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Creating Equal Opportunities for a Healthy Weight: Workshop Summary

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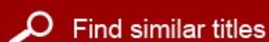
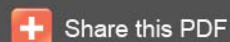
Heather Breiner, Lynn Parker, and Steve Olson, Rapporteurs; Standing Committee on Childhood Obesity Prevention; Food and Nutrition Board; Institute of Medicine





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THE NATIONAL ACADEMIES
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CREATING EQUAL OPPORTUNITIES FOR A HEALTHY WEIGHT

WORKSHOP SUMMARY

Heather Breiner, Lynn Parker, and Steve Olson, *Rapporteurs*

Standing Committee on Childhood Obesity Prevention

Food and Nutrition Board

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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[1]Institute of Medicine planning committees are solely responsible for organizing the workshop, identifying topics, and choosing speakers. The responsibility for the published workshop summary rests with the workshop rapporteurs and the institution.

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Reviewers

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

David V. B. Britt, Sesame Workshop (Retired)
Diedra Chester, U.S. Department of Agriculture
Sandra Hassink, Nemours Obesity Initiative, A.I. Dupont Hospital for Children
Arnell Hinkle, Community Adolescent Nutrition & Fitness

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 **Hugh H. Tilson,** University of North Carolina at Chapel Hill. Appointed by the Institute of Medicine, he was responsible for making certain that an independent examination of this workshop summary was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this workshop summary rests entirely with the rapporteurs and the institution.

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1

Introduction and Themes of the Workshop[1]

In 2012 the Institute of Medicine (IOM) released the report *Accelerating Progress in Obesity Prevention*: *Solving the Weight of the Nation* (IOM, 2012a). Written by an expert committee in response to the epidemic of excess weight in America, the report evaluates obesity prevention strategies and offers recommendations for accelerating progress in obesity prevention. The report also articulates an ambitious vision: a "society of healthy children, healthy families, and healthy communities in which all people realize their full potential" made possible through "large-scale transformative approaches focused on multilevel environmental and policy changes" (p. 19).

The report identifies five critical environments in which reform is urgently needed to accelerate progress in obesity prevention:

1. environments for physical activity,
2. food and beverage environments,
3. message environments,
4. health care and work environments, and
5. school environments.

Each of these environments interacts with the others, creating a set of interconnected systems that can be changed only through engagement, leadership, and action among many groups and at many levels (see Figure 1-1).

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[1]The planning committee's role was limited to planning the workshop, and this workshop summary was prepared by the rapporteurs as a factual summary of what occurred at the workshop. Statements, recommendations, and opinions expressed are those of individual presenters and participants and are not necessarily endorsed or verified by the Institute of Medicine, nor should they be construed as reflecting any group consensus.

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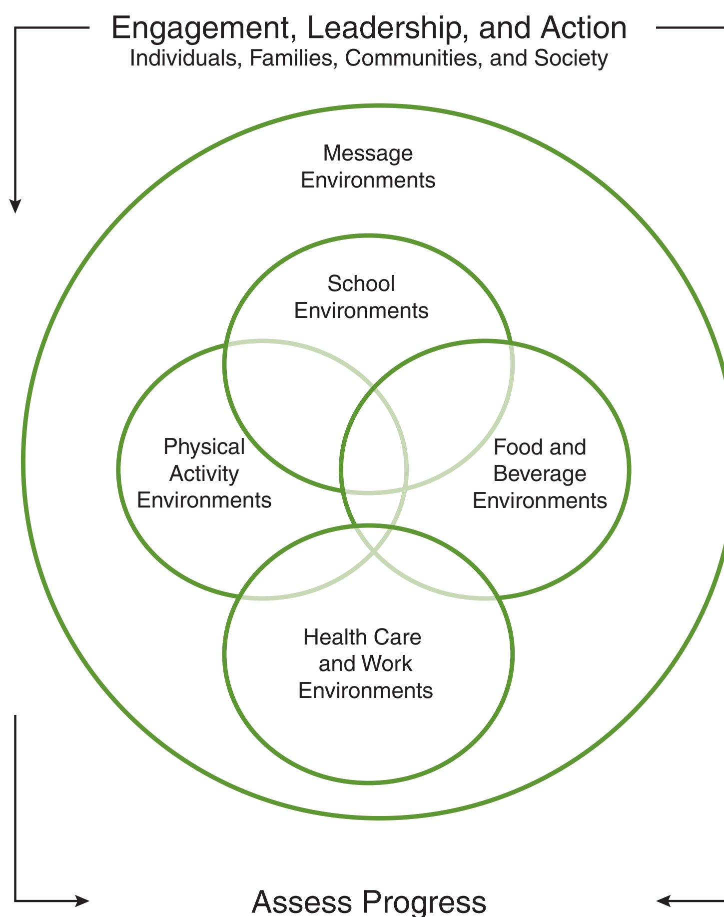

