult to maintain over time. The

takeaways from these case studies therefore go beyond any individual intervention. More holistic approaches are necessary to increase the interdependence *between* sectors.

Successful place-based interventions necessarily leverage their local context to achieve maximum impact. But this represents a potential barrier to bringing them to a national scale, as local contexts can vary widely. Creativity in program design and implementation is therefore critical in understanding the essential elements for program success and how they work in different local circumstances. This consideration motivated the Small Area Fair Market Rents demonstration, an experiment by HUD that represents a first step towards introducing MTO-type mobility to the entire housing choice voucher program (Kahn and Newton, 2013). The demonstration was run in a small diverse set of cities, and the results suggest scaling is possible.

It is our hope that these examples and the lessons embedded in them spark conversations and inspire researchers and policy makers to find innovative ways to take effective policies to scale with financing structures that can be sustained over the long run.

This paper was commissioned by the National Academies of Sciences, Engineering, and Medicine's Roundtable on Population Health Improvement with additional support from the Low-Income Investment Fund (LIIF). The paper was prepared for the workshop titled Building Sustainable Financing Structures for Population Health, which was held in Washington, DC, on October 19, 2016. All errors and omissions are the authors'.

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D

SPEAKER BIOGRAPHICAL SKETCHES

Michael Bodaken, J.D., serves as the president of National Housing Trust and as the vice president of Homes For America, Inc. He served as the head of the National Housing Trust for more than 13 years. Mr. Bodaken is chiefly involved in administration, business planning, technical assistance, and public policy. Mr. Bodaken has been directly involved in providing technical assistance to capable nonprofit organizations interested in purchasing affordable, multi-family housing developments. He served as the deputy mayor of the City of Los Angeles with the responsibility for, among other things, the housing and community development programs of the city. He is a frequent moderator and panelist at regional and national housing conferences concerning the preservation of multifamily housing. He is proficient in investment, tax, and legal matters concerning housing and community economic development. He practiced as a public interest lawyer with the Legal Aid Foundation of Los Angeles and the San Fernando Valley Neighborhood Legal Services. He is recognized as a key national leader in the affordable housing field and is a frequent moderator and panelist at regional and national housing conferences concerning the preservation of multifamily housing. He serves on the boards of numerous national housing organizations, including Homes for America, Inc., Housing Preservation Project, Urban Vision, Fairfax and Montgomery County Housing Tax Forces, and Stewards for Affordable Housing for the Future. Mr. Bodaken has a J.D. degree from Peoples College of Law and a B.A. degree from the University of Iowa.

Raphael Bostic, Ph.D., is the Judith and John Bedrosian Chair in Governance and the Public Enterprise at the University of Southern California's Price School of Public Policy and the chair of the Department of Governance, Management, and the Policy Process. For 3 years, he was the Obama administration's Assistant Secretary for Policy Development and Research at the U.S. Department of Housing and Urban Development (HUD). In that Senate-confirmed principal position, he advised HUD's secretary on policy and research in order to promote informed decisions on HUD policies, programs, and budget and legislative proposals.

