# Business Engagement in Building Healthy Communities: Workshop Summary

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Theresa Wizemann, Rapporteur; Roundtable on Population Health Improvement; Board on Population Health and Public Health Practice; Institute of Medicine

# BUSINESS ENGAGEMENT *in* BUILDING HEALTHY COMMUNITIES

WORKSHOP SUMMARY

Theresa Wizemann, *Rapporteur*

Roundtable on Population Health Improvement

Board on Population Health and Public Health Practice

INSTITUTE OF MEDICINE
*OF THE NATIONAL ACADEMIES*

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

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



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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:

**Alan Gilbert,** GE Healthymagination
**Marc Gourevitch,** New York University School of Medicine
**Emma Hoo,** Pacific Business Group on Health
**Martín José Sepúlveda,** IBM Research

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 **Derek Yach,** The Vitality Group. 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 rapporteur and the institution.

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## BOXES



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# Abbreviations and Acronyms

| | |
|---|---|
| AAS | associate in applied science degree |
| APEC | Asia Pacific Economic Cooperation |
| BMI | body mass index |
| CBO | Congressional Budget Office |
| CDC | Centers for Disease Control and Prevention |
| CUNY | City University of New York |
| FSG | Foundation Strategy Group |
| GDP | gross domestic product |
| GPBCH | Greater Philadelphia Business Coalition on Health |
| GSI | Greater Spokane Incorporated |
| HERO | Health Enhancement Research Organization |
| IHI | Institute for Healthcare Improvement |
| IOM | Institute of Medicine |
| NBCH | National Business Coalition on Health |
| NYAM | New York Academy of Medicine |
| P-TECH | Pathways in Technology Early College High School |
| STEM | science, technology, engineering, and mathematics |

# 1

# Introduction[1]

Businesses across the nation are involved in every aspect of their communities and the economy and can be powerful partners in terms of improving the health of the nation, said George Isham, a senior advisor at HealthPartners, Inc., a senior fellow at the HealthPartners Institute for Education and Research, and a co-chair of the Institute of Medicine (IOM) Roundtable on Population Health Improvement. On July 30, 2014, the IOM roundtable held a workshop at the New York Academy of Medicine (NYAM) in New York City to consider the role of business in improving population health beyond the usual worksite wellness and health promotion activities.[2,3] In welcoming participants

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

[2] The working definition of population health used by the roundtable is "the health outcomes of a group of individuals, including the distribution of such outcomes within the group" (Kindig and Stoddart, 2003). For an expanded discussion of this term, see the roundtable's website at http://www.iom.edu/pophealthrt. The term "population health" is used in a variety of ways throughout the summary and should be considered in the context of how individual speakers use the term.

[3] Extensive research exists that links socioeconomic factors such as income and education to health outcomes. See, for example, *Exploring Opportunities for Collaboration Between Health and Education to Improve Population Health: Workshop Summary* (IOM, 2015a). http://www.

to NYAM, the academy's president, Jo Ivey Boufford, said that economic development is a crucial factor in achieving population health and that there are many opportunities to create win–win situations for businesses to promote population health in the communities where they live and serve. She added that in New York State businesses have been a fundamental part of a large, multi-stakeholder group that is implementing a prevention agenda for the state and helping communities to identify and address priority needs.[4]

The workshop, co-chaired by George Isham and David Kindig, emeritus vice chancellor for health sciences at the University of Wisconsin School of Medicine and Public Health, followed previous roundtable discussions on the importance of applying a health lens to decision making in non-health sectors and the need for cross-sector collaborations to advance population health (IOM, 2014a). Invited speakers included representatives from several businesses that have taken action to improve the health of their communities and representatives of business coalitions on health.

## WORKSHOP OBJECTIVES

The roundtable supports workshops for its members, stakeholders, and the public to discuss issues of importance for improving the nation's health. Isham explained that the roundtable has identified six drivers that it believes are key to improving population health and to where the activities of the roundtable can be designed to stimulate further dialogue and action: metrics, policy, relationships, evidence, resources, and communication. This workshop examined several of these drivers, especially relationships and resources. An independent planning committee, co-chaired by Catherine Baase and Andrew Webber and including Rachel Bright, Alexander Chan, George Isham, James Knickman, and Martín José Sepúlveda, was charged with developing a workshop to explore the role of the private sector in advancing the health of their communities (see Box 1-1). The workshop, titled Business Engagement in Population Health Improvement, was designed to:

- discuss why engaging in population health improvement is good for business;

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iom.edu/healthandeducation. The effects of business on economic growth, education, and urban planning can contribute to community support that fosters improved health status and security.

[4] See http://www.health.ny.gov/prevention/prevention_agenda/2013-2017 (accessed December 12, 2014).

**BOX 1-1**
**Statement of Task**

An ad hoc committee will plan and conduct a public workshop that will feature invited presentations and discussion of how businesses can participate in improving population health. Specific topics may include the business case for involvement in population health and how businesses can be effective as key players in population health improvement. The committee will define the specific topics to be addressed, develop the agenda, select 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.

- explore how businesses can be effective key leaders in improving the health of communities; and
- discuss ways in which businesses can engage in population health improvement.

## ORGANIZATION OF THE WORKSHOP AND SUMMARY

The workshop consisted of a keynote presentation on "blue zones," the places with highest longevity around the world (Chapter 2), followed by four panel discussions designed around the topics listed above. Invited speakers and participants considered the case for business engagement in population health improvement (Chapter 3); examples of corporate responsibility projects that affect health in communities, but which were not designed with population health improvement as the primary goal (Chapter 4); case examples of corporate programs intentionally designed to affect population health (Chapter 5); and mechanisms to stimulate and support business engagement in population health improvement, including partnering with other community-based stakeholders (Chapter 6). In the closing session, roundtable members and invited speakers were asked to offer their observations on the main themes that emerged from the workshop sessions and also their perspectives on how to move forward (Chapter 7).

# 2

# Lessons from the Blue Zones®

The Danish Twin Study established that only about 20 percent of how long the average person lives is dictated by genes, while about 80 percent is influenced by lifestyle and environment, said keynote speaker, Dan Buettner, founder of the concept of Blue Zones®.[1] To better understand the role of lifestyle and environment, Buettner set out to "reverse engineer longevity." In association with *National Geographic* and with funding from the National Institute on Aging, Buettner and a team of demographers studied census data and identified five pockets where people are living verifiably longer lives by a number of measurements (Ikaria, Greece; Loma Linda, California; Nicoya, Costa Rica; Okinawa, Japan; Sardinia, Italy; see Box 2-1). A team of experts then used established methodologies to try to determine why people had such remarkable longevity in these areas, which were dubbed "blue zones." The intent, Buettner explained, was to identify lessons or principles that could be applied to build healthier communities and to help people live longer and better lives. In describing the five blue zones, Buettner shared the stories of several individuals, each close to or more than 100 years of age. He showed photos of them swimming, surfboarding, lifting weights, working, and volunteering in their community. Health information is boring, he said, even in the cases of the best research and data. Using a human story to present health information increases audience engagement.

[1] See http://www.bluezones.com (accessed December 12, 2014).

**BOX 2-1**
**The Blue Zones**

**Ikaria, Greece** The Greek Island of Ikaria has the greatest adherence to the Mediterranean diet in the world. The people live about 7 years longer than Americans do. A survey by the University of Athens of all 674 people over age 70 on the island found, using the same cognitive tests that the National Institute on Aging uses, that Ikarians have one-fifth the rate of dementia as Americans of similar age. Not only are Ikarians healthy, Buettner said, but they are also mentally sharp until the very end. At 80 years old, about 80 percent of Ikarians are still engaged in growing their own food and working at their jobs.

**Loma Linda, California** A community in Loma Linda, California, with a large concentration of Seventh Day Adventists was identified as a blue zone. The Adventist church promotes a culture of health, emphasizing a healthy diet and exercise, and it operates numerous hospitals and health facilities across the United States and around the world. Buettner said that life expectancy for all women in the United States is about 80 years of age, while for an Adventist it is 89. On average, U.S. men live to 79; however, the life expectancy for male Adventists is 87.

**Nicoya, Costa Rica** The Nicoya peninsula of Costa Rica has the lowest rate of middle-age mortality in the world, yet Costa Rica spends only 15 percent of what America does on health care. People in Nicoya are more than twice as likely as Americans to reach a healthy age 90, which indicates, Buettner emphasized, that people do not necessarily need to be rich or have the best health care treatment to be healthy.

**Okinawa, Japan** The archipelago of Okinawa is home to the world's longest-lived women. In some parts there are up to 30 times more female centenarians per capita than in the United States. Overall, Okinawan women have the longest disability-free life expectancy in the world. They eat a plant-based diet and have strong social networks. Buettner said that Okinawans have no word in their language for retirement and that they stay active into old age.

**Sardinia, Italy** Sardinia, an island off the coast of Italy with 42,000 people living in 14 villages, has the highest concentration of male centenarians in the world. The population is mostly shepherds, and their diet is mostly plant-based, with some pork. Buettner highlighted their attitude toward aging, which celebrates elders.

SOURCE: Buettner presentation, July 30, 2014.

## POWER 9® PRINCIPLES

In meeting numerous centenarians, Buettner realized that in no case did they reach middle age and then decide to pursue longevity through a change in diet, taking up exercise, or finding some nutritional supplement. The longevity occurred because they were in the right environment—an environment that fostered a lifestyle of longevity. Regardless of location, the same nine lifestyle characteristics were identified across all five blue zone environments, which Buettner termed the "Power 9®" principles. Activity, outlook, and diet are key factors, and the foundation underlying behaviors is how people in blue zones connect with others (see Figure 2-1).

### Activity

- **Move Naturally** The world's longest-lived people do not "exercise." In blue zones, Buettner's team observed that people were nudged into moving about every 20 minutes. For example, they were gardening, they kneaded their own bread, and they used hand-operated tools; their houses were not full of conveniences. When they did go out (e.g., to school, work, a friend's house, a restaurant, or to socialize), it was almost always on foot. Movement is engineered into their daily lives.


**FIGURE 2-1** Power 9® principles. Shared traits of the longest-lived people from the five blue zones around the world.
SOURCE: Buettner presentation, July 30, 2104. Used with permission.

### Outlook

- **Down Shift** Stress is part of the human condition, Buettner said, and people in blue zones suffer the same stresses that others do. However, the people living in blue zones have daily rituals that reduce stress and reverse the inflammation associated with stress. Rituals varied and included activities such as prayer, ancestor veneration, napping, and happy hour.
- **Purpose** In the blue zones, people have vocabulary for purpose. Buettner described a recent study from Canada that followed 6,000 people for 14 years and found that those people who could articulate their sense of purpose had a 15 percent lower risk of dying. Another study, this one from the National Institute on Aging, found that people who could articulate their sense of purpose were living up to 7 years longer.

### Diet

- **Wine at 5** Except for the Adventists, people in blue zones consumed moderate amounts of alcohol (most commonly two glasses per day, but as much as four glasses per day).
- **Plant Slant** A meta-analysis by Buettner of 154 dietary surveys in all five blue zones found that 95 percent of 100-year-olds ate plant-based diets, including plenty of beans. Beans are inexpensive, full of fiber and protein, and nutritionally rich, Buettner said. The 100-year-olds also eat a lot of carbohydrates, but in the form of whole grains and sourdough breads rather than in breads leavened with yeast.
- **80 Percent Rule** The longest-lived people have strategies to keep themselves from overeating, Buettner said (such as the Confucian mantra some Okinawans use to stop eating when they feel 80 percent full). There is clinical evidence that strategies such as stopping to say a prayer before meals, eating slowly so that the full feeling can reach the brain, not having televisions in kitchens, or eating with family lead to a decrease in food intake. In all five blue zones, people eat a large breakfast and a smaller lunch, and dinner is the smallest meal of the day.

### Connections

- **Loved Ones First** Centenarians spend a lot of time and effort working on their relationships with their spouses and children. Children are likely to keep their aging parents nearby and to

consider them to be fonts of wisdom that will favor their own survival.

- **Belong** People in blue zones tend to belong to a faith-based community. Individuals of faith who regularly attend a faith-based service live 4 to 14 years longer than their counterparts who do not, Buettner said.
- **Right Tribe** Health behaviors are contagious, Buettner said. Deleterious behaviors (e.g., obesity, smoking, excessive drinking, loneliness, unhappiness) are also contagious. They world's longest-lived people "curate" social circles around themselves that support healthy behaviors.

## PRINCIPLES INTO ACTION: LIFE RADIUS

Americans spend more than $100 billion annually on diets, exercise programs and health club memberships, and nutritional supplements, Buettner said. And while proper nutrition and exercise are good, this approach leads to short-term successes and long-term failures. Interventions need to last decades or a lifetime to affect life expectancy and lower rates of chronic disease, he said. Within 3 months of starting a diet, about 10 percent of people will quit. Within 7 months only about 10 percent will remain on the diet, and by 2 years less than 5 percent will still be adhering to the diet. Exercise programs show a similar pattern, Buettner said. Many people start exercise programs after the end-of-year holidays and have quit by autumn. Adherence to daily medication regimens also drops off over time.

With additional funding from *National Geographic*, Buettner set out to identify populations that were unhealthy but were able to improve their health and to determine what led to lasting improvement. In general, public health initiatives for non-infectious diseases have not been successful, he said. Tens of millions of dollars have been spent on major initiatives (e.g., for heart disease prevention), and while there is sometimes initial success in changing health behaviors, once the spotlight is off and the health researchers and media are gone, people revert to their baseline behaviors. One successful example Buettner did identify took place in North Karelia in Eastern Finland. In 1972 this region had the highest rate of cardiovascular disease in the world. A team led by Pekka Puska reduced the incidence of cardiovascular disease by 80 percent over 30 years and reduced the incidence of cancer by more than 60 percent. Puska's approach, Buettner explained, focused not on the individual but on the environment and the systems around the individual.

### The Life Radius Approach to Optimizing the Living Environment

With funding from AARP, Buettner assembled a team of experts to consider how to optimize what he dubbed the *life radius*—the environment where people spend about 80 percent of their lives (see Figure 2-2). The best investment for optimizing the environment is policy, he said. For example, are fruits and vegetables affordable and accessible, or are fast food and snacks cheapest and most accessible? Do ordinances promote sprawl, or are there incentives for creating livable spaces? Is smoking widely permitted, or more difficult to do? (For instance, consider the difference between West Virginia, where smoking rates are as high as 35 percent, and San Luis Obispo, California, where smoking rates are less than 10 percent.)

Another key factor is the built environment. By making the active option the easy and safe option, the activity level of an entire population can be raised by 30 percent, Buettner said. People increase activity without gym memberships or exercise classes by, for example, walking or biking to school, work, or shopping. Social networks are also important in the life radius, strategically bringing together people who are ready to change their habits and setting up a network to spread the lifestyle. There is also a huge opportunity to affect health through building design, Buettner said. The team identified 120 evidence-based ways that schools, restaurants, grocery stores, workplaces, and other buildings can be set up to nudge people to move more, eat less, eat better, socialize more, smoke less, and

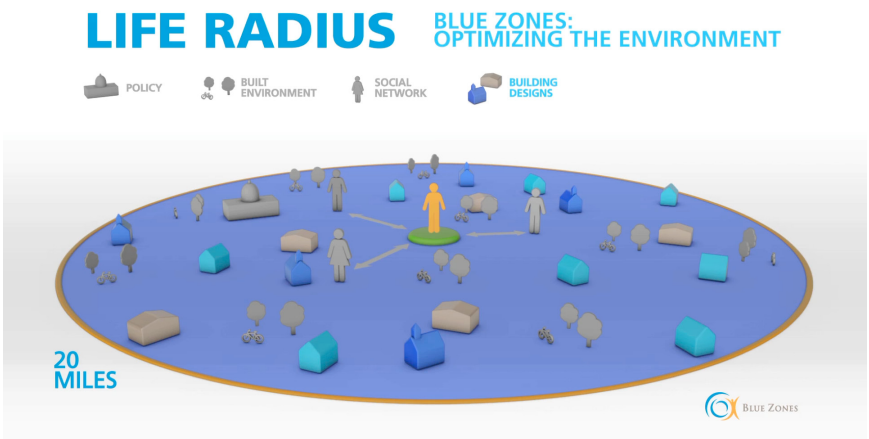


**FIGURE 2-2** Life radius. Optimizing the environment where people spend 80 percent of their time.
SOURCE: Buettner presentation, July 30, 2104. Used with permission.

reduce stress. Finally, one factor that is unique to the life radius approach is a focus on purpose. Buettner described workshops on purpose and initiatives to connect people to volunteering, noting that volunteers have lower rates of cardiovascular disease and lower health care costs.

### *12 Pillars*

Taking the life radius approach forward, Buettner and his team focus on 12 "pillars." The first three pillars are areas in which city governments can make a difference: the built environment, food policy, and tobacco policy. The approach is to start with a conversation, gradually introduce best practices, and ultimately get local leaders to choose 10 priorities and coach them to fruition. This is the best investment and has the biggest impact for the population, Buettner said.

The next six pillars are the places where people spend their day: employers, schools, restaurants, grocery stores, faith organizations, and home. The team developed checklists of revenue-neutral ways that these environments can be optimized for health, and it offers blue zone certification for those that implement a certain number of changes. The last three pillars are programs for creating new social networks, getting people involved in volunteering, and helping them define a sense of purpose.