FIGURE 1-1 The Committee on Accelerating Progress in Obesity Prevention identified five interconnected environments in which engagement, leadership, and action are needed to accelerate progress in reducing obesity.
SOURCE: IOM, 2012a.

For each of these five environments, the report presents an overarching recommendation and a set of strategies and potential actions designed to achieve that recommendation. It also identifies relationships among the strategies and actions that could strengthen their overall impact. This systems approach enabled the authoring committee to identify synergies and potential unintended consequences while also highlighting and filling gaps in previous approaches to obesity prevention.

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REDUCING DISPARITIES

Accelerating Progress in Obesity Prevention (IOM, 2012a) acknowledges that the five environments identified above can differ substantially for individuals, families, and communities. A variety of characteristics linked historically to social exclusion or discrimination, including race, ethnicity, religion, socioeconomic status, gender, age, mental health, disability, sexual orientation or gender identity, geographic location, and immigrant status, can thereby affect opportunities for physical activity, healthy eating, health care, work, and education (IOM, 2012a). In many parts of the United States, certain racial and ethnic groups and low-income individuals and families live, learn, work, and play in places that lack health-promoting resources such as parks, recreational facilities, high-quality grocery stores, and walkable streets. These same neighborhoods may have characteristics such as heavy traffic or other unsafe conditions that discourage people from walking or being physically active outdoors. The combination of unhealthy social and environmental risk factors, including limited access to healthy foods and opportunities for physical activity, can contribute to increased levels of chronic stress among community members, which have been linked to increased levels of sedentary activity and increased calorie consumption.

To examine the role of these and other factors in health disparities and explore ways to counter and reverse their influence, the IOM's Standing Committee on Childhood Obesity Prevention held a workshop in Washington, DC, on June 6-7, 2013, titled "Creating Equal Opportunities for a Healthy Weight." Registered participants (see Appendix C for details), along with viewers of a simultaneous webcast of the workshop, heard a series of presentations by researchers, policy makers, advocates, and other stakeholders focused on health disparities associated with income, race, ethnicity, and other characteristics and on how these factors intersect with obesity and its prevention (see Box 1-1 for the statement of task for the workshop). In each of the five environments identified in *Accelerating Progress in Obesity Prevention* (IOM, 2012a), speakers discussed potential future research, policies, and actions that could lead to greater equity in opportunities to achieve a healthy weight. The workshop agenda and brief biographies of the speakers and moderators are presented in Appendixes A and B, respectively.

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BOX 1-1
Statement of Task

An ad hoc committee will plan a 2-day public workshop that will examine childhood obesity prevention through the lens of working to achieve health equity. Workshop presentations and discussions involving researchers, policy makers, advocates, and other stakeholders will focus on income, race, and ethnicity, and how these factors intersect with childhood obesity and its prevention. The workshop will feature invited presentations and discussions concerning the key obesity prevention goals and recommendations outlined in the 2012 IOM report *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation* related to physical activity, healthy food access, food marketing and messaging; and the roles of employers, health care professsionals, and schools. Workshop attendees will explore the health equity issues in each of these critical aspects of obesity prevention, while discussing potential future research, policy, and action in each area that could lead to equity in opportunities to achieve a healthy weight. The committee will plan and organize the workshop, select and invite speakers and discussants, and moderate the discussions. An individually authored workshop summary will be prepared by a rapporteur. The designated rapporteur will not be a member of the committee and no committee members will be used in the development of the workshop summary.