Debbie Chang, MPH, is the vice president of policy and prevention for Nemours, in which position she focuses on developing and achieving Nemours' policy and advocacy goals; identifying, evaluating, replicating, and promoting model practices and policies in strategic areas such as innovation in child health promotion, prevention, and Nemours' integrated system of care; and developing and advancing Nemours' visionary child health prevention strategy across the enterprise. Ms. Chang is also leading a collaborative learning effort with eight communities across the country to harness and promote innovative policies and practices to improve the health and well-being of children in cross-sectoral (i.e., integrating health and other sectors serving children), place-based approaches. During the past 5 years at Nemours, she created and led Nemours Health & Prevention Services, an operating division devoted to improving children's health over time through a cross-sectoral, community-based model in Delaware that includes developing, implementing, evaluating, and promoting model prevention interventions. Ms. Chang has more than 22 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, the 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; director of the Office of Legislation for the Health Care Financing Administration (now Centers for Medicare & Medicaid Services); and the director of SCHIP when it was first instituted in 1997. Ms. Chang also served as the senior health policy advisor to former U.S. Senator Donald W. Riegle, Jr., the former chair of the Senate Finance Subcommittee on Health for Families and the Uninsured. She currently serves as the co-principal investigator on a Robert Wood Johnson evaluation grant, Evaluation of School and Child Care Sector Childhood Obesity Prevention Strategies in Delaware. She is an active member on a number of boards, including Grantmakers in Health, Healthy Eating Active Living Convergence Partnership, National Institute for Children's Healthcare Quality (NICHQ) Policy Advisory, and Obesity National Advisory Committees, and the University of California at Los Angeles Alliance for Information on Maternal and Child Health Support Center National Advisory Panel. Ms. Chang is a senior associate in the Department of Population, Family, and Reproductive Health at the Bloomberg School of Public Health, Johns Hopkins University. She has published work on integrating population health and medical care, SCHIP, and Maryland's managed care program. She holds a master's degree in public health policy and administration from the University of Michigan and a bachelor's degree in chemical engineering from the Massachusetts Institute of Technology.

Holmes Hummel, Ph.D., is the senior policy advisor in the U.S. Department of Energy's Office of Policy and International Affairs. In earlier public service, Dr. Hummel served as a Congressional Science Fellow focused on energy and climate policy. Dr. Hummel's experience on Capitol Hill informed his Climate Policy Design Pro-Series, a program for Silicon Valley professionals and public interest organizers that remains an active online resource for educators and entrepreneurs alike. The series was developed from Dr. Hummel's graduate course on climate policy design offered by the Energy Resources Group at the University of California, Berkeley. Before moving to Washington, DC, Dr. Hummel designed corporate energy strategies for clients of the energy intelligence software firm Itron and later consulted with the Google energy and climate team. As one of the first candidates to earn a Ph.D. from the Interdisciplinary Program on Environment and Resources at Stanford University, Dr. Hummel researched methods for interpreting technology and policy implications of energy scenarios for climate stabilization. The techniques involved were developed with support from global thought leaders in the Greenhouse Gas Initiative at the International Institute for Applied Systems Analysis and subsequent work with Professor Zhang Xiliang at the Institute for Energy, Environment, and Economy of Tsinghua University in Beijing. Demonstrating the value of policy-relevant research beyond Stanford, Dr. Hummel immediately joined Jan Hamrin, the long-time president of the Center for Resource Solutions, to co-author A Review of Role of Renewable Energy in Global Energy Scenarios for the International Energy Agency's Implementing Agreement on Renewable Energy Technology Development. Dr. Hummel was first hooked on energy technology innovation in 1994 as a co-leader of the Clarkson University Solar Car Team, which designed and raced a highly efficient experimental electric vehicle across the country using only the power of the sun. In addition to receiving a Switzer Environmental Fellowship in the ensuing years, Dr.

Hummel has been recognized by the Environmental Leadership Program as a "visionary, action-oriented leader."

George Isham, M.D., M.S., is a 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 HealthPartners Research Foundation and 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 clinical program committee of the National Committee for Quality Assurances (NCQA), and is a member of NCQA's Committee on Performance Measurement. He is a former member of the Center for Disease Control and Prevention's Task Force on Community Preventive Services as well as the Agency for Healthcare Research and Quality's U.S. Preventive Services Task Force and currently serves on the advisory committee to the director of Centers for Disease Control and Prevention. 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. In 2014 Dr. Isham was elected to the National Academy of Medicine. He is the chair of the Health and Medicine Division's (HMD's) Roundtable on Health Literacy and has chaired three studies in addition to serving on a number of HMD studies related to health and quality of care. In 2003 Dr. Isham was appointed as a lifetime national associate of the National Academies of Sciences, Engineering, and Medicine (the National Academies) in recognition of his contributions to the work of HMD of the National Academies.