## Case Example: Albert Lea, Minnesota

Albert Lea, Minnesota, was selected from a handful of potential sites for the pilot Blue Zones project. Buettner stressed the importance of having community and leadership buy-in and commitment as well as the need to "listen, not pontificate." Albert Lea was a beautiful city, but no one could walk anywhere. By connecting sidewalks, people could walk downtown for dinner or to church or schools. Older people did not have to walk through fields or cut across dangerous traffic. Albert Lea originally wanted to widen its main street and raise the speed limit, which, Buettner said, creates stress, danger, noise pollution, and air pollution. Over a series of long conversations, the city agreed to instead put a trail around the lake at the end of the main street. That trail is now busy all of the time with people being active because it is easy, accessible, and pretty, Buettner said. A vast section of the parkland was simply open lawn. The team convinced the city to put in six community gardens, which Buettner said filled up instantly; a seventh garden was added the second year. The gardens are not only a good place for regular, low-intensity physical activity, he said, but a place for people to connect.

Grocery store and restaurant pledges were developed to help change the way people eat. For example, at a blue zone restaurant patrons have

to ask for bread, rather than having it brought to the table automatically. Sandwiches come with fruit, but diners can ask for fries instead. Buettner also described the impact of changing the adjectives on menus. For example, no one wants to order the "healthy choice salad," but call it the "Italian primavera salad" and sales increase. Restaurants also let diners know that they can order split plates or take leftovers home. The big grocery chain agreed to tag longevity foods and created a blue zone checkout aisle with healthy snacks in the racks. Schools agreed to implement a policy of no eating in hallways or classrooms. A blue zone club was also established, and about 25 percent of the population signed a personal pledge to take action toward achieving a set of personal health and lifestyle goals.

In association with the University of Minnesota, Buettner developed the "vitality compass," a free tool that lets people calculate their overall life expectancy and three other broad metrics.[2] A total of 33 metrics are captured (e.g., what people eat, how often they attend a house of worship, and their body mass index [BMI]). Completing the assessment at baseline and again sometime later after implementing changes can provide a fairly good measurement of impact. Some residents agreed to let blue zone team members come into their homes and optimize their kitchens—for example, with smaller plates, planting gardens, etc. About 1,100 people joined community walking groups ("walking Moai"[3]), 60 percent of which are still together 5 years later. Residents also attended a purpose-defining class and were quickly matched with volunteer organizations to provide them with an outlet for their newly articulated purpose.

After the first year of the pilot project in Albert Lea, with 3,400 participants (24 percent of the population), entering the participants' information in the vitality compass program suggested an average life expectancy gain of 3.2 years due to changes in their life habits. Participants also self-reported a collective weight loss of 7,280 pounds. The city of Albert Lea independently reported a 40 percent drop in health care costs for city workers. Buettner noted that some of these figures briefly caught national media attention, but the underlying question is what were the permanent or semi-permanent ways in which the environment or ecosystem was changed.

[2] See http://apps.bluezones.com/vitality (accessed December 12, 2014).

[3] Moai, pronounced "Mo Eye," is an Okinawan term that roughly means "meeting for a common purpose." For more information about walking Moais, see https://www.bluezonesproject.com/moai_events (accessed December 12, 2014).

### Creating More Blue Zones

After the Albert Lea pilot project, the Blue Zones project teamed up with Healthways and issued nationwide request for proposals for the next blue zone city. From the 55 cities that applied, the Los Angeles Beach Cities (Hermosa, Redondo, and Manhattan Beach) were selected. After 3 years, the measurement of 80 different facets of well-being (physical and psychological) by Gallup–Healthways showed a 14 percent drop in obesity (compared to a 3 percent drop in obesity across California), a 30 percent drop in smoking, and better self-reported eating habits and increased physical activity.

Buettner said that these results caught the attention of Blue Cross/Blue Shield of Iowa and of the governor of Iowa, Terry Branstad, who invited the Blue Zones project to conduct a publicly supported, privately funded state-wide blue zones initiative. Iowa is a state with a huge pork industry, Buettner pointed out. Instead of trying to address the entire state of 3.2 million people and 995 cities at once, the Blue Zones project set up demonstration cities. Ninety-three cities "auditioned," and the 10 cities that were most ready for change were selected. Impressive drops in obesity rates and increased health care costs savings are already being observed, and Blue Cross/Blue Shield of Iowa actuaries are calculating a health care savings over a 10-year period of $5 billion due to the establishment of blue zones. New blue zone projects are now starting up in Fort Worth, Texas, and Kauai, Hawaii.

## GOING TO SCALE

Buettner closed his presentation by sharing some lessons learned from working with 20 cities through six iterations of the project. Scale is the hardest aspect of the project, Buettner said. The first lesson in achieving scale is to start with "ready" communities. Unlike public health, where interventions are targeted at the most at-risk populations, prevention targets the people who are most ready for it. It takes some time to find that readiness, he said, and you have to say no to some communities. Invest in rigorous measurement. "If you can't measure it, you can't manage it," he said, and data are needed to back up the approach. Orchestrate "the perfect storm," he recommended, engaging the schools, restaurants, grocery stores, city council, and the media, so that everyone is hearing about blue zones everywhere they go. Finally, the process takes time. A workplace may be able to institute effective interventions in 1 year, but communities really need 3 to 5 years, often longer, in part because policy change can be a slow process.

There is no downside to any of the interventions, Buettner concluded. He suggested thinking about programs as an operating system, and striving to make permanent or semi-permanent changes to the system.

## DISCUSSION

The open discussion that followed expanded on the concepts of readiness and scale. Buettner emphasized the value of a few successful demonstration projects in creating broad interest. Engaging everyone at once is generally not successful, he said. When working with communities, one should try to identify those employers who are most committed, and who are willing to commit some of the budget from human resources, marketing, their foundation, or other departments and orchestrate that perfect storm. He added that data on workplaces suggest that the main determinant of whether or not an employee likes his or her job is whether he or she has a best friend at work. Businesses have an enormous opportunity to connect people strategically so that their relationships transcend the commercial or business relationships. Set up those networks internally, make small changes to the policies and the built environment, and measure rigorously. Once you have shown what works, distill that into a scalable model for other companies, starting with the companies that are most ready and most committed, he said.

A participant expressed concern that some of the most at-risk communities may never be as "ready" as Albert Lea and that not including them might exacerbate some of the disparities further. Buettner clarified that blue zones tries to intervene at the whole city level, adding that 15 percent of the population of Albert Lea is Hispanic migrant workers who are very poor. Although the Blue Zones project may not necessarily be working in the poorest neighborhoods, the policy changes made (e.g., de-normalizing tobacco, making healthy foods more accessible and affordable) should benefit all of the communities in a city. Another participant suggested that some of the concepts about readiness are related to equity. How do we create more readiness in communities so that they are more prepared to change? Buettner clarified further that the Blue Zones project does not necessarily assess individual readiness as much as leadership readiness and whether the private and public sectors are open to innovation. Sign-on from the leadership components usually reflects the support of a larger population, he said.

A participant observed that for the original blue zones there was the sense of population homogeneity and a common culture and wondered whether more diversity within a city affects the outcomes. Buettner responded that it is easier if the population is more homogeneous, has a strong sense of civic unity and pride, and speaks a common language. However, the Los Angeles Beach Cities are very diverse and the initiatives have been very successful.

# 3

# Why Should Businesses Engage in Population Health Improvement?

A recurring theme across prior roundtable discussions has been that population health improvement requires multi-sector and multi-stakeholder engagement, said session moderator Andrew Webber, chief executive officer of the Maine Health Management Coalition. This workshop was focused on one particular stakeholder group—the business community—and speakers in this session discussed a variety of reasons business might or should engage in population health improvement. Michael O'Donnell, director of the Health Management Research Center at the University of Michigan, discussed the relationship of health to the federal debt and the creation of jobs. Catherine Baase, chief health officer at The Dow Chemical Company, used a macroeconomic model to illustrate how the current health scenario is negatively affecting the success of the business sector. Nicolaas Pronk, vice president and chief science officer at HealthPartners, described an initiative to develop the underlying rationale and business case for companies to invest in community and population health.

Webber reminded participants that there is not one homogeneous "business community," although all businesses are focused on remaining competitive in their market, and there is often a shared culture that informs how businesses determine whether there is a clear business strategy for engaging in an issue like population health and health care. Webber noted that although there has been a significant increase in worksite health promotion and wellness programs, engaging business at the broader community level has been more of a challenge (Webber and Mercure, 2010).

## CREATING JOBS AND REDUCING FEDERAL DEBT THROUGH IMPROVED HEALTH

O'Donnell posed the question of whether improving population health could lead to reduced federal debt and to the creation of jobs. As background, he noted that in 1970 federal spending on health care (e.g., Medicare, Medicaid, Children's Medicaid, and exchange subsidies) was about 1 percent of the country's gross domestic product (GDP), and spending on Social Security was about 4 percent of GDP. In 2011 long-term budget scenarios from the Congressional Budget Office (CBO) suggested that federal spending on health care could reach 19 percent of GDP by 2085, with spending on social security projected to increase to about 6 percent of GDP (see Figure 3-1). Updated CBO projections in 2013 suggested that federal spending on health care might only reach 14 percent of GDP, and a recent short-term projection suggests further reductions in predicted federal health care spending (CBO, 2011, 2013, 2014).

The current annual budget deficit is not the problem, O'Donnell said. Rather, it is the long-term federal debt.[1] If current CBO long-term budget scenarios hold true, by 2035 the U.S. federal debt could be 200 percent of GDP, O'Donnell said (compared with the current federal debt of about 75 percent of GDP). He suggested that such a situation would be a fiscal crisis beyond compare for the United States.

### The Health-Related Contributors to the Federal Debt

O'Donnell listed four underlying health-related causes of federal debt: lifestyle, chronic disease, an aging society, and poverty and inequality (see Figure 3-2). For example, lifestyle can lead to increased chronic disease, resulting in increased Medicare or Medicaid costs for covered individuals and also in reduced tax revenues from these individuals because they cannot work. Poverty and inequality have a negative impact on lifestyle and health, and they are associated with increased Medicaid costs and decreased tax revenues.

### Opportunities Presented by Improved Health

Based on his own calculations, O'Donnell suggested that improving the health of the population can reduce the federal debt in various ways:

[1] The annual shortfall between spending and receipts is the deficit. Borrowing to meet each year's deficit adds to the federal debt.

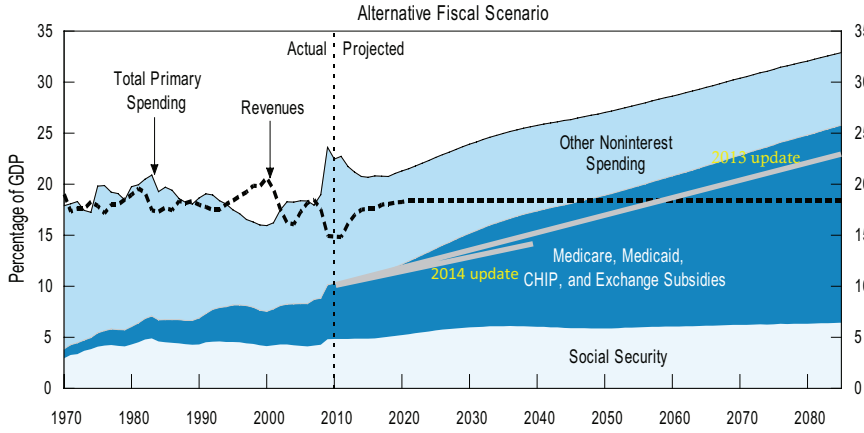


**FIGURE 3-1** Primary spending and revenues, by category, under CBO's long-term budget scenarios through 2085.
NOTES: CHIP = Children's Health Insurance Program; GDP = gross domestic product.
SOURCE: CBO, 2011.

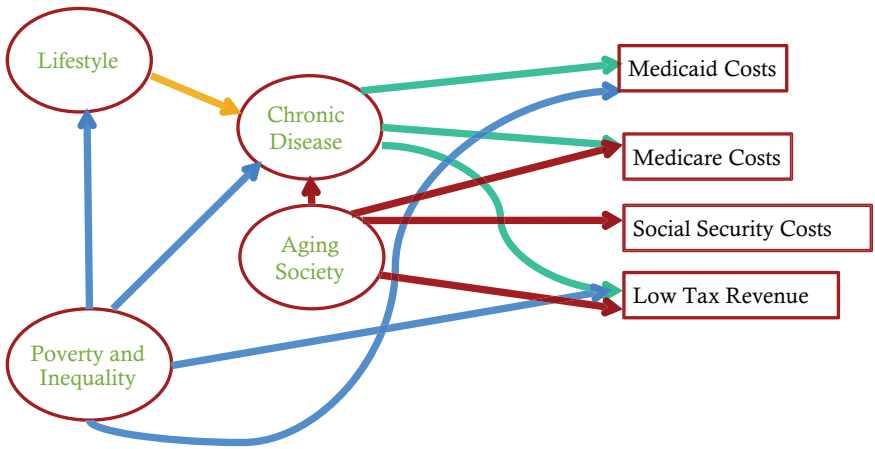


**FIGURE 3-2** Underlying health-related causes of federal debt.
SOURCE: O'Donnell, 2012. Used with permission.

- Expanding the average years of working life by 5 months would reduce the federal debt by 1.6 percent.
- Expanding the average years of working life by 4.5 years would reduce federal debt by 16 percent.

- Expanding the average years of working life by 9 years would reduce federal debt by 32 percent.
- Reducing the annual rate of increase of Medicare by 0.1 percent would reduce the federal debt by 1.5 percent.
- Reducing the annual rate of increase of Medicare by 1 percent would reduce the federal debt by 15 percent.
- Reducing the annual rate of increase of Medicare by 2 percent would reduce the federal debt by 30 percent.

Improved health will, of course, also improve the well-being and quality of life of millions of people, he added. To facilitate these health improvements, O'Donnell recommended that funding come from organizations that can benefit from the improved health of the population, including employers and insurers, the U.S. Treasury (through the taxes it collects from employers), the Centers for Medicare & Medicaid Services, and state Medicaid programs, and then flow to organizations that can engage people in effective health-improvement programs where they live, work, learn, play, and pray (see Figure 3-3).

A budget of $200 per person per year would provide approximately $62 billion per year, O'Donnell said (assuming 310 million[2] people). According to O'Donnell, this is about five times the current public health department spending per person (about $41 in 2005), about 30 times the spending of the existing workplace health promotion industry, about 2 percent of spending on medical care in the United States, and 0.32 percent of the liquid assets that non-farm, non-financial institutions have in the bank. This is definitely within our spending ability, O'Donnell asserted, and short-term costs may actually be covered by the short-term savings (in addition to reducing the federal debt in the long term).

In addition to reducing debt, O'Donnell said that growing the workplace health promotion field from $2 billion to $60 billion would create about 280,000 new health promotion jobs at about $75,000 per job (including benefits). He said that this would stimulate $4 billion in new state income taxes and about $22 billion in new federal income taxes. These funds would be sufficient to fund health promotion programs for Medicare and Medicaid recipients.

## BUSINESS PRIORITIES AND HEALTH

One of the challenges in population health is that no single entity feels ownership of, or has responsibility or accountability for, taking con-

[2] Latest Census figures show 317 million people live in the United States, but the figure of 310 million was used as the basis for the speaker's back-of-the-envelope calculation.

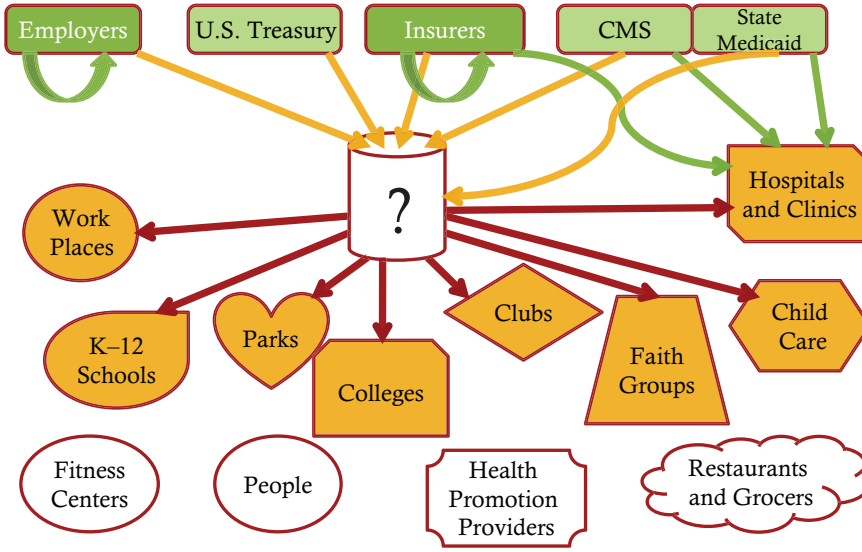


**FIGURE 3-3** Funding flow from organizations that benefit from improved population health to organizations that can engage people in effective programs. The majority of funding would come from employers. The U.S. Treasury would contribute funding from taxes. Estimates of funding allocations to recipient organizations are based on $200 per person per year.
NOTE: CMS = Centers for Medicare & Medicaid Services.
SOURCE: O'Donnell, 2012. Used with permission.

trol and finding solutions, said Baase of Dow. She cited a report from the World Economic Forum on global risks that stated, "[T]he mobilization of social forces and people outside of health systems is critical, as it is clear that chronic diseases are affecting social and economic capital globally" (World Economic Forum, 2010, p. 26). The task now is to create collective ownership of population health and to engage people from all sectors, including the business community, she said.