The Standing Committee on Childhood Obesity Prevention was formed in 2008 to serve as a focal point for national and state-level policy discussions about obesity prevention. It comprised national leaders in public health, public policy, medicine, nutrition, physical activity, pediatrics, obesity prevention, the social and behavioral sciences, biostatistics, and epidemiology. During its existence, it guided the selection and refinement of focused topics on obesity prevention to be examined through workshops, public briefings, and studies conducted by separately appointed ad hoc committees.

The workshop summarized herein was the last formal activity of the standing committee. A new phase of obesity work was initiated at the IOM with the formation of the Roundtable on Obesity Solutions, which is intended to engage leadership from an even broader range of sectors, including public health, health care, and health insurance; the food industry; the entertainment, sports, and recreation industries that influence physical activity; government; philanthropy; diverse nonprofit organizations; the financial sector; and academia. The goal of the roundtable is to foster ongoing cross-sector dialogue on critical and emerging policy and research issues and to accelerate and sustain progress in obesity

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prevention and care through a focus on implementation challenges and successes.

The standing committee's chair, Shiriki Kumanyika, associate dean for health promotion and disease prevention and professor of epidemiology at the University of Pennsylvania's Perelman School of Medicine, dedicated the workshop to Antronette K. Yancey, M.D., M.P.H.,[2] associate professor of health services at the University of California, Los Angeles, and a member of the standing committee, who died of lung cancer at age 55 shortly before the workshop. A college athlete, fashion model, poet, and inventor of Instant Recess®—short activity breaks in which anyone can participate at any time—Yancey was a pioneer and a national leader in introducing physical activity into all settings and among all groups. Box 1-2 at the end of this chapter contains a remembrance of Yancey written by Kumanyika.

UNDERSTANDING HEALTH EQUITY

During her opening remarks at the workshop, Kumanyika laid the groundwork for the discussion to follow. She began by defining health equity as the principle underlying a commitment to reducing disparities in health and its determinants (Braveman et al., 2011). In other words, health equity represents social justice in health because it focuses on eliminating differences in health that are associated with the systematic social disadvantages that affect some population groups. Disparities are not just differences, Kumanyika emphasized. They reflect unfair circumstances that result in worse health outcomes.

Systematic, avoidable health differences can adversely affect many different socially disadvantaged groups, including those distinguished by (Braveman et al., 2011):

- race or ethnicity, skin color, religion, language, or nationality;
- socioeconomic resources or position;
- sexual orientation or gender identity; and
- age, geography, disability, illness, political or other affiliation, or other characteristics that are associated with discrimination or marginalization or that determine position in a social hierarchy.

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[2]See http://www.toniyancey.com.

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Kumanyika identified several broad issues that need to be considered in addressing disparities that affect obesity. Disparities can result from higher exposure to a certain type of risk, greater sensitivity to that risk, or circumstances associated with greater resistance to change, each of which calls for a different approach to risk reduction (Braveman, 2009). Ethnicity and socioeconomic status are both risk factors. Both are characterized by great heterogeneity, yet they also overlap, Kumanyika pointed out, in that poverty rates are much higher among many ethnic minority groups than in the general population (Macartney et al., 2013). In addition, the actions of parents and other adults clearly influence the risk of childhood obesity, as does the broader social context (IOM, 2005). Each of these factors plays a role in conceptual frameworks that can be used to address obesity prevention.

FRAMEWORKS FOR ANALYSIS

Kumanyika briefly summarized several of the frameworks that can be used to analyze disparities relevant to obesity prevention and develop potential solutions. One such framework identifies differential exposures, differential vulnerabilities, and differential consequences in the context of social stratification (Diderichsen et al., 2001). Each of these differences among individuals and groups provides an opportunity for intervention.

Another framework, known as the ANGELO (Analysis Grid for Environments Linked to Obesity) framework, divides the environment into microenvironments (“settings”) and macroenvironments (“sectors”), separately for nutrition and physical activity (Swinburn et al., 1999). It then prompts for analyses of the physical, economic, policy, and sociocultural influences within these settings and sectors. In the sociocultural environment, for example, it asks, for both the micro- and macroenvironment, “What are the attitudes, beliefs, perceptions, values, and practices?” This framework has been used to analyze what makes a community high risk (Yancey et al., 2004) and to develop community action plans (Simmons et al., 2009).