Paula Lantz, Ph.D., M.S., M.A., is the associate dean for research and policy engagement and a professor of public policy at the Ford School. She most recently was a professor and the chair of the Department of Health Policy and Management at the Milken Institute School of Public Health at George Washington University. From 1994 to 2011, she was a faculty member at the University of Michigan, with a primary appointment in the School of Public Health and affiliations with the Ford School and the Institute for Social Research. Dr. Lantz, a social demographer, studies the role of public health in health care reform, clinical preventive services (such as cancer screening and prenatal care), and social inequalities in health. She is particularly interested in the role of health care versus broad social policy aimed at the social determinants of health in reducing social disparities in health status. She is currently doing research regarding the potential of social impact bonds to reduce Medicaid expenditures. Dr. Lantz is a member of the National Academy of Medicine (elected in 2012) and received an M.A. in sociology from Washington University, St. Louis, and an M.S. in epidemiology and a Ph.D. in sociology from the University of Wisconsin.

Elizabeth K. Lyon oversees the technical support provided to states that are participating in the Justice Reinvestment Initiative. Since joining the Council of State Governments Justice Center in 2012, Ms. Lyon has worked with leaders across 12 states to ensure that the policies enacted achieve the projected outcomes to reduce spending on corrections and to reinvest in strategies to improve public safety. Ms. Lyon provides technical assistance tailored to the specific policies in each state. Previously, Ms. Lyon was the director of governmental relations for the State Bar of

Michigan, where she directed the public policy program, which included a large state and federal agenda. She holds a B.A. from the James Madison College at Michigan State University.

Sanne Magnan, M.D., Ph.D., is the co-chair of the Roundtable on Population Health Improvement. Dr. Magnan served as the president and chief executive officer of the Institute for Clinical Systems Improvement (ICSI) until January 4, 2016. Dr. Magnan was previously the president of ICSI when she was appointed by former Minnesota Governor Tim Pawlenty to serve as Commissioner of Health for the Minnesota Department of Health. She served in that position from 2007 to 2010 and had significant responsibility for the implementation of Minnesota's 2008 health reform legislation, including the Statewide Health Improvement Program, standardized quality reporting, the development of provider peer grouping, the certification process for health care homes, and baskets of care. She returned as ICSI's president and chief executive officer in 2011. Dr. Magnan also currently serves as a staff physician at the Tuberculosis Clinic at St. Paul–Ramsey County Department of Public Health and as a clinical assistant professor of medicine at the University of Minnesota. Her previous experience includes serving as a vice president and medical director of Consumer Health at Blue Cross and Blue Shield of Minnesota, where she was responsible for case management, disease management, and consumer engagement. Dr. Magnan holds an M.D. and a Ph.D. in medicinal chemistry from the University of Minnesota and is a board-certified internist. She earned her bachelor's degree in pharmacy from the University of North Carolina. She currently serves on the National Academies of Sciences, Engineering, and Medicine's Roundtable on Population Health Improvement; she has served on the board of Minnesota Community Measurement, and the board of NorthPoint Health and Wellness Center, a federally qualified health center which is part of Hennepin Health. She was named 1 of the 100 Influential Health Care Leaders by *Minnesota Physician* magazine in 2004, 2008, and 2012. Since 2012 she has participated in the Process Redesign Advisory Group for the National Center for Inter-Professional Practice and Education coordinated through the University of Minnesota. Recently, she became a senior fellow of the HealthPartners Institute for Education and Research. She is participating in several technical expert panels for the Centers for Medicare & Medicaid Services on population health measures (2015–2016), and is a member of the Population-Based Payment Workgroup of the Healthcare Payment Learning and Action Network (2015–2016). She is also on the Interdisciplinary Application/Translation Committee of the Interdisciplinary Association for Population Health Sciences.

Bobby Milstein, Ph.D., M.P.H., directs ReThink Health's work in dynamics, systems strategy, and sustainable financing. An expert in health system dynamics and policy, Dr. Milstein oversees the ongoing development of the ReThink Health Dynamics Model. He spent 20 years at the Centers for Disease Control and Prevention, where he founded the Syndemics Prevention Network and coordinated planning and evaluation activities for a number of public health initiatives. Bobby has a Ph.D. in public health science from Union Institute & University, an M.P.H. from Emory University, and a B.A. from the University of Michigan Honors College.