### Macroeconomic Concept Model

Businesses generate money in society. Some of that money is used to pay employee wages and some percentage of it, in the form of taxes, goes into a common resource pool. Baase used a macroeconomic model to illustrate five key ways in which the current health scenario is negatively impacting the success of the business sector (see Figure 3-4). A better understanding of how these elements are destructive to a business's suc-

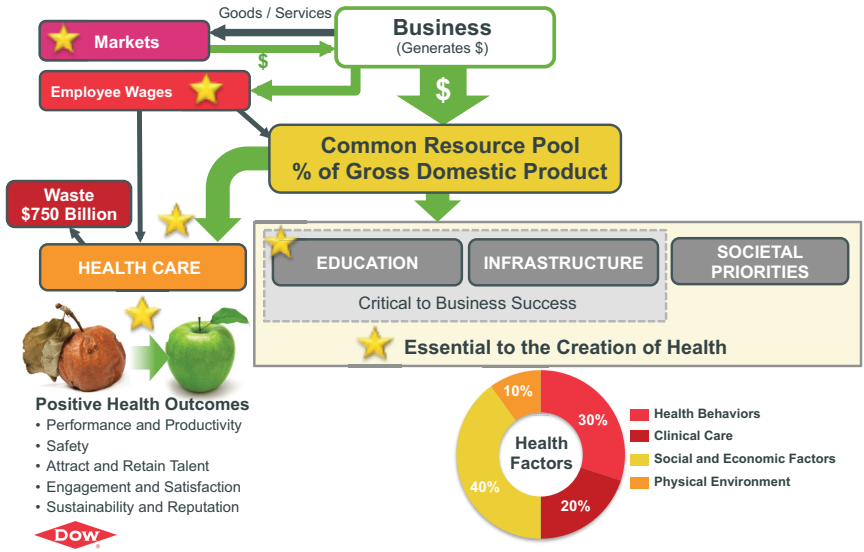


**FIGURE 3-4** Macroeconomic concept model illustrating ways in which the current health scenario is negatively affecting the success of the business sector. SOURCE: Baase presentation, July 30, 2014. Used with permission.

cess could motivate the business community to become more engaged. As summarized by Baase, the five elements are:

- **Wage compression** Increasing health care costs are resulting in wage compression, that is, a greater percentage of pay is going toward health care benefits versus take-home wages.
- **Reduced profits** A greater percentage of total generated funds has to be allocated toward health care, resulting in a reduction of profits.
- **Eroded foundation for business** Money from the common resource pool funds health care as well as education, infrastructure, and other social priorities. Education and infrastructure are essential foundation elements for the success of business, but they are being undermined by the diversion of GDP toward health care. Business also needs healthy people in order to be successful.
- **Impact on elements essential to the creation of health** The same elements that are essential to business are important social determinants of health. The diversion of spending away from education and infrastructure also undermines the creation of health. This is compounded by the significant waste in health care.

- **Diminished purchasing power** The cumulative impact of the current scenario is a diminished market because there is less take-home pay and less disposable income.

### The Dow Health Strategy

Years ago, Baase said, The Dow Chemical Company's business case for its health strategy was built on addressing large spending on health care, an inflation rate greater than the consumer price index, high waste in the system, an understanding that prevention can make an impact, and related legislative and regulatory activity. Over time, this evolved toward an understanding that well-designed health strategy elements can advance other corporate priorities, including sustainability, safety, manufacturing reliability, employee performance and engagement, the ability to attract and retain world class talent to the organization, and corporate reputation. This is not health for the sake of health, but health as essential for and inextricably linked to achieving other corporate priorities, Baase explained.

Several years into this strategy Dow recognized that progress toward the vision of health, human performance, and long-term value for Dow could advance further and faster with a community focus beyond the worksite. Baase said that 80 percent of the covered lives on company health plans were not employees but retirees, dependents, and spouses in the community. The Dow health strategy now includes four core pillars focused on culture and environment inside the company as well as in the community: prevention, quality and effectiveness, health care system management, and advocacy. In addition to its corporate health promotion programs, Dow has incorporated a collective impact model into its strategy and has developed a community profile toolkit to define strategic priorities and value. Using publicly available data sources and benchmarks, the company has identified five priority areas for evidence-based interventions.

For Dow, the business case for engagement in population health is broad and strong, Baase concluded. Insightful and effective action is possible, and there are opportunities for high-value actions.

## DEVELOPING THE BUSINESS CASE: A HERO INITIATIVE

In its annual reports to Congress the Community Preventive Services Task Force has identified a variety of ways in which community health improvement can benefit multiple stakeholders, including business and industry, Pronk of HealthPartners said. These include reductions in health care spending through lowering the need and demand for health care; a

reduced burden of illness leading to improved function; environmental and policy changes that make healthy choices the easy choices; stable or improved economic states, as healthy communities complement vibrant business and industry; increased healthy longevity; enhanced national security (obesity has become the leading reason for failure of recruitment to the military); and preparation of a healthy future workforce through education and skill building (CPS Task Force, 2014).

Pronk quoted Eccles and colleagues who concluded, "[S]ustainable firms generate higher profits and stock returns, suggesting that developing a corporate culture of sustainability may be a source of competitive advantage for a company in the long-run" (Eccles et al., 2011, p. 30). That means, Pronk said, that a more engaged workforce, a more secure license to operate, a more loyal and satisfied customer base, better relationships with stakeholders, greater transparency, a more collaborative community, and a better ability to innovate are all contributing factors to the potentially superior performance of a company in the long term. Furthermore, workforce health and a connection to the community position a company in a positive light related to long-term sustainability.

### Healthy Workplaces, Healthy Communities HERO Initiative

To develop the underlying rationale and business case for companies to invest in community and population health, the Health Enhancement Research Organization (HERO)[3] undertook an initiative to document the reasons why employers might want to take an active role in community health initiatives and to identify barriers to engagement. The initiative, titled Healthy Workplaces, Healthy Communities, was co-chaired by Pronk and Baase.

The first phase of the initiative, which was sponsored by the IOM Roundtable on Population Health Improvement, involved a search for community health-related activities being conducted by businesses at the time. The search revealed that many businesses were already engaged in programs that affect community health and wellness (beyond workplace wellness programs). The reasons that businesses offered for engaging in such programs included an enhanced reputation in the community as a good corporate citizen; cost savings that increased over time; job satisfaction for employees; healthier, happier, and more productive employees; and a healthy, vibrant community that draws new talent and retains current staff (HERO, 2014a).

[3] The Health Enhancement Research Organization (HERO) is a national leader in employee health management, research, education, policy, strategy, leadership, and infrastructure. See http://hero-health.org (accessed December 12, 2014).

To develop a business case based on the results of the search, the initiative employed a "World Café" process,[4] convening more than 50 executives and thought leaders for a 1-day meeting to consider two key questions: (1) What are the strongest elements of a business case that will generate higher levels of employer leadership in improving community health? and (2) What are the most important barriers and limitations that keep employers from playing their critical role in improving community health?

*Elements of the Business Case*

Seven thematic areas were identified as elements of a business case to engage employers in addressing community health and wellness (HERO, 2014b). As summarized by Pronk, they are:

- **Metrics and measurement** There is a clear need for common definitions and a set of metrics for the measurement of health relevant for both business and the community.
- **Return on investment** It is important to present the business case in language that the chief financial officer can relate to, such as saying that investing in the community can lead to greater profits.
- **Clear communications** When articulating the business case, the messages need to be clear, focused, and relevant. There is a need for different value propositions for different types and sizes of businesses.
- **Shared values** It is important to understand shared risk and shared values among businesses, communities, and stakeholders (e.g., pooled resources, shared benefits, shared expenses). Recognition is important (e.g., to be seen as an "employer of choice" or a "community of choice").
- **Shared vision** Employers and communities need to focus on sustainability with the integration of a culture of health, both internally within the company and externally in the community.
- **Shared definitions** Define key terms (e.g., what is meant by terms such as "health beyond medical care," "leader," or "influence model").

[4] The World Café process uses connected conversations to share knowledge, ignite innovation, and tap into the intelligence of the group. Key elements of the process include small group discussions and informal conversations focused on key questions, sharing ideas and knowledge as participants move among small groups, opportunities to record ideas in words and images, the weaving together of emerging themes and insights, an awareness of the social nature of learning, and noticing that individual conversations are part of and contribute to a larger web through which collective intelligence can become aware of itself (HERO, 2014b).

- **Leadership/buy-in** Business leaders are needed who can communicate the value of engagement in community health to their peers.

*Barriers*

The most commonly reported barriers to engagement in community health included a lack of understanding (e.g., what "health" is, why it is important to care about health beyond the workplace, diverse agendas and potential misalignment of multiple stakeholders, who is responsible, and potential benefits and risk); the lack of a strategy, playbook, framework, or model to move forward; the overall complexity of the problem; issues of trust (especially in a competitive business environment); the lack of a common language; return on investment; the lack of metrics; and a lack of leadership buy-in (HERO, 2014b).

## Moving Forward

Overall, Pronk summarized, it became clear that there is great variability across employers in the understanding of the rationale for business involvement in community and population health efforts. The cost of health care has become a threat to much needed investments in other social priorities. The need persists for a powerful, yet concise, articulation of the business case for these efforts. Following the acceptance of the business case for such engagement, a roadmap for action will be required to guide "the how and the what." A shared commitment for action could be generated through processes that, like the HERO World Café, bring people and organizations together, Pronk said.

In the future, the main driver for early engagement of businesses in population health might be compliance with regulatory requirements (e.g., worker safety standards), Pronk concluded. The next level of engagement could stem from corporate charitable giving campaigns, which provide opportunities for companies to be visible in doing good. A more strategic approach to engagement would involve systems to connect health and safety to business value. This may eventually lead to systematic solutions designed to intentionally generate population health and business value and to address the social determinants of health.

In closing, Pronk reiterated some of the benefits that may drive intentional investment in population health, including an enhanced corporate image, increased visibility, stewardship and social responsibility, employer choice, enhanced employee morale, job satisfaction, job fulfillment, teamwork, engaged employees, increased productivity, increased creativity and innovation, the improved attraction and retention of top

talent, reduced illness absences, reduced absenteeism in general, reduced workplace injury, reduced benefits cost (including health care cost as well as short-term and long-term disability and worker's compensation), better management of an aging workforce, and an increasing awareness and knowledge of self-management and health.

## DISCUSSION

During the discussion that followed, participants considered why business engagement in population health is not more widespread and what could potentially catalyze greater engagement. Pronk suggested that one way to accelerate movement forward would be to identify and define the role of a convener in the community that could bring stakeholders together in a place of respect and trust. Baase reiterated that businesses are already engaged in policy, advocacy, and philanthropy and that they participate on the boards of local community organizations. How can they do this with greater insight toward health? Webber noted that it is often the medium-sized companies that have a real presence in a community and that these companies seem to find it easier to engage in community-wide endeavors than very large, multi-national corporations, even those that might be headquartered in that community. Pronk added that there is much more flexibility in smaller organizations (100 to 200 employees) for engagement.

Participants discussed whether engagement in community health should be mandatory or voluntary. O'Donnell said he did not see how it could be made mandatory. Employers need to be made aware that engagement does not cost them much money and that it has direct, measurable financial benefits, and then they need to be shown how to do it. The more that we appeal to the selfish interests of business, he said, the faster this will get done.

Raymond Baxter of Kaiser Permanente observed that much of the discussion thus far had been on physical health, and he raised the issue of the role of behavioral health in building the connection between business and community. Pronk clarified that his discussion of well-being encompassed the multiple dimensions of emotional, mental, social, career, and physical health as well as meaning and purpose. Baase concurred that she does not consider physical and mental health as separate in these discussions. Dow takes a very comprehensive view of health, she said, and the inclusion of behavioral health is part of the approach, both inside the company and outside in its community work. O'Donnell added that he defines optimal health as including physical, emotional, social, spiritual, and intellectual health.

# 4

# The Impact of Business on Population Health

The second panel, moderated by Catherine Baase, chief health officer at The Dow Chemical Company, illustrated activities that businesses are undertaking that are having a positive and beneficial impact on population health but which were not designed with population health improvement as the primary goal. Gary Rost, executive director of the Savannah Business Group, opened the session with a discussion of the need for locally relevant data when considering the engagement and impact of business on health. Grace Suh, manager of Education Programs for Corporate Citizenship and of Corporate Affairs at the IBM Corporation, described a grades 9-to-14 "early college high school" education model designed to develop science, technology, engineering, and mathematics (STEM) talent for IBM. Alisa May, executive director of Priority Spokane, described collaborative efforts to enhance community vitality in the areas of economics, education, environment, health, and safety.

## THE IMPORTANCE OF LOCALLY RELEVANT DATA

When trying to engage employers, it is important to understand who you are actually engaging, said Rost of the Savannah Business Group.[1] Small businesses in a community are owned by people who often have longstanding, deep roots in the community. In contrast, employees of

[1] The Savannah Business Group is a business coalition established in 1982 to negotiate and group-purchase health care services for self-funded employers.

nationally owned companies come and go, and it can be difficult to get their attention and engagement on a local and community level. It is not necessarily the size of the employer, he said, but how willing the employer is to get involved. Employers have expertise in worksite employee wellness, prevention, and disease management efforts, and they have influence and leverage in the community.

Rost shared health risk assessment and bio-screening data from three large employers in Savannah (whose employees collectively represent about 10 percent of the local population). These data suggested that the diabetes rate was as high as 34 percent for employees at one of the companies. However, Rost said, the data from public sources were not local data, and local data from employee health risk assessments done in Chatham County, home of Savannah, showed that the pre-diabetic rate there was actually almost 80 percent and the obesity rate was 50 percent. The local community, from which the workforce was drawn, was very unhealthy.

This is important, Rost said, because when employers are looking for a site on which to build a new plant or to which to move their headquarters, they are now taking into account the health of the community surrounding the site. It is no longer just about infrastructure, education, and workforce availability, but also about how healthy the workforce is.

Rost said that in 2011, Chatham County was awarded a planning grant through the National Business Coalition on Health from the United Health Foundation to assemble key community organizations and define health priorities. This was followed by an implementation grant from the United Health Foundation and the Robert Wood Johnson Foundation. As an example of the importance of local data, participants identified health priorities for Savannah as obesity, low-birthweight babies, diabetes, community data collection, immunization, tobacco cessation, and asthma. Specifically, Rost said, the group wanted to focus on childhood obesity. One data source suggested that one in three children in Chatham County was "overweight," while another data source said one in three is "obese." Adding to the confusion, the data were based on five counties in Georgia, which were then overlaid on the Chatham County demographic information. A local data collection collaborative is now in progress to better understand the actual local situation regarding overweight children in Chatham County.

Rost said that in Georgia, the law now requires that BMI and weight be reported for all children in public schools, grades K through 12, and that a fitness assessment be done for all children in physical education class. There is a significant disparity between the best- and worst-performing schools in Georgia. For example, nearly 80 percent of the children in one of the worst-performing elementary schools are overweight, compared to about 25 percent in the best-performing school. Even 25 percent of

our school children being overweight is too much, Rost said. The most recent data show that about 40 percent of Georgia's children are not in the "healthy fitness zone" for BMI, and 33 percent of seventh-graders failed all five of the fitness tests. One manifestation of this is, Rost said, that the U.S. Department of Defense, which has a very big presence in Savannah, cannot get enough recruits who can pass the military fitness tests.

In conclusion, Rost said that a decade ago the members of the Savannah Business Group were working only with their own employees. However, the coalition now works with many different groups in the community to improve the health status of the community. National organizations serve as information sources (e.g., the U.S. Department of Health and Human Services, the Leapfrog Group for Patient Safety, and Bridges to Excellence), and the coalition serves on a variety of local boards (e.g., the Chatham County Safety Net Council).

## A NEW MODEL FOR EDUCATION

Health and education are interrelated, said Grace Suh, manager of Education Programs for Corporate Citizenship and of Corporate Affairs at the IBM Corporation. While direct health education informs people about what it means to be healthy and teaches them healthy behaviors, general education can create opportunities for better health. For example, education can enable people to get good jobs, with good income and health benefits. Income and resources affect where people live (i.e., whether people can afford to live in healthier neighborhoods). Following on Dan Buettner's comments about living a life with purpose, Suh said that education can also enable young people to think about their purpose in life and, more importantly, to attain the skills to fulfill that purpose.

Across industrialized nations, median life expectancy is increasing. However, Americans who have not completed twelfth grade are actually living shorter and less healthy lives, Suh said. There are many contributing factors, one of which is education. Data on education disparities among millennials (25- to 32-year-olds) show that those with only a high school education are far more likely to be unemployed and far more likely to live in poverty than those with a college education (Pew, 2014). In addition, salaries for college graduates have increased over time, but salaries have decreased for those with only a high school diploma, which has steadily widened the earnings gap.

Suh noted that in the 1980s IBM hired high school graduates and paid them a good salary, affording them an opportunity to make it to the middle class. Today, throughout the national economy, those with only a high school diploma are likely to be among the working poor, making on average $9 an hour. It now takes at least a 2-year college degree to get a

well-paying, meaningful skilled job and make one's way into the middle class. By 2018, Suh said, there will be 14 million new STEM jobs, but we will not have enough skilled workers to fill them. With this in mind, IBM has been focusing on how to help young people get a degree that matters—a degree that can put them on the path to a good job that will enable them to have better economic, social, and health opportunities and outcomes.