Finally, Kumanyika mentioned a framework developed by the African American Collaborative Obesity Research Network that can be used to engage communities in analyzing their environments (AACORN, 2013). It divides influences on eating habits, physical activity, and body weight into the domains of historical and social factors, culture and

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mindset, and environments to navigate. Conversations with communities enable community members to recognize and articulate the effects of environments on health, wellness, and quality of life.

Targeted Solutions

Targeted solutions to the obesity problem are needed, said Kumanyika, because solutions with an equivalent impact on all populations will not close existing gaps. Solutions for the general population that fail to target high-risk populations could increase or fail to decrease the disparities that were the focus of the workshop. Even if obesity prevalence in minority populations and those of low socioeconomic status were to decrease, the disparity relative to the white and higher-income populations could remain, Kumanyika stated. For example, disparities could worsen if an approach were less appealing, less feasible, or less effective for high-risk groups.

This failure to close existing gaps is apparent in some of the otherwise encouraging reports of declining obesity prevalence in children. In Mississippi, childhood obesity has declined somewhat in white children but has only leveled off in black children (Center for Mississippi Health Policy, 2012). In New York City, obesity has decreased among all children (in kindergarten through eighth grade) but has declined less among blacks, Hispanics, and students in high-poverty schools (CDC, 2011a). While any decline in childhood obesity is welcome news, the persistence of such disparities is a reminder of how much remains to be done.

Kumanyika left the workshop participants with two broad questions to inform their discussions:

1. What does "accelerating progress" mean in creating equal opportunities for a healthy weight, given that "accelerating" means not just working to create equal opportunities but speeding up progress toward that goal?
2. Which of the recommendations of *Accelerating Progress in Obesity Prevention* (IOM, 2012a) are the most important for making progress in creating equal opportunities, and how can their implementation be tailored for maximum effectiveness?

Meeting the challenge of achieving equity will require both transforming inequitable environments, including those associated with physical activity, foods and beverages, and messaging, and targeting

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critical settings, including schools, worksites, and health care institutions. These targets for action reflect the structure of both *Accelerating Progress in Obesity Prevention* and the workshop.

ORGANIZATION OF THE WORKSHOP AND THIS SUMMARY

Following the opening session, the workshop was divided into six panels. Each panel focused on one of the five environments identified in *Accelerating Progress in Obesity Prevention*, with health care and work environments being split into two separate panels. Thus, the workshop covered the following six subjects, each of which is treated in a separate chapter of this summary:

1. physical activity (Chapter 2),
2. foods and beverages (Chapter 3),
3. workplaces (Chapter 4),
4. health care (Chapter 5),
5. messaging (Chapter 6), and
6. schools (Chapter 7).

In each panel session, a member of the standing committee introduced the strategies described in *Accelerating Progress in Obesity Prevention* for achieving progress in the respective environment. A speaker then presented a case study of a program or initiative that embodied those strategies. A subsequent speaker broadened the discussion by considering policy issues or other topics associated with the environment. Finally, the standing committee member led a moderated intrapanel discussion in which the speakers responded to questions from the moderator.

After the second, fourth, and sixth panels, a standing committee member led a "town hall" session in which the speakers answered questions from the audience, followed by public statements from audience members. Responses from speakers to questions are integrated into the synopses of their talks in this workshop summary. The statements from workshop participants are presented in Appendix D.

In the final session of the workshop, a speaker discussed the systems perspective that is a prominent feature of *Accelerating Progress in Obesity Prevention* (IOM, 2012a). A systems approach emphasizes the inherent complexity of a problem, recognizes the wider context of any action to address it, investigates interactions among the components of

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the problem and potential solutions, and seeks solutions that move the system as a whole in positive directions. This talk is summarized in Chapter 8.