Anthony W. Orlando is a Ph.D. candidate in public policy and management at the Sol Price School of Public Policy at the University of Southern California. He is a lecturer in the College of Business and Economics at California State University, Los Angeles, an op-ed columnist for the Huffington Post, and the managing partner of the Orlando Investment Group. His latest book, *Letter to the One Percent*, was published by Lulu Press in November 2013.

Chris Parker, M.B.B.S., M.P.H., is an associate project director at the Georgia Health Policy Center. He holds a leadership role in many of the center's projects related to public health and program evaluation. His areas of expertise include strategic planning and evaluation, with a particular interest in projects that link population health and health care. Mr. Parker is a skilled facilitator who has guided a significant number of multi-sectoral, state, and local organizational strategic and evaluation plans. He is the co-principal investigator for Bridging for Health: Improving Community Health through Innovations in Financing, sponsored by the Robert Wood Johnson Foundation. He also leads the center's growing health care workforce portfolio with a focus on Georgia's primary care assets to address gaps in light of the Affordable Care Act as well as leading the center's work on community health needs assessments. As a trained family physician who has worked with underserved populations and faith-based organizations, Mr. Parker brings his clinical and community linked experiences to addressing current and longstanding public health issues.

Mary A. Pittman, Dr.P.H., is the president and chief executive officer of the Public Health Institute (PHI). A nationally recognized leader in improving community health, addressing health inequities among vulnerable people, and promoting quality of care, Dr. Pittman assumed the reins at PHI in 2008, becoming the organization's second president and chief executive officer since its founding in 1964. Her primary focus has been guiding the development of a strategic plan that builds on existing PHI program strengths to achieve greater impact on public policy and practice in public health. "In a changing environment, strategic planning is an ongoing process, not an end product," she said. Dr.Pittman's overarching goal is for PHI to become known for leadership in creating healthier communities. To this end, PHI continues to work closely with the state on many programs, including the Supplemental Nutrition Assistance Program. What's more, she advocates that all PHI projects take the social determinants of health into account in order to better address health disparities and inequities. Under Dr.Pittman's leadership, PHI has emphasized support for the Affordable Care Act and the Prevention and Public Health Fund, the integration of new technologies, and the expansion of global health programming. Other top priorities are: increasing advocacy for public policy and health reform and addressing health workforce shortages and the impacts of climate change on public health. Under Dr. Pittman, PHI has created Dialogue4Health.com, the online platform for conferencing and social networking, and has been recognized as a preferred place to work. Dr. Pittman strives for PHI's independent investigators to work together to achieve a synergy among their contributions so that the whole is greater than the sum of the individual contributions. Dr. Pittman has deep, varied, and multi-sectoral experience in local public health, research, education, and hospitals. Before joining PHI, Dr. Pittman headed the Health Research and Educational Trust, a Chicago-based affiliate of the American Hospital Association, from 1993 to 2007. Previously, she was president and chief executive officer of the California Association of Public Hospitals and a director of the San Francisco Department of Public Health. Dr. Pittman has authored numerous peer-reviewed articles in scientific journals and two books. She has served on the PHI board of directors since 1996. Dr. Pittman also serves on numerous boards and committees, including the World Health Organization's Health Worker Migration Global Policy Advisory Council and the National Patient Safety Foundation's board of governors.