### Pathways in Technology Early College High School (P-TECH)

In 2010, IBM began working with the New York City Department of Education, the City University of New York (CUNY), and the New York City College of Technology to reinvent and redesign high school so that students could graduate with both a high school diploma and an associates in applied science (AAS) degree. The goal is to provide students with the academic, technical, and workplace skills necessary either to secure a well-paying, entry-level job in a STEM field or to continue their education at a 4-year institution.

The P-TECH model requires partnerships among K–12 education, higher education, and industry, Suh explained. It is a public school model, open to all students, with no grade or testing requirements and no additional costs to students. As designed, P-TECH serves historically underserved children, enabling them to earn an industry-recognized associates degree for free. P-TECH is also an early college model, integrating high school and college coursework over 6 years, but the focus is on mastery, not seat time, and some students may be able to graduate in 4 or 5 years. A key tenet is career readiness, including skills mapping, coursework, mentoring, worksite visits, speakers, and internships. IBM's interest in P-TECH is in developing the next generation of leaders and innovators. One commitment that IBM and other companies that partner with the schools make is that students who graduate successfully will be first in line for jobs with the industry partner. There are currently four IBM partner schools: the flagship model, P-TECH, in Brooklyn, New York; the Sarah E. Goode STEM Academy in Chicago, Illinois; Excelsior Academy in Newburgh, New York; and Norwalk Early College Academy in Norwalk, Connecticut.

Suh elaborated on P-TECH in New York City as an example of the model. The school, which opened in September 2011, awards AAS degrees in computer information systems and electromechanical engineering technology. There are currently 335 students, primarily underserved young people (76 percent boys; 60 percent black and Hispanic males; 80 percent of students are recipients of free or reduced-price lunch). Suh emphasized the importance of environment and culture in making the model work.

The principal knows the students by name, and students are expected to progress and achieve, regardless of their academic proficiency upon entry. Early results are promising. Six students are expected to graduate with their AAS degree in 2015, after 4 years at the school. One-quarter of the inaugural class has finished all their high school requirements before their third year of what would be traditional high school. There are 162 students enrolled in at least one college course. Suh shared similar results from the school in Chicago.

### IBM's Commitment to Workplace Learning

In its role as a partner, IBM is involved in all aspects of the school, Suh said, but the company has a special responsibility over the Workplace Learning strand. IBM develops the curriculum that incorporates skills mapping, provides mentors for all students as well as worksite skills-based paid internships, and places graduates first in line for jobs.

Skills mapping involves identifying the skills required for entry-level jobs at IBM and mapping them to the curriculum. This is essential to ensuring that students graduate career-ready, and it brings meaning to IBM's commitment to making graduates first in line for jobs at IBM, Suh said. All students are paired with industry mentors to inspire them and coach them over the course of the 6 years. Research has shown that mentoring leads to better student outcomes in the areas of educational achievement, health and safety, and social and emotional development (Jekielek et al., 2002). IBM is also committed to providing skills-based, paid internships for students, beginning the summer after their third year in the school. The students are engaged in projects that require them to demonstrate the academic and workplace skills they have learned at P-TECH. This adds value for the students, as they have the opportunity to practice and push the envelope on the skills that they have learned at school within an actual job setting and because it makes them more marketable since employers tend to favor people who have work experience.

The early results of the program have garnered national recognition, including a visit by President Barack Obama to P-TECH in October 2013, Suh said. Major media attention has included a cover story in *Time* magazine as well as coverage in the *Wall Street Journal*, the *New York Times*, and the *PBS NewsHour*.

The essential next step is replication, Suh said, noting that other companies are participating, with 27 schools that were slated to open in September 2014 and at least 37 to be in operation by fall 2015. In November 2014, IBM, in partnership with CUNY, was scheduled to launch an online playbook that would provide tools and resources for other public–private partnerships that want to launch a P-TECH 9–14 model school. This new approach

to education holds a lot of promise for changing the American education landscape, Suh concluded. These schools are nurturing a new group of innovative leaders while also addressing the U.S. skills gap.

## BUSINESS PARTNERSHIPS THAT INFLUENCE HEALTH

Spokane, Washington (population 210,000), is 232 miles east of Seattle and on the opposite side of the Cascade Mountains. The Cascades are a great divide not only physically, but also economically, politically, and culturally, said May of Priority Spokane. Because the city of Spokane serves a large rural geographic area, known as the Inland Northwest, it has developed an infrastructure that many cities its size would not normally have. Spokane has two public universities, two private universities, and a thriving community college system that works closely with workforce development efforts. Two large hospital systems are aligned with health care providers. Fairchild Air Force Base is the largest single-entity employer in Spokane County, which also has an international airport, and a strong industry presence. May shared several examples of business partnerships among these entities that have influenced health.

### Priority Spokane

Priority Spokane is a collaboration of community leaders who are focusing on community vitality, especially the social and economic factors that influence health, May said. Members, including the Spokane Regional Health District and Greater Spokane Incorporated (GSI), meet monthly to evaluate data and create strategies for achieving common community priorities.

From 2009 to 2013 the community priority was educational attainment, specifically raising the graduation rate in Spokane public schools and throughout the county. May said that as a result of those efforts, Spokane County was awarded one of six 2014 Robert Wood Johnson Foundation Culture of Health Prizes for engaging in best practices that create a culture of health.[2] The county's proposal was grounded in the fact that education is directly linked to higher incomes and better health.

### Greater Spokane Incorporated

GSI is Spokane's combined Chamber of Commerce and Economic Development Council. May shared several examples of how the organiza-

[2] See http://www.rwjf.org/en/about-rwjf/newsroom/features-and-articles/culture-of-health-prize.html (accessed December 12, 2014).

tion is involved in education and workforce issues. GSI hosts a monthly K–12 roundtable attended by all 14 school superintendents as well as by business and community leaders. There is also a Higher Education Leadership Group that meets monthly and includes the leaders of the four universities and the community college system. Committed to Education is a group of business leaders who come together to incentivize businesses to encourage their employees to seek a technical certificate or 2- or 4-year degree. Teaching the Teachers brings teachers into the workplace to learn about the needs of local industries so they can guide their students. Business AfterSchool is an interactive program that connects students, teachers, and parents to the worlds of manufacturing, health care, agriculture, computer science, and engineering.

In addition to the work being done at GSI, Spokane County is benefitting from Excelerate Success, a "collective-impact"[3] effort headed by the United Way to increase education attainment, and an active Spokane STEM Network.

## Other Business Partnership Examples

### *Riverfront Park*

Spokane was once a thriving economic center and transportation hub for logging, mining, and shipping by rail, but by the early 1970s it was a shadow of its former self, May said. Business leaders sought to revitalize Spokane, and they made a successful bid for the World's Fair Expo'74. After the Expo, the fairgrounds were transformed into Riverfront Park. There are bike paths and a trail that connects to a 37-mile trail system running from the border of Washington and Idaho to Nine Mile Falls, Washington. Families of all economic statuses bring their children to Riverfront Park to play, May said. Spokane is working on a new master plan to further expand Riverfront Park because it is in many ways the center of health in the community.

### *Inland Northwest Health Services*

Twenty years ago, Spokane's competing hospital systems had the radical idea of partnering in the operation of their air ambulance system and rehabilitative services, May said. Since then, the resulting partner-

[3] Refers to a concept used by the Foundation Strategy Group (FSG) and others, including the Stanford Social Innovation Review, describing the "commitment of a group of actors from different sectors to a common agenda for solving a complex social problem" (http://www.fsg.org/OurApproach/WhatIsCollectiveImpact.aspx [accessed December 12, 2014]).

ship, Inland Northwest Health Services, has expanded and has become a leader in medical technology and in the sharing and reporting of data. As a business, it has grown from $10 million annually to $200 million annually and from 400 employees to more than 1,000, providing $79 million in salary and benefits to the community.

*Academic Health Sciences Center*

The business community, headed by GSI, approached the legislature and advocated for a 4-year medical program in Spokane County, which has since become a reality. The medical program is one of several that are part of an Academic Health Sciences Center on the Riverpoint Campus in Spokane, where Washington State University, Eastern Washington University, the University of Washington, and Whitworth University each have a presence. It is expected that by the year 2030, the program will bring an additional $2 billion of revenue to the area, $1.5 billion of which will stay in Spokane County, May said. It will bring in doctors and research staff, and it will help retain medical talent in Spokane. Evidence shows, May said, that practitioners are more likely to stay and practice where they intern.

### Understanding the Impact of Collective Efforts

To understand the impact of these various efforts, the Community Indicators Initiative of Spokane is collecting and sharing data under the leadership of Eastern Washington University.[4] The Spokane Regional Heath District has also released a report on health inequities in Spokane County that directly links health and education.[5] As a result, Spokane's business leaders are learning about the important relationship of business, education, and health, and they are taking this message to their spheres of influence, May concluded.

## DISCUSSION

During the discussion, participants considered how to sustain business involvement; the role of health systems; engaging other community partners, including state and local departments of health and education; and the potential negative impacts of business on health.

[4] See http://www.communityindicators.ewu.edu (accessed December 12, 2014).
[5] See http://www.srhd.org/links/data.asp (accessed December 12, 2014).

### Sustaining Business Engagement

Baase asked panelists what would help to sustain business involvement in health. Rost responded that in Savannah the sole purpose of the business coalition is to contain costs. Rost listed four ways of containing and controlling cost: value-based purchasing, value-based benefits design, improving the quality of care, and improving the health of the community. He noted that employers have control over managing their purchasing and benefits plans. They like to move quickly and to deploy solutions and plans rapidly to manage costs. However, the real sustainable change comes from addressing the core issues of quality and community health. Employers cannot accomplish quality improvement and community health improvement alone, and changes occur over the long term.

May added that it is important to have at least one central, coordinating organization that businesses trust, that is committed for the long term, and that is willing to grow beyond its original mission. GSI, for example, has been engaged in workforce issues and education and is now moving into the link between education and health. Businesses trust that GSI will provide benefit to the business community and that it can provide continuity and sustainability for community initiatives.

Suh said that for IBM, the early college high school initiative is not about donating money (although that is needed), but it is instead about bringing the best expertise to the table to work with educators and make a difference. Suh referred participants to the IBM online "playbook" designed to help partnerships and businesses implement the grades 9-to-14 early college high school model.[6]

### Engaging Health Systems as Businesses in the Community

Baxter pointed out that hospitals tend to be the biggest employers in communities, the largest real estate presence, and one of the biggest purchasers, and he noted that there are tensions between hospitals' roles as businesses and as consumers of resources that could otherwise be going into economic development, education, or other areas.[7] Rost noted that working with hospitals usually involves two separate sets of meetings, one with the chief financial officer and the health resources staff, and

[6] See http://citizenibm.com/wp-content/uploads/STEM-Pathways-Playbook_Feb-2012.pdf (accessed December 12, 2014).

[7] For more on this topic, see *Financing Population Health Improvement* (IOM, 2015b) at http://www.iom.edu/Reports/2014/Financing-Population-Health-Improvement (accessed December 12, 2014), which includes presentations and more extensive discussion of the role of hospitals in communities.

another with the chief financial officer and the chief executive officer. Hospitals often do not look at their own data for their employees, so it is necessary to bring the information to them and "tell them the story." May said that the hospital systems in Spokane have been willing to come to the table, to consider ideas outside of traditional health care, and to be involved in the community. Health care providers are also facing a skills gap, and they need to hire qualified people. Although the 9-to-14 STEM education model started with information technology, Suh said that other employers are becoming involved, including hospitals and advanced manufacturing in health care. In engaging health systems or hospitals as employers, it is important to remain focused on the best interests of the people in the community and to recognize the interdependence of health systems and the business community, Baase said.

### Other Partners

George Isham of HealthPartners inquired about the relationship of the efforts in Savannah and Spokane to the local public health departments. The Savannah Business Group works closely with the health department as a resource for expertise, but not for implementation, Rost said. The health department's priorities in population health include issues such as sexually transmitted diseases, tuberculosis, and lead poisoning. Diabetes, asthma, and obesity are not in its priorities or its budget at this time. However, the department has valuable expertise to share, such as data analysis or guidance on the preparation of grant applications and presentations. May said that the Spokane Regional Health District was the first health district in the nation to achieve national accreditation. The health department has moved away from a model of one-to-one direct provision of care and toward a model of addressing the upstream determinants of health. It is very involved with the educational efforts in the community and readily shares data and expertise.

Suh said that the early college high school initiative is working closely with the state departments of education to change the American education landscape. For example, it is working to develop articulation agreements between the 9-to-14 high schools and 4-year colleges so that young people can carry their college credits forward and continue their education. David Kindig of the University of Wisconsin raised the issue of how to get the business community to understand that education is directly linked to higher income and improved health. May reiterated the value of telling a compelling story and said that the national recognition of Priority Spokane from the Robert Wood Johnson Foundation has provided an excellent platform for telling that story. The story includes what initiatives are happening, why they are happening, and what the positive outcomes

are for Spokane County and Eastern Washington. She also reiterated the importance of having a trusted local entity, such as GSI, that has established relationships with businesses and can convey information to them.

Rost said that as you go more deeply into community, there are more and more potential partner organizations. Some of the best partners in Savannah have been, for example, the YMCAs, the Boys and Girls Club, and the churches. Go into the community and find the organizations already involved in health-related activities, he suggested. Homeowners associations may be creating community gardens and green spaces, for example.

### Negative Impact

George Flores of The California Endowment pointed out that while all of the examples discussed were positive, businesses can also have very negative impacts on population health. There is no systematic way of assessing the net negative impact of businesses on health. Instead, businesses are targeted selectively, he said; for example, the soda companies feel they are being treated unfairly and differently relative to other sugar purveyors. He added that some businesses have a competitive advantage because of business practices that either are unhealthy or pose greater risks to their employees, while others provide unhealthy products to the community (e.g., tobacco). He raised the issue of corporate accountability for population health.

Baase referred to the concept, developed by the Harvard School of Public Health and others, of the "corporate handprint." Although "corporate footprint" generally refers to the adverse impact that an organization might have on the community (e.g., $CO_2$ emissions), the handprint is the net positive impact. It is important to look at both sides of the equation, she said. May said that the Spokane Community Indicators Initiative tracks data in five different areas, including environment and health, and these data can help characterize the impact a business has on the community, whether negative, positive, or neutral.

The Healthy Savannah Coalition wanted to restrict membership and exclude what they deemed to be unhealthy organizations, Rost said, but the Savannah Business Group insisted that everyone be at the table. There is also an organization in town that works closely with several federal agencies and employers who have negative environmental impacts on the community. These businesses are fully within legal limits, he said, but they can do better. The Community Indicators Coalition has the data to be able to inform businesses about how they are impacting the community before asking what they are willing and able to do to improve. Companies do not want to have a negative impact on the community, he said. We need to work together and make sure their impact is minimal.

# 5

# Community/Population Health as an Intentional Business Strategy

As discussed in Chapter 4, businesses undertake a variety of activities that positively affect health but which were not designed specifically with population health improvement in mind. In this session, moderated by James Knickman, the president and chief executive officer of the New York State Health Foundation, panelists from two companies described how their organizations have intentionally included population health improvement in their overall business strategy. Fikry Isaac, the vice president for Global Health Services at Johnson & Johnson, discussed the company's commitment to improving population health through global reach with a regional focus. Charles Yarborough, the director of medical strategies at Lockheed Martin, described how the company selects sites for its outreach efforts and assesses outcomes for modifiable determinants of health.

## THE EXAMPLE OF JOHNSON & JOHNSON

From a business perspective, it is critical for a company to earn the right to be in the communities in which it operates and to give back to the communities, said Isaac of Johnson & Johnson. The Johnson & Johnson strategy starts with its credo, which is the value system that the company operates under.[1] The company's first responsibility, Isaac said, is to the customers it serves—the doctors, nurses, patients, mothers,

[1] See http://www.jnj.com/about-jnj/jnj-credo (accessed December 12, 2014).

fathers, and others who use its products and services. The company is also responsible to its employees throughout the world, to the communities in which it lives and works, and to the world community as well. Finally, the company is responsible to its shareholders, and when the aforementioned principles are followed, there should be a positive return on investment for the shareholders. The credo is about leading with a purpose, he said.

The Johnson & Johnson approach to improving global health has three focus areas: saving and improving the lives of women and children, addressing unmet needs and preventing disease among the most vulnerable, and strengthening the health workforce. Echoing the comments made by IBM's Grace Suh, Isaac noted that Johnson & Johnson's efforts are focused on how the company can make a difference, not just by giving money, but by using its expertise to make a lasting impact.

In working to improve population health in its communities worldwide, Johnson & Johnson strives to have global reach, with a regional focus. Even though the three strategy areas are consistent around the globe, Isaac said the approach varies by region and by country, depending on needs. In North America, for example, the company supports health education through the U.S. Head Start program. The approach is to add value to existing programs, such as offering a 2-week executive management program for Head Start administrators. There are also health literacy programs for Head Start families that educate the families about managing their children's illnesses at home and avoiding unnecessary hospital visits. In Africa, the company supports the Total Control of the Epidemic Campaign, a person-to-person and village-to-village informational campaign about HIV/AIDS. The program has reached more than 4 million people thus far.

Isaac shared several specific examples of programs across the three focus areas, highlighting the impact of each on population health (see Box 5-1). In response to a question about topic selection, Isaac said that some of the topics (e.g., Gateway to a Healthy Community–Healthier Kids) are identified as unmet needs by the Johnson & Johnson Sustainability Taskforce or other committees. The intentional strategic initiatives that are linked to corporate goals require the involvement of the business leaders. For example, offering pharmaceutical support for millions of people comes at a cost, but it is also a part of the strategy of reaching out, he said.