THEMES OF THE WORKSHOP

Also during the final session of the workshop, Kumanyika described several prominent issues that arose repeatedly during the workshop. This section combines those issues with topics identified by other workshop participants to provide a brief introduction to the major themes of the workshop. These themes should not be viewed as consensus conclusions or recommendations of the workshop participants; rather, they point to the wide range of topics discussed and viewpoints expressed during the workshop.

General

- The social and environmental factors that contribute to health disparities generally also act to increase weight among high-risk populations.
- Population-oriented approaches are needed for obesity prevention initiatives in high-risk communities.
- Cross-sector linkages can produce win-win situations.
- Evaluations can demonstrate what has and has not worked, but should account for the fact that change takes time.
- The activities of and examples set by adults in many sectors are essential to preventing childhood obesity.

The following subsections are a continuation of the issues discussed at the workshop, and should not be seen as consensus conclusions or recommendations.

Physical Activity

- Civil rights laws provide an opportunity to reverse overt discrimination, such as the lack of public parks and recreational facilities in disadvantaged communities.

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- Realizing the potential of parks and other facilities to reduce health disparities requires proximity, quality, safety, and promotion of their use.
- Better understanding of the features of parks and other facilities that increase physical activity would enable these features to be incorporated into future facilities.

Foods and Beverages

- Straightforward measures such as eliminating sugary drinks from schools, promoting the drinking of tap water, and providing calorie information to consumers can improve food and beverage environments for members of high-risk populations.
- A combination of media campaigns, menu labeling laws, school nutrition policies, and incentives for food and beverage outlets has the demonstrated ability to reduce childhood obesity.
- If funding levels for programs that act to prevent obesity are reduced, the high-risk populations they serve will be negatively affected.

Workplaces

- The number of workplace wellness programs has been growing with employers' increasing recognition that such programs can reduce medical spending, absenteeism, and worker turnover.
- Approaches aimed at improving the health of employees are most effective when they are tailored to the needs, belief systems, and histories of particular groups.
- The costs of wellness programs that generate large health benefits can be kept low.

Health Care

- Much more needs to be learned about how to prevent obesity through primary care. In the context of the health care system, obese individuals are an underserved group.
- Although community-based care has much to offer many overweight and obese individuals, the heaviest individuals are likely

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to need additional medical intervention and more intensive supervision.
- Engagement and adequate preparation of a broad range of health care providers will be essential in dealing with obesity, as well as other chronic conditions.

Messaging

- Message environments in many ethnic minority and low-income communities are dominated by advertisements and other promotions for high-calorie foods and beverages to a significantly greater extent than is the case in white and higher-income communities.
- Obesity prevention messages can counter at least some of the unhealthy messaging to which people are exposed, but need to be sustained given the ubiquity of food and beverage advertising and the time required to change behaviors.
- The four Ps of marketing—product, price, place, and promotion—all need to be understood in greater detail to counter the unhealthy effects of today's message environments.

Schools

- Disparities in schools reflect broader inequities in society and contribute to health disparities.
- Food service departments can be central to the efforts of schools to improve nutrition for students.
- Out-of-school programs can complement and augment the efforts of schools to encourage healthy eating and physical activity.

Systems Approaches

- Cross-sector linkages can take advantage of connections within broader systems to produce win-win outcomes.
- Developing a systems understanding requires both broad studies of societal forces and detailed examinations of specific issues and populations.

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- Given that changing a complex system can take time, both short- and long-term evaluations may be required to judge the effectiveness of actions taken.

> *"We need to appeal to hearts, minds, a sense of justice, power, and money.... We can't just be technocrats. We have to understand the field we are working in." —Shiriki Kumanyika*

BOX 1-2
Antronette "Toni" K. Yancey, M.D., M.P.H.: A Remembrance
November 1, 1957-April 23, 2013

Toni Yancey was a force to be reckoned with on many fronts. At the time of her death, she was a tenured professor at the University of California, Los Angeles (UCLA) Fielding School of Public Health and co-director of the UCLA Kaiser Permanente Center for Health Equity. She had also just released the second edition of her book of poetry, *An Old Soul with a Young Spirit: Poetry in the Era of Desegregation Recovery*, published on April 30, 2013. A gifted and successful scholar, mentor, and public health practitioner and advocate and a creative writer who used poetry and the spoken word to reach diverse audiences with her keen insights on issues of concern for public health, she accomplished more in her too-brief 55 years than many of us can dream to accomplish in our lifetime.