Joel Rogers is the Sewell–Bascom Professor of Law, Political Science, Public Affairs, and Sociology at the University of Wisconsin–Madison, where he also directs the Center on Wisconsin Strategy, a national high-road strategy center. Mr. Rogers has written widely on American politics and democratic theory. Along with many articles, his books include *The Hidden Election*, *On Democracy*, *Right Turn*, *Metro Futures*, *Associations and Democracy*, *Works Councils*, *Working Capital*, *What Workers Want*, *Cities at Work*, and *American Society*. Mr. Rogers has also worked with and advised many politicians and social movement leaders, and founded, co-founded, and helped operate several progressive nongovernmental organizations (including the New Party, Economic Analysis Research Network, Apollo Alliance, Emerald Cities Collaborative, and State Innovation Exchange). He is a contributing editor of *The Nation* and *Boston Review*. Along with various academic honors, he is a MacArthur Foundation Fellow, and he was identified by *Newsweek* as 1 of the 100 living Americans most likely to shape U.S. politics and culture in the 21st century.

Pamela Russo, M.D., M.P.H., has been a senior program officer at the Robert Wood Johnson Foundation since 2000. The major area of her work is improving health at the community level, based on the understanding of health as the result of interactions between social, environmental, behavioral, health care, and genetic determinants. This area of programming includes developing robust collaborative partnerships across different sectors, agencies, and organizations and requires addressing the root causes underlying inequities in the determinants between different populations or neighborhoods. Her program portfolio includes transforming the governmental public health system, including national accreditation as a platform for quality improvement; health impact assessment and more routinely bringing a health lens to decisions made in other sectors; working with communities to bridge sectors, including health care, public health, social services, and others, and to identify and implement financing innovations to sustain their progress in improving the health of all in their communities; and supporting predictive modeling showing the value of community-level prevention based on the best available evidence, and making those models useful to decision makers in communities and states. Dr. Russo is a member of the National Academies of Sciences, Engineering, and Medicine's Roundtable on Population Health Improvement. Prior to joining the Foundation, Dr. Russo was an associate professor of medicine, a researcher in clinical outcomes, and a program co-director for the master's program and fellowship in clinical epidemiology and health services research at the Cornell University Medical Center in New York City. Her education includes a B.S. from Harvard College, an M.D. from the University of California, San Francisco, and an M.P.H. in epidemiology from the University of California, Berkeley, School of Public Health, followed by a residency in primary care general internal medicine at the Hospital of the University of Pennsylvania and a fellowship in clinical epidemiology and rheumatology at Cornell.

Judge Steven C. Teske, J.D., M.A., B.I.S. is the chief judge of the Juvenile Court of Clayton County, Georgia, and regularly serves as a superior court judge by designation. He was appointed a juvenile court judge in 1999. Judge Teske authored the School-Justice Partnership Model to reduce delinquency by promoting academic success using alternatives to suspensions and school-based arrests. Judge Teske has testified before Congress on four occasions and before several state legislatures on detention reform and zero-tolerance policies in schools. The governor of Georgia has appointed him to the Children and Youth Coordinating Council, the Governor's Office for Children and Families, the Department of Juvenile Justice Judicial

Advisory Council, the Juvenile Detention Alternatives Institute Statewide Steering Committee, and the Georgia Commission on Family Violence. Judge Teske was also appointed to the Georgia Criminal Justice Reform Commission and serves as chair of the Oversight and Implementation Committee (juvenile justice). He has served on the Council of State Attorneys General of the Coalition of Juvenile Justice and the Federal Advisory Committee for Juvenile Justice, which advises the President and Congress on juvenile justice issues. He chairs the Southern Region of the Coalition of Juvenile Justice. He is a member of the National Council of Juvenile and Family Court Judges and has served on the Board of Directors. He currently chairs the School Pathways Steering Committee and is vice-chair of the Juvenile Justice Advisory Committee. He is a past president of the Georgia Council of Juvenile Court Judges and the Clayton County Bar Association. He has written several articles on juvenile justice reform published in the *Juvenile and Family Law Journal*, *Journal of Child and Adolescent Psychiatric Nursing*, *Juvenile Justice and Family Today*, *Family Court Review*, and the *Georgia Bar Journal*. His book, *Reform Juvenile Justice Now*, is a collection of essays on juvenile justice issues. He is a Toll Fellow of the Council of State Governments and received his J.D., M.A., and B.I.S. degrees from Georgia State University in Atlanta.