### Intentional Strategies

Having an intentional strategy brings measurable results, and Johnson & Johnson has established specific social goals and targets as part of its overall strategy. The goals and objectives are outlined in the corporate strategic plan, *Healthy Future 2015*, and the company is committed to mea-

suring and reporting on global and community health initiatives annually.[2] As an example, Isaac offered the 2015 goal of providing 200 million doses of mebendazole per year to children infected with intestinal worms and reported that 161 million doses were provided to affected children in 16 countries in 2013. Another 2015 goal is advancing community wellness through health education, and in 2013 seven disease-related programs were launched in nine countries. Isaac said that in 2013 Johnson & Johnson reached more than 4.9 million people with its human wellness initiatives.

In closing, Isaac said that Johnson & Johnson believes in creating a healthier world, one community at a time, and that the company fulfills this mission through essential partnerships. He added that businesses that are doing good can influence and inspire others.

## THE EXAMPLE OF LOCKHEED MARTIN

Yarborough of Lockheed Martin briefly shared two examples of ways in which community and health come together at Lockheed Martin. The program A Million Makes a Difference is part of the company's commitment to making a positive impact in communities where its employees live and work.[3] The goal is for employees to collectively volunteer an average of 1 million hours each year. In addition, Lockheed Martin invests more than $25 million worldwide in nonprofit organizations, and employees donate $20 million annually to various organizations through workplace giving programs. Another program, Accelerating a Better You, focuses on the overall well-being of employees and their families, helping them to achieve a series of lifestyle changes that will help them to get healthy and stay healthy.[4] Yarborough said that this is a cultural shift in how Lockheed Martin views its employees' health and wellness.

Lockheed Martin has dozens of company sites across the country, and Yarborough described the method used to select the sites for the various outreach efforts as well as a report card to assess achievement levels for modifiable determinants of health.

### The Site Selection Process

In selecting company sites for the launch of initiatives, the first key criterion is being ready. Yarborough referred to this as "persuadability,"

[2] See http://www.jnj.com/caring/citizenship-sustainability/performance/healthy-future-2015 (accessed December 12, 2014).

[3] See http://www.lockheedmartin.com/us/who-we-are/community/volunteers.html (accessed December 12, 2014).

[4] See http://www.lockheedmartin.com/us/employees/healthcarereform/aby.html (accessed December 12, 2014).

**BOX 5-1**
**Examples of Johnson & Johnson Initiatives on Population Health Improvement**

**Asia Pacific Economic Cooperation**—Johnson & Johnson participates in the Asia Pacific Economic Cooperation (APEC) and co-chairs the APEC Life Science Innovations Forum (industry co-chair). There are 21 APEC member countries or "economies," including the United States. The Life Science Innovations Forum engages representatives from government, academia, and business and forms public–private partnerships with the goal of sustainable and inclusive growth in the region through health and innovation. The forum facilitates the sharing of best practices among the economies. The results described by Isaac included a renewed focus on non-communicable diseases and health care–acquired infections and the development of a mental health roadmap for the region. There has also been an evolution of the dialogue from health as a cost to health as an investment that drives economic growth.

**Campaign for Nursing's Future**—Johnson & Johnson is working in cooperation with professional nursing organizations, schools, hospitals, and other health care groups to promote opportunities in nursing and to increase awareness of the value of the nursing profession to society and to America's health care community. Isaac reported that their 750,000 new nurses have joined the workforce since the campaign began in 2002. In the past 2 years, employment of registered nurses has increased by 243,000 nurses. Discovernursing.com, the Johnson & Johnson information and resource website for the campaign, is the number one website for nurses. The campaign has distributed 35 million pieces of recruitment and retention materials in more than 50 countries, awarded $20 million in scholarships and grants, produced 12 award-winning documentaries on nursing, and developed more than 25 key partnerships.

or the potential for engaging in healthy actions. Persuadability scores for each site take into account eight health actions: pedometer use, disease management, flu shot participation, biometrics, preventive examinations, cardiovascular exercise, nutrition, and stress management. Scores are determined using decision trees and regression analyses of de-identified data.[5] The second key site criterion is the potential health benefit relative to the average prospective health care cost for each site's employees. This is a proprietary risk score that comes from the company's data warehouse vendor, Yarborough said. The score is based on a relative risk model and takes into account age, gender, and medical claims data as well as

[5] For further information, Yarborough referred participants to Chapter 9 of *Victory Lab* by Issenberg (2013), which discusses big data and campaigns, and *The Signal and the Noise* by Silver (2012).

**Gateway to a Healthy Community–Healthier Kids Initiative**—Johnson & Johnson has partnered with local and state health departments and other organizations to combat childhood obesity and diabetes. The Gateway to a Healthy Community–Healthier Kids Initiative offers innovative tools and applications developed with the support of Johnson & Johnson, including Activity Works, a curriculum-based module that delivers 12-minute exercise bursts in elementary school classrooms to increase physical activity. The program was started in school districts in Atlanta, Houston, Newark, and Philadelphia where a need was identified. According to Isaac, from January 2012 through early February 2013 the program enabled 150,000 children in grades K through 3 to burn more than 150 million calories by engaging in physical activity for 712,789 hours. User surveys and feedback indicate an increase in student physical activity and high levels of classroom and teacher/principal satisfaction, engagement, and support.

**Moms in Motion**—Johnson & Johnson has recently become involved with this existing program that helps busy moms get fit by connecting socially to local or virtual fitness groups as well as through mission-driven coaching toward a fitness goal (e.g., running a 5K race or half marathon). There are more than 10,000 participants in the network. The company's involvement is with an energy management program covering the physical, nutritional, emotional, and mental aspects of energy. A 10-week, 1-day-per-week training program was held for 125 moms who lead fitness teams to help them define their fitness missions and become energy management coaches for their teams. The results, as summarized by Isaac, included increased energy levels; self-reports of positive change in fitness and health behaviors; weight loss; improvement in stress levels, mood, and sleep; and positive program feedback.

SOURCE: Isaac presentation, July 30, 2014.

an analysis of known chronic conditions and acute and new conditions that might occur. Average scores are then plotted on a graph to identify the priority sites for intervention; these are sites that fall into the upper right quadrant in a diagram that maps both persuadability and potential benefits (see Figure 5-1). This quadrant is referred to as the "slingshot" area. "Slingshot," Yarborough explained, is an entrepreneurial term from Silicon Valley that refers to places where one would want to invest funds in a start-up company. These company sites are those that are most ready (persuadable) and that are predicted to have higher health care costs in the coming year (meaning they offer the most potential benefit from an intervention). The site selection process identified 18 company sites as higher priorities for community and industry collaboration on health. Yarborough said that this process is also used for identifying sites for safety performance interventions (considering data such as safety sta-

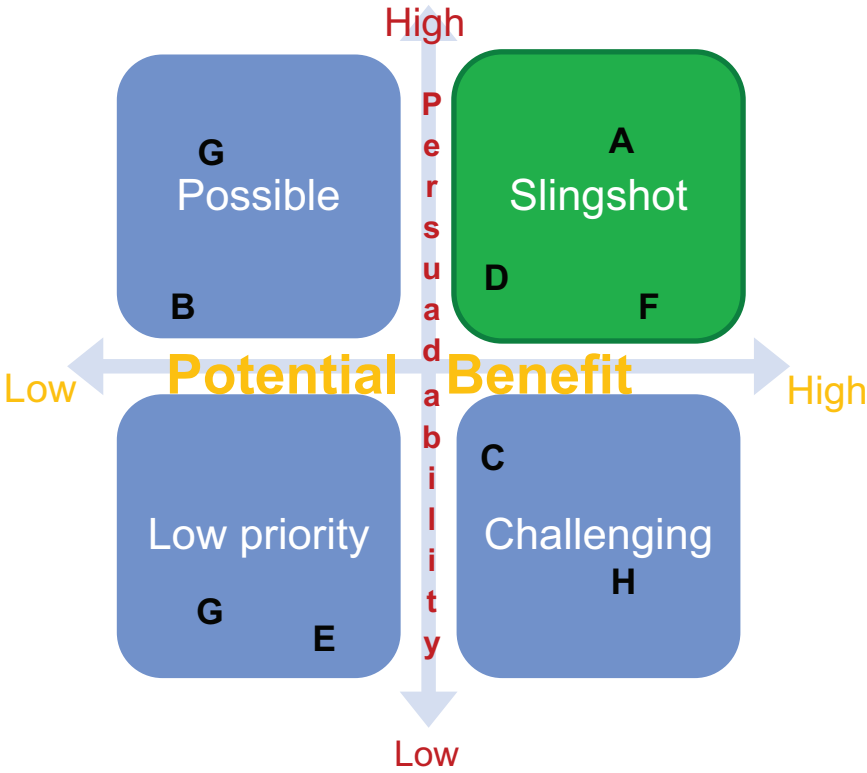


**FIGURE 5-1** Selection of company sites for health initiatives.
SOURCE: Yarborough presentation, July 30, 2014. Used with permission.

tistics, time to report the incident, lost work days, etc.). Interestingly, he said, there was an almost complete correlation, site by site, of the plots for safety and health, and he emphasized that this reflects the interrelationship between the protection of workplace health and safety and the promotion of employee health (Hymel et al., 2011).

### Site Report Cards

As part of the Lockheed Martin HealthWorks employee health plan, employees and their spouses complete a voluntary and confidential well-being assessment. This health risk appraisal is used to create a personal roadmap to health for the individual. Using de-identified data from these assessments, Yarborough explained, scores were derived for individual behavior, physical environment, social and economic determinants, and

health care in order to identify the areas where the company sites should focus attention. Scores were reported as grades (A through F), with the distribution of grades used as an indicator of performance.

Yarborough shared data for 2012 from 47,000 of Lockheed Martin's U.S. employees (see Figure 5-2). There were very few As in the areas of individual behavior and social and economic determinants. Generally, male and female employees were similar he said, except for health care, where men, not unsurprisingly, got more D and F grades. Yarborough said that charts like these are very useful when talking to site managers about what actions are needed at the local level.

## Partnering for Health

There are various models of intervention used across the many Lockheed Martin "slingshot sites." In Fort Worth, Texas, the company is partnering with the Blue Zones® project described by Buettner (see Chapter 2). At a plant in Cobb County, Georgia, the site manager is in a

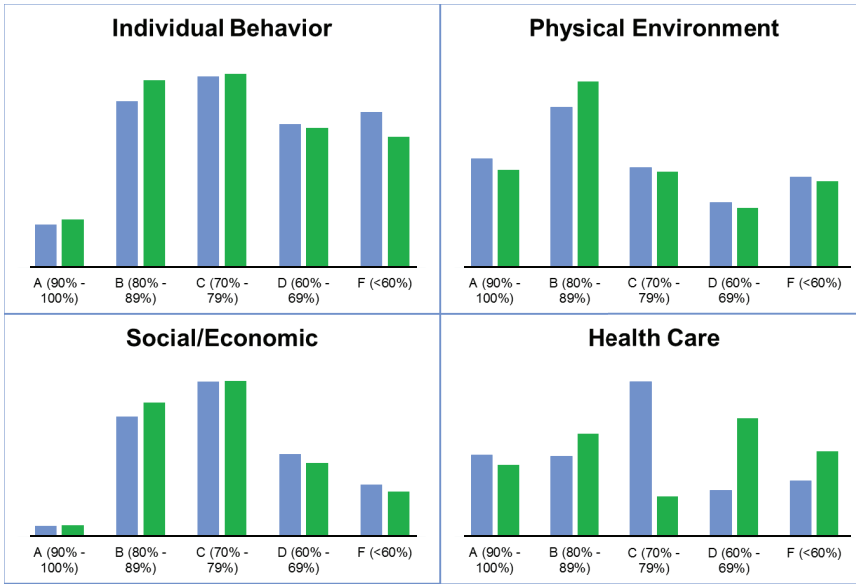


**FIGURE 5-2** Report card grades for 47,000 U.S. employees for 2012, based on de-identified, self-reported well-being assessment data.
SOURCE: Yarborough presentation, July 30, 2014. Used with permission.

YouTube video for the kickoff of the Cobb County 2020 campaign, conducted in partnership with the local public health department, school district, and others. In Manassas, Virginia, the company is a part of the business sector of the comprehensive community plan, Manassas Next, and in Palmdale/Lancaster, California, the company is involved with the community collaborative Antelope Valley Partners for Health, a 501(c)(3) nonprofit organization. Working with these community-led initiatives is a good tactic to improve the determinants of health where most needed in order to benefit both communities and business, Yarborough concluded.

## DISCUSSION

### Engagement, Scalability, and Sustainability

Participants discussed further the challenges of getting businesses engaged in their communities, especially large corporations in small communities. Yarborough said that even though Lockheed Martin has more than 100,000 employees in the United States, each local site manager and each business area of each division is responsible for the productivity of his or her employees and the economic health of the local site. The managers are approachable on a local level, he said, and he suggested that communities think of them as individual entities, rather than as part of a large system. A challenge for the surrounding community in engaging local employers, however, is that many of the company employees do not actually live in the community. Isaac suggested that part of the problem is that there is no framework to help match businesses' interests and expertise with community interests and needs. There is no way for a corporation to post its focus areas or for communities to share which of their systems need support or for several of a corporation's employers to come together as part of a solution to a particular community problem. Any matching among different groups has been ad hoc and informal, Isaac said. He added that one of his company's sustainability goals is to extend education and on-site guidance to the various companies in the supply chain—for example, instructing them on how they can protect their employees if they are making products or parts for Johnson & Johnson. Baase noted that the Lockheed Martin examples were all in partnership with existing groups, initiatives, or frameworks (e.g., the blue zones in Forth Worth). She noted that the Institute of Medicine roundtable has previously discussed the importance of a backbone organization or integrator function in enabling partnerships (discussed further in Chapter 6).

Participants also discussed the issue of scalability. Well-constructed health promotion campaigns have been shown to work in terms of both participation and actual results, Yarborough said, but it can be difficult

to put those together to be sustainable and scalable across multiple sites. The issue goes back to local readiness and need, and the efforts are often around health disparities. A key question is how to implement initiatives equitably, realizing that some places will adopt initiatives faster than others. Isaac suggested the need for a platform to transfer proven business or private-sector programs elsewhere, perhaps to areas where the company does not have a presence but where another entity could duplicate the effort. Isaac also said that an obstacle in dealing with governments around the world is a lack of trust in the private sector, combined with a feeling that there must be a hidden agenda for a business to want to be involved in community health. He added that this is an area where business has a responsibility to try to address the concerns in order to really be successful in creating healthy communities here in the United States or elsewhere.

Baxter said that companies, whether they are discussing corporate philanthropy, social responsibility, sustainability, or employee engagement, tend to take credit for the good they intentionally do, but do not always take ownership of some of the other impacts that their work may have. He suggested a "health in all business practices" framework that would look at the overall health impacts of an organization (including, for example, hiring practices, sourcing practices, and waste or environmental impact). Some frameworks for sustainability already exist, but there are not yet any for health. Isaac responded that health objectives are included in the Johnson & Johnson sustainability framework, covering topics such as cultural health programs, health risks, access to medicines, education, health literacy, waste and environmental issues, and safety. He agreed that there is value in including health as part of a sustainability framework.

## Policy

Terry Allan of the National Association of County and City Health Officials asked about the involvement of companies in policy change at the state or local levels where the companies do business (e.g., smoke-free legislation or nutrition labeling). Yarborough said he has been studying the costs associated with low-back pain and knee pain in employees and spouses, both the health care costs and the loss-of-productivity costs. He said that there is often little incentive for people to come back to work while collecting disability. His company is looking into ways to safely bring employees back to work earlier, but a challenge is that the workers' compensation system varies by state.

Isaac said that his company works directly with the government in some countries and not in others. For example, it has not gone directly

to states or health departments for tobacco bans. Rather, the company worked through the CEO Roundtable on Cancer[6] and with the American Cancer Society to try to ban smoking in workplaces. It also worked to improve the benefits coverage for smoking cessation and created a toolkit for other businesses interested in banning tobacco to become an accredited "Cancer Gold Standard" employer. Through the CEO Roundtable and the American Cancer Society, the company has also been working to influence state-level policy changes, for example, to raise taxes on cigarettes.

### Impact on Health Care Costs

José Montero of the New Hampshire Division of Public Health Services raised the issue of financing health promotion and community engagement activities and analyzing the benefit of these programs not just in savings to the company, but in outcomes that could enhance the company's health insurance purchasing power. Isaac responded that Johnson & Johnson has not incorporated its health and wellness programs into its benefit planning, and it does not use the health plan as the delivery arm for its wellness programs. The company has been able to definitely measure and publish data on the performance of these programs, and the measurements have shown an impact on health care costs, specifically, a reduction in the rate of growth of health care costs for Johnson & Johnson in the United States (a 1 percent increase relative to a 4.7 percent in the comparative group). Yarborough said that Lockheed Martin has built its health plan around its wellness programs and metrics.

[6] See http://www.ceoroundtableoncancer.org (accessed December 12, 2014).

# 6

# Stimulating and Supporting Business Engagement in Health Improvement

After previous panels had considered why businesses should engage in population health and what they can do indirectly and directly to affect population health, speakers in the fourth panel session, moderated by Clinton Foundation fellow Alex Chan, addressed how businesses might engage in population health. George Isham, a senior advisor at HealthPartners, outlined several mechanisms to stimulate and support business engagement in health, including developing a community health business model and acting in the role of an integrator or neutral coordinating entity. Neil Goldfarb, the executive director of the Greater Philadelphia Business Coalition on Health, described his organization as an example of a local business coalition engaged in population health. John Whittington, the lead faculty member for the Institute for Healthcare Improvement's Triple Aim initiative, described how employers have used the Triple Aim as a framework to improve the health of their own employees and have also applied it via participation in multi-stakeholder coalitions in the communities that they serve.