The name Antronette K. Yancey will surface readily in any review of the evidence on the importance of physical activity for health or the need to try harder to address disparities in chronic disease based on race/ethnicity and socioeconomic status. Dedicating this workshop to Toni is a fitting and timely way to pay homage to this great colleague and friend. Toni was a valued colleague on the Standing Committee on Childhood Obesity Prevention. She would have been here on the stage with us had it been within her power. Many who knew or knew of Toni will remember their shock upon learning that this seemingly invincible icon of health and physical fitness, a nonsmoker, had been diagnosed with lung cancer. But we will also remember that she continued to be a role model and spokesperson for striving to remain active and fit during the subsequent fight for her life. Her energy, spirit, and wisdom will be missed within the public health academic and practice communities and in communities at large that were touched in some way by her efforts.

We will remember Toni in many ways. Perhaps most vivid will be the unforgettable image of an engaging, 6′2″ tall black woman who would appear at the front of the room at a National Institutes of Health meeting, Institute of Medicine meeting, workplace, school, or other venue to tempt (or perhaps to dare) those assembled to join her in a 10-minute physical activity break. As an avid proponent of taking short physical activity breaks to incorporate physical activity into daily routines, she might say—not really with apology—that she

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could not see why we always had a coffee or snack break but had difficulty finding time for a little activity. This became her trademark—eventually named Instant Recess®—disseminated through a book (*Instant Recess: Building a Fit Nation 10 Minutes at a Time*), a website, and partnerships with sports organizations and businesses and supported by research studies. The concept was deceptively simple: using prerecorded breaks that could be played for groups of people to follow along—children or adults of any level of fitness, in any clothing, and in any setting. But as Toni knew, the concept is far from simple in that it challenges deeply entrenched social norms of sedentary behavior at work, at school, and even at home.

Toni will long be remembered for putting her credentials, reputation, and personal credibility on the line to challenge these norms—for walking the talk. The concept caught on and has attracted many followers and proponents to the movement she sought to spark. She spread the word in diverse communities while also traveling in leadership circles that led her to count First Lady Michelle Obama and former President Clinton among her supporters. Following the news of her death, as a tribute and to amplify her message, colleagues and supporters organized a nationwide Instant Recess® on May 7, garnering support from more than 100 organizations and with massive participation.

Woven throughout Toni's efforts to make a difference in population health was her persistent advocacy within academic and professional circles for a greater focus on the science of addressing health disparities. We spoke often about her frustration with the dearth of research on ways to reduce the excess risks of cardiovascular diseases and cancer in communities of color and with the difficulty of keeping these issues on the research agenda and giving them priority. Her legacy includes the many research studies and reviews she generated in an attempt to fill this void and to identify solutions.

Toni Yancey was wise beyond her years. Close examination of her academic and creative writing reveals remarkable insights that will continue to inform efforts to create equal opportunities for achieving a healthy weight. Toni's legacy above all is the inspiration to fight for health justice.

—Shiriki Kumanyika

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Building Physical and Social Environments for Physical Activity in High-Risk Communities

Important Points Made by Speakers

- Reducing disparities in access to places for physical activity will require multifaceted actions from a variety of stakeholders. (Sallis)
- Disparities in access to physical activity, parks, green space, and physical education are civil rights issues that can be remedied in the courts and through voluntary compliance with equal justice laws, if necessary. (García)
- Realizing the potential of parks to reduce health disparities will require increased proximity to parks, better park quality and safety, and promotion of their use. (Floyd)
- Voters, including minority voters and low-income voters, have demonstrated that they are willing to tax themselves to support parks. (García)

The first goal articulated in *Accelerating Progress in Obesity Prevention* (IOM, 2012a) is making physical activity an integral and routine part of life (see Box 2-1). Physical activity encompasses a wide range of activities that are influenced by a comparably broad range of policies. The routine activities of daily life, activities performed for work or recreation, and exercise performed for health reasons all expend energy. Policies that shape when and how children, adolescents, and adults live, work, play, worship, and attend school all affect physical activity. Because of this diversity of activities and influences, a large number of factors can generate disparities in physical activity among groups.

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BOX 2-1
Goal 1 from *Accelerating Progress in Obesity Prevention*

Goal: Make physical activity an integral and routine part of life.

Recommendation: Communities, transportation officials, community planners, health professionals, and governments should make promotion of physical activity a priority by substantially increasing access to places and opportunities for such activity.

Three speakers at the workshop discussed ways to increase access to physical activity. James Sallis, professor of family and preventive medicine at the University of California, San Diego, listed actions that could be taken to pursue the strategies articulated in *Accelerating Progress in Obesity Prevention*. Robert García, founding director and counsel of The City Project in Los Angeles, described how civil rights laws can be used to achieve public health objectives. Myron Floyd, professor in the Department of Parks, Recreation, and Tourism Management at North Carolina State University, summarized the benefits associated with parks and recreational facilities and how those benefits can be extended to more people. The speakers in this session devoted more of their attention to parks and recreation than to transportation, community design, or other means of increasing physical activity, but many of the tactics they described could be used in other areas as well.

STRATEGIES FOR INTEGRATING PHYSICAL ACTIVITY INTO EVERYDAY LIFE

Summary of Remarks by James Sallis

Many studies have demonstrated the existence of disparities in access to places for physical activity (Taylor and Lou, 2011). In a study of neighborhoods in and around Baltimore, Maryland; Washington, DC; and Seattle, Washington, for example, Sallis and his colleagues found that low-income neighborhoods are significantly disadvantaged in terms of opportunities for physical activity (Sallis et al., 2011). They have

- significantly fewer and lower-quality walking and bicycling facilities,

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- less pedestrian and traffic safety,
- reduced aesthetic appeal (aesthetic appeal is a consistent predictor of physical activity),
- less safety from crime,
- reduced access to parks, and
- fewer nearby gyms and other fitness facilities.

Strategy 1-1 in *Accelerating Progress in Obesity Prevention* calls for communities, organizations, community planners, and public health professionals to enhance the physical and built environment, rethink community design, and ensure access to places for physical activity. Sallis listed several options, derived partly from his research, that could contribute to implementing this strategy:

- Target funding for sidewalks and bike paths in neighborhoods with primarily low-income and minority populations.
- Improve the safety of street crossings in neighborhoods with primarily low-income and minority populations.
- Target traffic calming around schools and parks in neighborhoods with primarily low-income and minority populations.
- Target support for joint-use agreements covering the use of school facilities in neighborhoods without parks.
- Build parks and playgrounds in vacant lots.
- Improve facilities for physical activity in parks in neighborhoods with primarily low-income and minority populations.

The second strategy for increasing physical activity in *Accelerating Progress in Obesity Prevention* is to provide and support community programs. Among the options Sallis listed in this area are

- Provide free after-school activity programs in parks and school grounds in neighborhoods with primarily low-income and minority populations.
- Target training in physical activity leadership to after-school staff serving low-income and predominantly minority youth.
- Encourage youth sports organizations to offer programs to youth of all ability levels on a sliding-fee scale.
- Encourage youth sports, dance, and martial arts programs to provide sufficient activity for participants.

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The third strategy Sallis discussed is to adopt physical activity requirements for licensed child care providers. Potential components of this strategy include

- Add physical activity requirements for Head Start programs, and provide resources and training to implement them.
- Target training in physical activity leadership to child care providers serving low-income and predominantly minority children.

The fourth strategy is to provide support for the science and practice of physical activity. To carry out this strategy, Sallis listed the following possibilities:

- Recruit and support students from underserved racial and ethnic groups to major and become investigators in physical activity-related disciplines.
- Expand the minority supplement programs of the National Institutes of Health.
- Add "potential to reduce health disparities" as a criterion for evaluating grant proposals.
- Target additional training to physical activity practitioners serving low-income and predominantly minority youth.