## MECHANISMS FOR ENGAGING BUSINESS IN HEALTH IMPROVEMENT

Progress on health requires collaboration and action on multiple determinants by multiple actors, said Isham of HealthPartners. Isham summarized some of the main reasons for businesses to engage in popu-

lation health,[1] including improving their market image in the minds of potential customers (i.e., appearing to be community-minded), improving the value of products and services, improving the health of the workforce (which results in less costly inputs, increased productivity, and improved workforce motivation), improving the community environment for business, attracting more and better customers, increasing wealth in the community, encouraging altruism (social responsibility), improving one's national business competitiveness, and improving national defense. Ultimately, aligning the self-interest of businesses and the interest of a community needs to be at the core of engagement, Isham said. Appealing to what is important to the stakeholders encourages them to work together toward a common purpose.

### Creating Value for the Organization

Isham referred participants to the work of Kaplan and Norton, who laid out strategy maps for creating value from various perspectives (Kaplan and Norton, 2004). In brief, the *learning and growth perspective* involves considering the internal assets that the organization has (human, informational, and organizational capital). The *internal perspective* takes into account the processes that create value (operations management processes, customer management processes, innovation processes, and regulatory and social processes). The *customer perspective* considers those factors that determine value for the customer, including price, quality, availability, selection, functionality, service, partnership, and brand. From the *financial perspective*, improved cost structure, enhanced customer value, increased asset utilization, and expanded revenue opportunities lead to long-term shareholder value (or strong financials for a nonprofit organization).

Isham highlighted specific areas in the strategy where he suggested that population health could contribute to enhanced value for an organization. Examples include organizational culture and leadership (e.g., the role of the chief executive officer and chief financial officer); human capital (the relationship of the health of the workforce to the community); production and risk management (increased work productivity and safety); environment, safety, and health; employment and community; price and quality of the product; brand and image; improved cost structure; and enhanced customer value. He recommended there be a more critical assessment of where value might be created to make it possible to be more persuasive when presenting the business case and value proposition for population health to business leaders.

[1] Making the business case for engagement is discussed in Chapter 3.

### Identifying Where the Organization's Mission, Capabilities, and Control Lie

In considering which mechanisms could stimulate and support business engagement in health, Isham reminded participants that there are multiple determinants of health outcomes (e.g., health care, health behaviors, socioeconomic factors, and environmental factors) as well as multiple drivers behind each of these determinants (e.g., behavioral drivers might include tobacco or alcohol use, activity level, diet, and nutrition). Using his organization, HealthPartners, as an example, Isham described how the board went through a process to determine which types of drivers of health are central to the HealthPartners mission in terms of improving health and which ones are aligned with the mission, but not central (see Figure 6-1; Kindig and Isham, 2014). As a health care, finance, and delivery organization, HealthPartners finds that the drivers of health care and health behaviors are central to its mission, while the drivers of socioeconomic and environmental factors are aligned with the mission. The board also identified the health determinant for which the organization has many capabilities and high control (health care), the health determinants where it has shared capabilities and shared control (health behaviors), and the health determinants where it has limited capabilities and limited control (socioeconomic and environmental factors). Finally, an

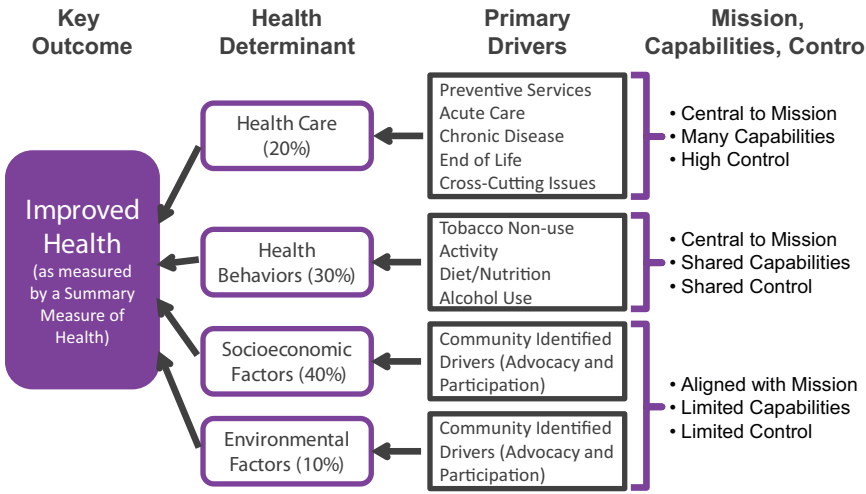


**FIGURE 6-1** HealthPartners health driver analysis for priority setting.
SOURCE: Isham presentation, July 30, 2014, adapted from G. Isham and D. Zimmerman, presentation, HealthPartners Board of Directors Retreat, October 2010. Reprinted with permission.

inventory was done of all of the activities that HealthPartners does that touch the various drivers and determinants. This information was then used to set the organization's priorities and goals.

Isham noted several ways in which businesses directly influence the social determinants of heath. Businesses buy health insurance and can shape the cost and quality of the health care that is delivered through purchasing and benefit design. Businesses can affect healthy behaviors through programs for their workforce, both directly and in partnership with public and private health organizations. In addition to providing employment, businesses affect socioeconomic conditions by contributing to economic development and education, directly and in partnerships. Businesses also affect their environments, for example, by instituting sustainable operations and "green" solutions.

### Developing the Community Health Business Model

A business model is the mechanism by which an organization (or collective group) creates, delivers, and captures economic, social, or other forms of value, Isham said. It represents the core aspects of a business (or organization), including its purpose, offerings, strategies, infrastructure, organizational structure, trading practices, operational processes, and policies (Kindig and Isham 2014, p. 5).[2] For the sake of discussion, Isham suggested the following list of necessary elements of a community health business model:

- All stakeholders engaged
- Operate in a transparent and public manner
- Leadership structure (in a community health business model)
- Common purpose and defined strategies
- Resources (to implement the community health business model)
- Effective collective and in-kind (direct) evidence-based interventions
- Incentives (moral, regulatory, financial)
- Knowledge of the state of health of the community, and its evolution over time
- Lessons are learned and applied to future efforts
- Commitment and support from government (policies, infrastructure, incentives and information, willingness to engage)
- Encourage dialogue and partnership between public health and broader collaboratives

[2] For more on business models, see Johnson et al., 2011.

Isham suggested that the necessary resources for the community health business model might come from savings captured from reducing ineffective health care spending, a better return on investment on policies and programs outside of health care, strengthened government funding for population health improvement, philanthropy, and engagement of corporate business leaders (in particular, from in-kind leadership resources) (Kindig and Isham, 2014).

### The Role of an Integrator

The concept of an "integrator" (a neutral coordinating entity or mechanism) has been discussed as a way to bring together the various elements and partners in a community health business model (see Figure 6-2; Kindig, 2010; Kindig and Isham, 2014). It has been suggested that the integrator role could be fulfilled by public health agencies (IOM, 2011), health outcome trusts (Kindig, 1997), or accountable health communities (Magnan et al., 2012). Isham said that organizations such as the United Way and the YMCA have also acted as conveners of large community

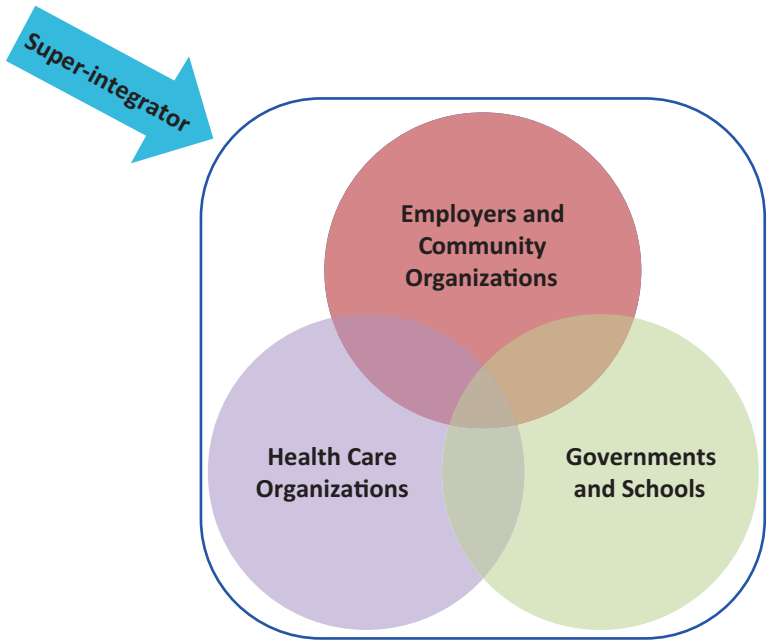


**FIGURE 6-2** Community heath business model: Collaborations and the integrator role.
SOURCE: Kindig and Isham, 2014. Reprinted with permission.

conversations about local health needs. The appropriate convening entity might vary according to regional factors and culture (as was illustrated by Rost and May with, respectively, the Savannah Business Group and Priority Spokane, in Chapter 4). The task now, Isham said, is to develop the collaborative relationship models and examine them critically in terms of how effective the different models are.

### Next Steps

In preparation for the roundtable workshop, Isham and Kindig, along with their colleague, Kirstin Q. Siemering, drafted a perspective article that put forth for discussion seven steps that need to be taken to assist businesses in taking a more active role in community health improvement (Kindig et al., 2013). The seven steps are as follows:

1. Set galvanizing targets
2. Extend a meaningful invitation, soliciting the businesses' views, needs, and involvement
3. Educate chief executive officers and senior executives
4. Sponsor meetings with broad community partners
5. Develop case studies of businesses that are already making progress in community health
6. Promote "Triple Aim"[3] collaborations with business
7. Identify and create durable revenue streams for population health activities

Ultimately, Isham concluded, businesses need to satisfy their customers' needs and make a return on investment for their shareholders. They also need to provide good health and health care options, relevant education and skills training, and a good wage to the workforce; provide pressure for cost control and quality in health care; and contribute to a community approach to health.

## CASE EXAMPLE: GREATER PHILADELPHIA BUSINESS COALITION ON HEALTH

After having been involved in the National Business Coalition on Health, Neil Goldfarb saw the need for a similar coalition in Philadelphia, and so in January 2012 he launched the Greater Philadelphia Business Coalition on Health (GPBCH). The nonprofit organization currently has 36 employer members, representing 450,000 covered lives locally and

[3] The Triple Aim is discussed further by Whittington in this chapter.

more than 1 million lives nationally. There are also 34 affiliate members (health plans, benefits consultants, pharmaceutical companies, and wellness vendors) that join the employers at the table for discussions. The coalition serves five counties in the Philadelphia region as well as northern Delaware and three counties in southern New Jersey. The GPBCH mission, Goldfarb said, is to keep employees healthy and productive in the workplace; to accomplish this, the coalition recognizes that the employees will need health care that is accessible, affordable, high quality, and safe. As examples of business engagement in population health, Goldfarb described three current GPBCH population health initiatives addressing obesity, diabetes, and cancer screening and treatment.

### The Philadelphia Health Initiative: Multi-Stakeholder Partnership Addressing Obesity

GPBCH was approached by the pharmaceutical company Sanofi, which was interested in working with other local stakeholders to address obesity as a major problem in the Philadelphia region. The Philadelphia Health Initiative was established as a community collaborative to reduce obesity through an integrated community, workplace, and health care strategy. At the community level, the Philadelphia Health Initiative disseminated the STOP Obesity Alliance Weigh-In Guide, which guides parents in having conversations with their children about healthy weight.[4] At the health system level, the goal is to get health centers to lead by example for their own workforces, for the patients they serve, in the curriculum they teach, and for the communities they are in.

At the workplace level, the Diabetes Prevention Learning Collaborative was launched to engage employers in preventing diabetes by recognizing and addressing early risk factors, particularly obesity, in their populations. The learning collaborative facilitates the measurement and sharing of data on obesity and diabetes rates among employers in the region as well as the sharing of practices and experiences (e.g., around benefit designs). Each employer developed and implemented its own customized action plan with guidance with GPBCH. In the first year, 11 employers signed on to the collaborative, and 10 have developed their customized action plans. Goldfarb added that the coalition is promoting the Diabetes Prevention Program of the Centers for Disease Control and Prevention (CDC) as an evidence-based approach to addressing diabetes risk and obesity.

Goldfarb said that even when employers want to put a workplace diabetes prevention program in place, there are barriers at the insurer level

[4] See http://www.stopobesityalliance.org/ebook/weighin (accessed December 12, 2014).

(e.g., the credentialing of providers and how to process claims). This is another area where a coalition adds value, so that employers do not have to fight these battles individually.

### Value-Based Insurance Design Partnership with the Philadelphia Department of Public Health

GPBCH was also approached by the Philadelphia Department of Public Health, which was eager to engage employers on smoking cessation, hypertension, hyperlipidemia, and diabetes. With funding from CDC and the Philadelphia Department of Health, GPBCH developed evidence-based recommendations for how employers could modify their benefit designs to add value and to reduce obstacles to care. Recommendations for benefit designs for smoking cessation, for example, included covering nicotine replacement therapy and not limiting the number of quit attempts covered. Goldfarb said that although there was a lot of interest in the concept from the employers, there has been little movement toward implementation of the value-based designs.

### Reducing Disparities in Cancer Screening and Treatment

With seed funding from NBCH, the Robert Wood Johnson Foundation, and United Health Foundation, GPBCH convened a summit with 40 stakeholders to plan a project around reducing disparities in cancer screening rates. The scope of the project was expanded when it became clear that there were even greater disparities in treatment. Many people who were screened were not able to access care afterward. A plan was developed, Goldfarb said, and GPBCH is currently seeking funding for pilot testing of the plan. The plan involves developing central resources that communities can draw upon to help them implement actions specific to their communities. One size does not fit all, Goldfarb emphasized, and community health planning cannot be done at the aggregate level.

### Facilitators and Barriers

In closing, Goldfarb described some facilitators and barriers he has observed in working on these GPBCH initiatives. One barrier is the disconnect between, internally, human resources and internal health benefits management for employees and, externally, the public relations and community relations efforts toward health programs. Goldfarb said that in his experience, the human resources staff do not know who the community relations staff are or on what they are working.

*Facilitators*

The facilitators Goldfarb mentioned included

- Coalition leadership with population health orientation
- Public health leadership that supports partnership
- Champions among members (members who "get it")
- Seed funding from external sources
- The participation of large local employers, including public employers
- Partnership with academic programs
- Growing employer recognition that population health issues affect costs and productivity loss

*Barriers*

Goldfarb's list of barriers included

- Large corporations reluctant to engage at the local level or to create the perception of geographic inequity
- A lack of evidence for return on investment for interventions
- The disconnect between human resources/benefits and public/community relations departments
- Limited direct access to data, including limited measurement of productivity loss
- Limited "translation" of academic research into actionable policy for employers
- Limited evidence showing links between community health and workforce health and costs

## THE TRIPLE AIM AND POPULATION HEALTH MANAGEMENT

The Institute for Healthcare Improvement (IHI) Triple Aim is an approach for optimizing health system performance. As explained by Whittington of the IHI, system designs should simultaneously improve three dimensions: improving the health of populations; improving the patient experience of care, including quality and satisfaction; and reducing the per capita cost of health care. Improving health is what we are all striving for, he added, and per capita spending is one of the key barriers to progress. The Triple Aim initiative is being pursued by 140 organizations around the world, about 50 of which are outside of the United States. Whittington shared some lessons learned (i.e., mechanisms) from working on the Triple Aim initiative.

### Foundational Setup for Population Management

To form the foundation for population management, three things must happen simultaneously to essentially form a multi-stakeholder coalition, Whittington said. These are choosing a relevant population for improved health, care, and lowered cost; identifying and developing leadership and governance for the efforts; and articulating a clear purpose that will hold the stakeholders together. He said that target populations can be geographic, such as provinces, regions, or communities, or discrete or defined populations, such as all of the employees of an organization or all the members of a health plan. Once these elements are in place, the next step is to develop a portfolio of projects that will yield results at the scale needed. No single project can accomplish the Triple Aim, he said.

### Managing Services for a Population

As Isham had discussed earlier, there is a role for an integrator in bringing together the elements of the portfolio. The integrator could be an organization, Whittington said, but more likely it will be a force for integration made up of multiple actors in a rich multi-stakeholder coalition. The needs of the chosen population segment are assessed, goals are set, and services are designed, coordinated, and delivered at scale. Throughout this progression the integrator's function is continuously informed by data from feedback loops. Whittington said that many of the services needed by the population segment will likely already exist; they just need to be coordinated better. Community, family, and individual resources also come into play in developing the portfolio of activities that will affect outcomes.

### Learning System for Population Management

This kind of work is complex, Whittington said, and it requires a strong learning system. He outlined six characteristics of a learning system for population management: system-level measures, an explicit theory or rationale for system changes, learning by testing, the use of informative cases (act for the individual, learn for the population), learning during scale-up and spread, and people to oversee and manage the learning system.

### Business Engagement in Triple Aim Initiatives

Employers have used the Triple Aim as a framework to improve the health of their own employees, Whittington concluded. Employers have also played a role in the multi-stakeholder coalitions in the communities

that they serve. Many were already actively working on health, and others incorporated a health component into existing programs (e.g., community safety programs). Employers have been involved in the implementation of the portfolio projects that were developed by the multi-stakeholder coalitions. Whittington added that employers also indirectly contribute through the service of their executives on community boards (e.g., community boards of nonprofit hospitals). In this way employers can help align the work of the health system with the needs of the community.

## DISCUSSION

Several issues were raised by participants during the open discussion on the mechanisms for engagement, including sustainability, productivity as an aim, the need to work with the key leadership personnel, improving the built environment, and risk adjustment in outcomes measurement.

### Sustainability

Moderator Alex Chan asked panelists what programmatic components or structural elements could help ensure that these multi-stakeholder coalitions survive past initial seed funding and are sustained over a long period of time. Goldfarb said that it is a challenge to continue to demonstrate value. Strong leadership is required to keep the coalition together, moving forward, and communicating clearly. It is also important to show progress toward measurable objectives or milestones defined at the outset. Goldfarb said that GPBCH compiles a list every year for its members detailing what was accomplished that year and what still needs to be done. Whittington said that the "why" of the coalition should be explained to businesses at the very beginning and that they should be made to understand that the coalition's work will be a long-term process. He agreed that there is a need to demonstrate results in order to help keep people engaged. Isham agreed that leadership and demonstrating early results and value for stakeholders are keys to success. It is also important, he said, for the coalition to become embedded in the fabric and culture of the community in terms of what it provides toward health. He added that changes in leadership in the major sponsoring institutions and changes in the leadership of the coalition can be threats to the sustainability of the coalition.

### Productivity as a Fourth Aim

Kindig said that the U.S. Department of Defense uses a "quadruple aim," adding readiness to the Triple Aim. For business, this fourth element could be productivity. Businesses want to have high-performing

employees, and communities want people who are productive. Kindig asked if productivity had been raised in the conversations about the business coalitions. Goldfarb responded that he is trying to interest coalition members in measuring lost productivity in a systematic way. Human resources staff members who work with benefits use direct medical spending to justify their operational budgets, but research shows that indirect costs are greater than direct costs for many diseases. Quantifying indirect costs could help justify health promotion programs. Goldfarb said that most human resources staff are not convinced that lost productivity is a meaningful measure. Because it is self-reported in most cases, there are concerns about bias, but Goldfarb suggested that the bias would be toward underestimating total productivity loss. He said that GPBCH has begun to work with the CFO Alliance on this issue. Chief financial officers have acknowledged that health and productivity are a primary concern, but that message is not reaching the benefits and human resources people. Productivity is a key element of the argument for why businesses should be engaged in health promotion, Isham added. He suggested that there is a need for better measures of productivity.

### Engaging Key Corporate Personnel

A participant noted that the person in a company who is most involved in employee and community health and wellness varies according to company structure, size, resources, and culture. In large corporations it might be the corporate medical director, but in many large companies the corporate medical director is focused on occupational health and safety and is not involved in benefits decision making. In small- and medium-sized companies it is often the human resources or benefits personnel who are involved. Goldfarb said that some companies have a full-time wellness director, while others outsource the oversight of their wellness initiatives. Isham noted that the fundamental strategy of a company comes down from the chief executive officer and the board. The argument that improving community health is part of the company's overall value proposition needs to reach this level of leadership, he said. The various functions within the company (e.g., benefits managers and corporate medical directors) also have a particular interest in that value proposition from various perspectives. Isham also suggested reaching out to business schools and training students in this area. Goldfarb concurred, but noted that the person who is most effective to engage with depends on the company and the culture and on who is in what position.

Baxter pointed out that some companies are rooted in place and are investing in the productivity, health, and safety of a workforce that they have had and intend to have for a very long time. Other businesses are

not rooted in a community and readily relocate for a lower cost of labor, or else have a lot of turnover and a less skilled workforce that they are less likely to invest in. The approach to engaging with these different kinds of organizations must vary in order to appeal to their different self-interests, he said. Isham concurred and warned against over-generalizing the approach to business engagement as a whole. Whittington added that, judging from his experience working in communities and building multi-stakeholder coalitions, there will always be those wanting to make a difference and those who are not invested in the communities.

### The Built Environment

A workshop participant emphasized the need to improve the built environment. Isham reiterated that from a business model perspective, a firm needs to identify its assets and capabilities and where it can exert control. For many businesses, smart health care purchasing for their workforces can have significant and direct impacts on health. Improving the environment is more challenging, and business is a partner or a supporter in this area more often than a leader. Goldfarb added that many businesses are addressing the built environment in the workplace, but this does not necessarily translate to the broader built environment of the community. For example, providing bike racks on site does not necessarily mean that employees have safe, paved bike lanes on which to ride to work. This is a next step, he said, adding that he is encouraged that employers are starting to recognize the built environment needs in the workplace.

### Risk Adjustment in Outcomes Measurement

A participant raised the issue of provider engagement and pointed to the ongoing debate at the National Quality Forum concerning risk adjustment in outcomes measurement. Such risk adjustment sometimes ends up as a rationalization for differences in outcomes in the measurement of population health. Isham responded that risk adjustment is important for some purposes (e.g., payment for performance). In many other cases, risk adjustment takes away the key issues that we are trying to understand and address (e.g., disparities and other issues in communities). If applied inappropriately, risk adjustment can reduce the pressure that ought to be on all institutions to address these risks. Isham suggested that the push toward simplification and harmonization of measures is compounding the issue. The mindless application of harmonization to either a risk-adjusted or a non-risk-adjusted measure means that we cannot adapt the measure accordingly to circumstances where it is important to understand

the differences. Goldfarb said that outcome measures have to be risk adjusted, particularly if they are to be linked to payment, or to be publishable data. Process measures do not lend themselves to risk adjustment (e.g., health care activities such as whether weight is recorded in the chart, whether obesity is diagnosed, whether treatment is documented in the chart). Process measures can help drive population health.

# 7

# Reflections on the Day

In the final discussion, moderated by David Kindig of the University of Wisconsin, roundtable members and attendees reflected broadly on engaging business in population health improvement. The following topics were highlighted by roundtable members and participants as important takeaway messages from the presentations they heard.

## HEALTH AS AN INTRINSIC VALUE

George Flores of The California Endowment observed that in the discussion of the key features of the blue zones, none of the people who were interviewed identified health care services, superior doctors or hospitals, or the services of health departments as among the reasons they were living so long. Flores emphasized that health is not a service; it is an intrinsic value. People in the blue zones place a high value on a lifestyle and a culture that supports health. Referring to Dan Buettner's assertion that health is a part of living with purpose, a participant noted that some businesses offer opportunities for employee volunteerism, which is one way to increase purpose. Catherine Baase of The Dow Chemical Company agreed that health does not come from any entity, but rather from the shared environment that supports people in achieving health. There has been an evolution in worksite health and in creating health for the employee population. In many cases the culture and environment created leads to high employee participation rates in health activities with few or no financial incentives. The challenge is to figure out how to do that at the community level.

## ELEMENTS OF ENGAGING BUSINESS

Throughout the workshop, invited panelists shared examples of how businesses had engaged successfully in communities and in population health. In the final discussion, participants discussed lessons and specific elements that could help facilitate these types of engagement efforts in other geographic areas.

### Champions, Conveners, and Integrators

Alisa May, executive director of Priority Spokane, said that two factors that were key to the success of Priority Spokane were having specific data about the community and having a champion who could reach out to other influential players and start a neutral, trusted group (i.e., Priority Spokane) to bring these data and issues forward. Having a trusted organization that businesses can look to and rely on is essential. Who fills that role in each community will be different. If there is not an existing organization to fill that role, she recommended developing one, acknowledging that this can take a number of years. Kindig and James Knickman of the New York State Health Foundation also highlighted the need for a trusted organizer, community health trust, or other integrating organizations, as had been discussed by George Isham of HealthPartners and John Whittington of the Institute for Healthcare Improvement (see Chapter 6). This will take different forms in different places, Kindig agreed.

Knickman added that although many employers are doing good things, most are not ready to take a leadership role in population health that is transformative. He suggested that it may be the employees who can energize their employers to support their communities.

### Relationship Building and Trust

May further emphasized trust as an essential component of bringing diverse stakeholders together. She said that she has observed people from different nonprofit organizations or the educational sector making disparaging comments about the business sector as being highly profit driven. However, the purpose of a business is to make a profit. Trust has to work both ways, she said, and progress cannot be made in the face of negative attitudes about businesses and why they are in business. In addition, it cannot be left entirely to businesses to reach out to other members of the community and do the work of building trust and relationships. The community must reach out to businesses as well. Those relationships might begin at the Rotary club or at community meetings, for example. May recommended making a point of sitting next to business members at the

table and starting those casual conversations that can eventually lead to a brief presentation, with one key piece of data that can take the relationship to the next level. Peggy Honoré of the U.S. Department of Health and Human Services agreed that the public health and health care communities need to reach out to the business community. She told a story about a time when there was an influx of casino gaming in a particular state and while education, transportation, the police department, and other sectors of the community approached the new businesses for collaborations, the health sector did not.

Kindig pointed out that the roundtable's December 2013 workshop, Supporting a Movement for Health and Health Equity, emphasized the role of relationships (IOM, 2014b). He added that although the Institute of Medicine workshops are not framed as relationship-building sessions, they do connect people who have not been previously connected.

### Reaching Out to Key Corporate Personnel

Participants discussed further the points made in the previous panel about identifying and reaching out to the key corporate personnel. Jacqueline Martinez Garcel of the New York State Health Foundation said that to get health systems to think outside their walls, their boards and the chief executive officers must embrace change. Things start to change when the leadership of health systems starts to see population health as part of their mission and their vision.

### Measures and Metrics

Paula Lantz, a professor at the George Washington University School of Public Health, emphasized the need for measures and metrics and for ways to use data to excite businesses and communities about "moving the dial" on population health. However, she raised a concern about the use of life expectancy as a metric because it is not accurate and can be misleading to individuals and communities. Life expectancy is a population-level statistic, and it is a synthetic measure used by demographers, she explained. She expressed concern about the idea of using population-level statistics to calculate individual life expectancies that have any predictive power, and about telling people how they might increase that life expectancy by taking certain actions. As a demographer, she said, she is concerned about how the reported increases in life expectancy of communities over a short period of time are being measured.

## MOVING FORWARD

Many participants said they were encouraged by the examples of business engagement in population health that had been described throughout the workshop, but the sentiment was that there is much to be done to make these examples the rule rather than the exception.

### Raising Awareness

Gary Rost of the Savannah Business Group cautioned that the employers and coalitions represented at the workshop are innovators and are the rare exceptions to the general pattern among businesses. A question that needs to be asked is, Who is currently providing information to the chief executive officers, chief financial officers, and benefit managers of the employers that are not engaged? He suggested that it is often brokers, consultants, actuaries, and benefit lawyers and that benefit plan design sessions for employers tend to be about avoidance (e.g., not covering certain conditions or providing certain services, or how to get people off the company health plan). Baase of The Dow Chemical Company agreed that the business case examples discussed at the workshop are not the norm. There is a real need for awareness in the business community of the capacity of businesses to affect health and of how to use the assets they have to have a beneficial impact. She added that it is hard to imagine being able to achieve public health objectives in population health without the business community, but she reminded participants that the business community is only one essential element of the solution. Isham agreed that business coalitions are far from everywhere around the country. He suggested that the Blue Zones® project (see Chapter 2) is a tremendous example of how to get things rolling in places that want to commit and that already have certain key characteristics. The question now is, How can this be expanded to everywhere else?

### Addressing the Disconnect Between Health and Wellness Promotion and Health Care

José Montero of the New Hampshire Division of Public Health Services said that although there are many real life examples of businesses taking action on health, there is still a disconnect between health and wellness promotion and employee health care, especially when it comes to making direct and clear connections regarding the impact on costs and outcomes. There is a need for a comprehensive look at what we pay for and what we are getting out of it. He noted that the initial focus of the Triple Aim was clinical and was geared toward the individual,

but the concept has evolved toward looking at the overarching outcome for the population.

### Sharing the Success Stories

Terry Allan of the National Association of County and City Health Officials referred to the forthcoming IBM playbook mentioned by Grace Suh of the IBM Corporation (see Chapter 4) and said that while the intent of the 9-to-14 early college high school model is to develop a pipeline of talent for IBM, the concept is also an opportunity for particularly high-need communities. There also may be playbooks available describing business efforts to address specific health problems in communities. He suggested that one role for the roundtable could be to assemble and share the stories from businesses of different sizes and how they have engaged in health.

### Driving Policy Change

Allan also suggested that businesses need to be more involved in policy changes aimed at affected community health. Business has influence with legislators and elected officials and has, particularly in the health care industry, the data to support policy change.

### Mentoring and Economic Development

Flores highlighted the role and capacity of business in mentoring youth so that they can become productive (thereby reducing economic and health inequities). Anybody who is employed could be a mentor to a youth who does not have an employment role model, he said. Kindig added that the business role in job creation and economic development in communities should not be overlooked.

### A Continuum of Investments in Health

Phyllis Meadows of The Kresge Foundation reiterated the notion of a continuum of investments in population health, from the early investments of ensuring compliance within an institution (e.g., safety) to charitable outreach programs in health, to health as part of the strategic plan. Positive changes have occurred, she said, because many stakeholders, with good intentions, are taking action on health. However, each stakeholder is addressing pieces of health issues individually, without coming together in a strategic and effective way. This is where the next movement

has to come from, she said—to go beyond being charitable to being more strategic and, ultimately, more focused on systems change to improve population health. Andrew Webber of the Maine Health Management Coalition said that the journey will take incremental steps. The business community and other stakeholders will start to think about population health relative to the defined populations that they have authority over. That journey can lead them to consider the larger community and to engage other stakeholder groups.

# Appendix A

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# Appendix B

# Workshop Agenda

**Roundtable on Population Health Improvement**
**Workshop: Business Engagement in Population Health Improvement**
**July 30, 2014**

**AGENDA**

New York Academy of Medicine, Room 20, New York, NY

**WORKSHOP OBJECTIVES:**

- Discuss why engaging in population health improvement is good for business.
- Explore how businesses can be effective key leaders in improving the health of communities.
- Discuss ways in which businesses can engage in population health improvement.

8:30 a.m. **Welcome, Introductions, and Context**
*George Isham, senior advisor, HealthPartners; senior fellow, HealthPartners Institute for Education and Research; co-chair, Roundtable on Population Health Improvement*

8:40 a.m. **Welcome to the New York Academy of Medicine**
*Jo Ivey Boufford, president, New York Academy of Medicine*

8:50 a.m. **Keynote Presentation**
*Dan Buettner, founder, Blue Zones®*

9:20 a.m. **Discussion**

9:45 a.m. **Panel I: The Case for Engagement in Population Health Improvement**

This panel will provide a broad view of the reasons and approaches for business involvement in population health improvement. Reasons may include alignment with core company values and broader company priorities such as safety, human capital, corporate reputation, sustainability, corporate social responsibility, and return on investment. Approaches may include philanthropy, leadership influence, board roles, and advocacy.

*Moderator: Andrew Webber, chief executive officer, Maine Health Management Coalition; member, Roundtable on Population Health Improvement; member, workshop planning committee*
*Michael O'Donnell, director, Health Management Research Center, University of Michigan*
*Catherine Baase, chief health officer, The Dow Chemical Company; member, Roundtable on Population Health Improvement; member, workshop planning committee*
*Nicolaas Pronk, vice president and chief science officer, HealthPartners*

10:20 a.m. **Discussion**

10:45 a.m. **Break**

11:00 a.m. **Panel II: What Business Actions Make an Impact on Population Health?**

This panel will focus on community health improvement projects that may not have improving health as the main goal but which do impact social and other determinants that affect population health improvement. Panelists will be asked to describe both the corporate priority that drove the action/aim of the program (e.g., early childhood education, building green space, improving transportation) and, briefly, the strategy they used (e.g., philanthropy, multi-stakeholder activity).

*Moderator: Catherine Baase, chief health officer, The Dow Chemical Company; member, Roundtable on Population Health Improvement; member, workshop planning committee*
*Gary Rost, executive director, Savannah Business Group*
*Grace Suh, manager, Education, Corporate Citizenship & Corporate Affairs, IBM Corporation*
*Alisa May, executive director, Priority Spokane*

11:35 a.m. **Discussion**

12:15 p.m. **Lunch**

1:15 p.m. **Panel III: Community/Population Health as an Intentional Business Strategy**

This panel will focus on business strategies, actions, and impacts that were intentionally designed to improve population health.

*Moderator: James Knickman, president and chief executive officer, New York State Health Foundation; member, Roundtable on Population Health Improvement; member, workshop planning committee*
*Fikry Isaac, vice president, global health services, Johnson & Johnson*
*Charles Yarborough, director of medical strategies, Lockheed Martin*

1:50 p.m. **Discussion**

2:30 p.m. **Panel IV: How Can Business Engage?**

This panel will focus on frameworks or mechanisms that work well to stimulate and support business engagement in population health improvement.

*Moderator: Alex Chan, Clinton Foundation fellow*
*George Isham, senior advisor, HealthPartners; senior fellow, HealthPartners Institute for Education and Research; co-chair, Roundtable on Population Health Improvement; member, workshop planning committee*
*Neil Goldfarb, Greater Philadelphia Business Coalition on Health*
*John Whittington, Institute for Healthcare Improvement*

3:15 p.m. **Break**

3:30 p.m. **Discussion of Previous Panel**

4:00 p.m. **Reflections on the Day**

*Moderator: David Kindig, professor emeritus of population health sciences, emeritus vice chancellor for health sciences, University of Wisconsin School of Medicine and Public Health; co-chair, Roundtable on Population Health Improvement*

4:45 p.m. **Open Discussion**

5:15 p.m. **Adjourn**

***For more information about the roundtable, visit www.iom.edu/pophealthrt or email pophealthrt@nas.edu.***

# Appendix C

# Biographical Sketches of Workshop Speakers[1]

**Cathy Baase, M.D., FAAFP, FACOEM,†*** is the chief health officer for The Dow Chemical Company, with direct responsibility for leadership and management of all occupational health, epidemiology, and health promotion programs and staff around the world. Dr. Baase is a key driver of the Dow health strategy. In combination with her role at Dow, Dr. Baase is active in a number of organizations and associations. She is the chair of the board of directors of the Michigan Health Information Alliance, a multistakeholder collaborative dedicated to improving the health of people in 14 counties in central Michigan. Dr. Baase has been a board member of the Partnership for Prevention for more than 10 years. She serves on the board of directors of the Patient-Centered Primary Care Collaborative. She is a fellow in the American College of Occupational and Environmental Medicine and a fellow in the American Academy of Family Physicians.

**Jo Ivey Boufford, M.D.,** is the president of the New York Academy of Medicine and a professor of public service, health policy, and management at the Robert F. Wagner Graduate School of Public Service. She is also a clinical professor of pediatrics at New York University School of Medicine. She served as dean of the Robert F. Wagner Graduate School of Public Service at New York University from June 1997 to November 2002. Prior to that she served as principal deputy assistant secretary for health in

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

the U.S. Department of Health and Human Services (HHS) from November 1993 to January 1997 and as acting assistant secretary from January 1997 to May 1997. While at HHS, she served as the U.S. representative on the executive board of the World Health Organization from 1994 to 1997. Dr. Boufford currently serves on the boards of the United Hospital Fund, Public Health Solutions, and the NYC Health and Hospitals Corporation and chairs the Public Health Committee of the State Public Health and Health Planning Council. She was elected to membership in the Institute of Medicine (IOM) in 1992 and is a member of its Board on Global Health, Board on African Science Academy Development and serves as its foreign secretary. She has received honorary degrees from the State University of New York–Brooklyn, New York Medical College, Pace University, and the University of Toledo. She has been a fellow of the New York Academy of Medicine since 1988. Dr. Boufford received her B.A. from the University of Michigan and her M.D. with distinction from the University of Michigan Medical School. She is board certified in pediatrics.

**Dan Buettner** is the founder and chief executive officer of Blue Zones®, a company that puts the world's best practices in longevity and well-being to work in people's lives. Mr. Buettner is also a National Geographic Fellow and *New York Times* best-selling author. His *New York Times Sunday Magazine* article, "The Island Where People Forget to Die," was the second most popular article of 2012. Mr. Buettner's *National Geographic* cover story on longevity, "The Secrets of Living Longer," was one of the magazine's top-selling issues in history and a made him a finalist for a National Magazine Award. His books *The Blue Zones: Lessons for Living Longer from the People Who've Lived the Longest* (2008) and *Thrive: Finding Happiness the Blue Zones Way* (2010) appeared on many best-seller lists and were both featured on Oprah. In 2009 Mr. Buettner and his partner, AARP, applied principles from *The Blue Zones* to Albert Lea, Minnesota, and successfully raised life expectancy and lowered health care costs by some 40 percent. He is currently working with Healthways to implement the program in three beach cities of Los Angeles; Fort Worth, Texas; and Kauai, Hawaii; and also the entire state of Iowa. Their strategy focuses on optimizing the health environment instead of focusing on individual behavior change. Writing in *Newsweek*, Harvard University's Walter Willet called the results "stunning."

**Alex Chan**[†] currently serves as the Orfalea-Brittingham Fellow at the Clinton Foundation's Health Matters Initiative. Prior to joining the Clinton Foundation, Mr. Chan worked in real estate finance and was the city planner for the City of El Monte, California. He holds a master's degree in urban planning from the University of Michigan and recently completed

graduate degrees in public administration and communications management from the University of Southern California.

**Neil Goldfarb** is the executive director of the Greater Philadelphia Business Coalition on Health. He is also the voice for the Philadelphia region's employers in working with providers, payers, and other system stakeholders to increase health care quality, safety, efficiency and access to care, and cost reduction. Mr. Goldfarb brings more than 30 years of health care experience to his coalition leadership position. Most recently, as associate dean for research in the Jefferson School of Population Health, he was responsible for developing and carrying out the school's research agenda, focused on health care quality and value. Concurrently, Mr. Goldfarb serves as director of ambulatory care performance improvement for the Jefferson University Physicians outpatient practices, overseeing the faculty practice plan's efforts to develop appropriate measures of quality, implement these measures, and develop and evaluate strategies to improve performance. Mr. Goldfarb has authored nearly 60 articles in the peer-reviewed literature covering topics such as health and disease management, quality measurement and improvement in ambulatory and long-term care settings, care for the underserved, and economic evaluation of health care interventions. Since 2004, Mr. Goldfarb has co-directed the College for Value-Based Purchasing of Health Benefits, an innovative national training program for employers. His previous positions include executive director of a quality improvement consulting and data collection firm, and vice president of health services and provider relations for a large Philadelphia Medicaid managed care plan.

**Fikry Isaac, M.D.,** is the vice president of global health services at Johnson & Johnson. In this capacity Dr. Isaac has driven programs at Johnson & Johnson that include the development of health and wellness strategies, policies, guidelines, and services worldwide (occupational medicine, employee assistance program, and wellness). Dr. Isaac's efforts have been greatly focused on introducing innovative approaches that improve employee health and well-being. Dr. Isaac is a pioneer in the field of workplace health promotion and global health, and he has introduced innovative approaches to improving the health and well-being of populations. He is a published author in this field and continues to do research on population health interventions, using rigorous scientific methods to ensure that these interventions deliver meaningful outcomes. His broad view spans the fields of clinical medicine, behavior change technologies, and economic analyses. Dr. Isaac is an outspoken champion of prevention and health promotion and has achieved remarkable success within Johnson & Johnson, gaining senior management support and funding

for health improvement initiatives for all Johnson & Johnson employees worldwide. In the public sphere, Dr. Isaac has taken part in important public policy discussions and formulations. During the discussion of health care reform in the United States, Dr. Isaac was invited to meet with officials of the Office of Personnel Management and the White House to provide input to a pilot program for health and wellness in the federal workforce. Through his engagement with the Asia Pacific Economic Cooperation (APEC) and the Life Science Innovation Forum, he has been instrumental in the development of an action plan that addresses noncommunicable diseases for member countries. Dr. Isaac received his medical degree from Ain Shams University Medical School (Cairo, Egypt). He was certified by the American Board of Internal Medicine in 1991 and earned an M.P.H. in occupational medicine from the Medical College of Wisconsin in 2001. He is a fellow of the American College of Occupational and Environmental Medicine, where he chairs the Corporate Health Achievement Award. He is also a member of the Gold Standard Task Force–CEO Roundtable on Cancer and is the industry co-chair of the Life Science and Innovation Forum–APEC. He also serves on several boards, including those of the Partnership for Prevention, the Global Business Group on Health, and the Health Enhancement Research Organization.

**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 the 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 Assurance (NCQA), and a is member of NCQA's committee on performance measurement. Dr. Isham is the chair of the 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 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 Center for Disease Control and Prevention's Task Force on Community Preventive Services and the Agency for Healthcare Research and Quality's U.S. Preventive Services Task Force and currently serves on the advisory committee to the director of the 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.

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

**Alisa May, M.A.,** is the executive director of Priority Spokane, a think tank with the mission of building a culture of health by focusing community attention on the social and economic factors that influence health (www.priorityspokane.org). Priority Spokane is based at Greater Spokane Incorporated (GSI), a merged chamber of commerce and economic development council, and GSI is an active member of Priority Spokane (www.greaterspokane.org). As executive director, Ms. May led a team of community partners through an extensive application process that resulted in one of only 18 awards for the 2012 Roadmaps to Health grant from the Robert Wood Johnson Foundation (RWJF), and she is the project manager for that grant. Ms. May also led the year-long, rigorous effort that resulted in Spokane County being named one of six winners nationwide for the 2014 RWJF Culture of Health Prize, which is based on collaborative educational efforts with healthy outcomes (http://www.rwjf.org/en/about-

rwjf/newsroom/features-and-articles/culture-of-health-prize/spokane-county-wa-2014.html). One outstanding characteristic of Spokane County is that business is actively at the table for these endeavors. This point was so clearly understood that RWJF chief executive officer Risa Lavizzo-Mourey, a LinkedIn influencer, wrote about Spokane County in her recent post: (Q) How did Spokane Cut Dropout Rate by Half? (A) Business. Prior to working at Priority Spokane, Ms. May served for 11 years as a director of development at Washington State University in a number of units, including corporate and foundation relations. Ms. May is a graduate of the University of Kentucky with a bachelor's degree and a master's degree in education.

**Michael O'Donnell, Ph.D., M.B.A., M.P.H.,** is the director of the Health Management Research Center at the University of Michigan. Dr. O'Donnell has developed and managed workplace health promotion programs for more than 50 medium, large, and very large employers over the span of three decades. Dr. O'Donnell's work includes developing strategic and operational plans, refining and implementing corporate policy, developing incentive systems, writing program materials, creating communication campaigns, hiring and training staff, presenting lectures, auditing and refocusing programs, and creating and implementing evaluation efforts. In addition, Dr. O'Donnell has more than 10 years of experience managing health promotion programs in clinical settings. He has been responsible for developing and managing comprehensive health promotion programs, integrating health promotion protocols into occupational medicine screenings, developing a wellness section of an electronic medical record, developing intensive clinical health promotion programs, training medical staff to refer qualified patients into intensive health promotion programs, creating grand rounds series, integrating health promotion concepts into medical school curriculum, and helping to develop a study to test the health and financial impacts of health promotion programs offered to Medicare recipients. Dr. O'Donnell has presented more than 200 keynote, breakout, and workshop presentations on six continents to groups ranging in size from 6 to 4,000. Audiences have included business leaders, health promotion professionals, scientists, corporate boards, senior-level government officials, local community members, and cruise ship passengers. The most popular topics have been the health and financial impacts of health promotion, integrating active living strategies into everyday life, the strategic design of workplace health promotion programs, and integrating health promotion into national health policy. Dr. O'Donnell earned a Ph.D. in health behavior and health education from the School of Public Health at the University of Michigan, an M.B.A. in general management, and an M.P.H. in hospital administration from

the University of California, Berkeley. He completed his undergraduate work in psychobiology at Oberlin College, and he received a high school diploma from the Seoul Foreign School, in Seoul, South Korea.

**Nicolaas Pronk, Ph.D., M.A.,** is vice president for health management and chief science officer at HealthPartners. In his role Dr. Pronk is focused on improving population health with practical programs and solutions that may be applied to the workplace, clinical, and community settings. He supports the development of new models to improve health at the research, practice, and policy levels. Dr. Pronk is a member of the Community Preventive Services Task Force and the Roundtable on Obesity Solutions of the IOM at the National Academy of Sciences. He holds an adjunct faculty position as professor of society, human development, and health at the Harvard School of Public Health and is a visiting professor in the Department of Environmental Health Sciences at the University of Minnesota School of Public Health. He is widely published in both the scientific and practice literature and is a national and international speaker on population health and health promotion. Dr. Pronk received his doctorate degree in exercise physiology at Texas A&M University and completed his postdoctoral studies in behavioral medicine at the University of Pittsburgh Medical Center and Western Psychiatric Institute and Clinic in Pittsburgh, Pennsylvania.

**Gary Rost** is the executive director of Savannah Business Group (SBG) on Healthcare Cost Management, Inc., and its subsidiaries, SBG Preferred Health Resources and Savannah Health Alliance, located in Savannah, Georgia. The Coalition has 19 member employers representing more than 52,000 lives. SBG is active in programs that improve the quality and delivery of health care such as hospital safety, electronic medical records, health information exchange, medical homes, community data collection, and other quality improvement programs. SBG Preferred Health Resources is the contracting arm of the Coalition. SBG's contracts include a preferred provider organization network (using a direct-to-provider contracting model), a pharmacy benefit manager, an employee assistance program, and other contracts. Savannah Health Alliance is the Coalition's nonprofit community health improvement program. Mr. Rost is currently serving as a member of the Georgia Child Obesity Project Steering Committee, a member of the Georgia Hospital Association's Care Transitions Action Group, a member of the National Business Group on Health's Value-Based Purchasing Committee, a board member of Healthy Savannah, a board member of the Chatham County Safety Net Planning Council, and a member of the Savannah/Chatham County Community Indicators Coalition, and he serves on the St. Joseph's Candler Health

System institutional review board. Mr. Rost has been with SBG since 1993 and has been executive director since 2001. Prior to joining SBG, Mr. Rost served 20 years in the U.S. Army.

**Grace Suh, M.P.P.,** is the manager of education programs for corporate citizenship and corporate affairs at the IBM Corporation. In her position, Ms. Suh manages IBM's global portfolio of STEM (science, technology, engineering, and mathematics) education and literacy programs. These programs include Teachers TryScience (teacherstryscience.org), TryScience (tryscience.org), MentorPlace, and Reading Companion (readingcompanion.org). Ms. Suh also manages IBM's 9–14 school model development, beginning at Pathways in Technology Early College High School (ptechnyc.org) in Brooklyn, New York, and now being replicated in 27 schools in the United States. Prior to working at IBM, Ms. Suh worked at the Children's Defense Fund, a national child advocacy organization in Washington, DC, where she focused primarily on child welfare policy. In addition to the corporate and nonprofit sectors, Ms. Suh has worked on education and children's issues in state and city governments. Ms. Suh has a master's degree in public policy from the John F. Kennedy School of Government at Harvard University and a bachelor's degree from Columbia University.

**John W. Whittington, M.D.,** is lead faculty for the Institute for Healthcare Improvement (IHI) Triple Aim initiative focused on achieving the optimal balance of good health, positive patient experience of care, and low per capita cost. Previously he was medical director of knowledge management and patient safety officer at OSF Healthcare System. Prior to that position, Dr. Whittington worked for many years as a family physician. He has been IHI faculty on numerous projects, including safety, spread, inpatient mortality reduction, the Executive Quality Academy, and Engaging Physicians in a Shared Quality Agenda, among others. He is part of the IHI team that works on research and development.

**Charles M. Yarborough, M.D., M.P.H., FACOEM, FACPM,** is the director for medical strategies in the Health and Wellness Department at Lockheed Martin Corporation (LMC), based in Bethesda, Maryland. He joined LMC in 2007. Dr. Yarborough has more than 25 years of experience in guiding health initiatives for global corporations, including Exxon and Caterpillar, and in evaluating medical services for expatriates and international business travelers. For 3 years before joining LMC, he was a senior managing scientist in New York City for an international engineering and health consulting firm. Training under Dr. Tinsley Harrison (who was editor-in-chief of the first five editions of *Harrison's Principles of Internal Medicine*)

he obtained an M.D. from the University of Alabama at Birmingham and an M.P.H. from the Medical College of Wisconsin. Dr. Yarborough took his internship and residency training in internal medicine under Dr. Walter Kirkendall at the University of Texas Health Science Center at Houston, including the M.D. Anderson Cancer Center, followed by training in occupational and preventive medicine at the University of Cincinnati Medical Center. Dr. Yarborough is board-certified in internal medicine and also in preventive and occupational medicine, and he holds active medical licenses in five states. Dr. Yarborough is on the medical staff of Johns Hopkins Suburban Hospital in Bethesda and is a voluntary physician for a community health center. He was a chief physician at the Veterans Administration Health Care System and on medical staff of the University Medical Center at Princeton, New Jersey, and he served previously at several other major U.S. medical centers. Dr. Yarborough is an elected member of Delta Omega, the National Public Health Honors Society, and he served on a health advisory committee for the U.S. Environmental Protection Agency, reporting to its director. Dr. Yarborough was one of a group of corporate physicians who co-authored a statement of support for the first United Nations High-Level Meeting on Non-Communicable Disease involving heads of state, which was held in September 2011. He is an advisor for an occupational medicine residency training program at Johns Hopkins University Medical Center and is an associate in the Department of Health Behavior and Society at the Johns Hopkins Bloomberg School of Public Health. Dr. Yarborough is a voting member of the Physicians' Consortium on Quality Improvement® of the American Medical Association. In 2011 he was appointed by the governor to serve on the Operating Model and Insurance Rules Committee for Maryland's Health Insurance Exchange Board. For the past 2 years Dr. Yarborough has served as the co-chair of the International Corporate Health Leadership Council, a think tank on health issues facing global companies. Dr. Yarborough is serving a third elected term as a member of the board of directors for the American College of Occupational and Environmental Medicine (ACOEM). He led the development of the initial framework for ACOEM's Corporate Health Achievement Award (CHAA), serving as the CHAA committee chair for 7 years, and he continues to serve as a judge for this annual award and others. Dr. Yarborough received the ACOEM President's Award in 1997. As well as having published many articles and serving as a reviewer for prominent peer-reviewed medical journals, Dr. Yarborough has been invited to speak many times at U.S. and international meetings, including the International Congress on Occupational Health held in Stockholm concerning global health care delivery systems and population health management and a TEDx session on healthy life expectancy in 2013.