Sallis also called attention to work he and his colleagues have been doing to translate research results in this area for nonscientists, including policy makers, program practitioners, and members of the public. For example, research has demonstrated that renovation of parks can increase their use (Cohen et al., 2009; Veitch et al., 2012). People on the front lines of community activism and planning need access to such results, which requires that research conclusions be presented simply, visually, and in a language people know. At the same time, more research is needed in areas of particular interest to members of the public, such as the effects of parks and recreational facilities on crime and perceptions of crime.

Sallis also pointed out during the discussion period that parents are a critical audience. They need to be comfortable with allowing their children go to a park or participate in an activity, which may require the organization of supervised programs, especially in neighborhoods where crime is a concern.

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> *"Almost every neighborhood has a school, so joint-use agreements would allow for community use of those public facilities."*
> *—James Sallis*

CASE STUDY: THE CITY PROJECT, LOS ANGELES

Summary of Remarks by Robert García

The mission of The City Project[1] is to achieve equal justice, democracy, and livability for all. The pursuit of this mission entails influencing the investment of public resources to achieve results that are equitable, enhance human health and the environment, and promote economic vitality for all communities, with a particular focus on parks and recreation, schools, health justice, and transportation justice.

The City Project uses five strategies to accomplish this mission:

1. community organizing and coalition building;
2. translation of research into policy, law, and systematic change;
3. strategic media campaigns, including the use of new social media;
4. policy and legal advocacy outside the courts; and
5. access to justice through the courts when necessary.

The City Project has worked to achieve its mission in and around Los Angeles.[2] García pointed out some of The City Project's accomplishments, including

- successful efforts to pass $10 billion in statewide park bond measures, with overwhelming support from minority voters and low-income voters;
- working with diverse alliances, helping to create or preserve more than 1,000 acres of green space in park-poor, low-income Los Angeles communities;
- being involved in greening the Los Angeles and San Gabriel rivers;

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[1]The City Project is a nonprofit policy and legal advocacy team.
[2]More information about The City Project is available at http://www.cityprojectca.org.

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- helping to expand national recreation areas in the Santa Monica mountains;
- keeping public beaches open for all despite efforts by wealthy homeowners to close them off;
- supporting a transit-to-trails program to take children from inner-city communities to nearby mountains, beaches, rivers, and parks they have never visited;
- helping to ensure that physical education requirements are enforced in public schools;
- helping to raise $27 billion for Los Angeles Public Schools to build 130 new schools and modernize hundreds of existing schools; and
- fostering agreements for the joint use of schools, pools, and parks.

The City Project resorts to pursuing justice through the courts when all else fails, said García. Access to justice through the courts is a First Amendment right, and minority groups and low-income people face disparities in access to this right as well. García urged foundations to fund efforts by civil rights lawyers to overcome these disparities by going to court to create change.

Actions to Address Underlying Disparities

Minority children living in poverty in Los Angeles with no access to a car have the worst access to parks; the worst access to schools with more than 5 acres of playing fields; the highest levels of childhood obesity; and the greatest risk for exposure to gangs, crime, drugs, and violence. These disparities are not an accident of unplanned growth, said García. They are the result of a historical pattern of discrimination in land use, housing, and federally subsidized mortgages.

The City Project's flagship initiative was the preservation of a 40-acre site in downtown Los Angeles. The city and a wealthy developer were proposing to build warehouses on this site without conducting an environmental review or considering the park alternative and the impact on low-income minorities in the neighborhood. That site is now Los Angeles State Historic Park, which the *Los Angeles Times Magazine* called "a heroic monument" and "a symbol of hope" (García et al., 2004; Ricci, 2001). The City Project has extended this success by publishing an analysis of access to green spaces and equity in nine Southern California

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counties (García and Strongin, 2011). It also has influenced the National Park Service's *Strategic Action Plan: Healthy Parks Healthy People US*, which argues that the Park Service has an obligation to address health disparities based on race, ethnicity, and income through equitable access to open spaces and natural places (National Park Service, 2011a). Just a few months before the workshop, for example, the Park Service published a study recommending that a national recreation area be established in the San Gabriel mountains (National Park Service, 2013). The draft study explicitly cited The City Project's work and civil rights laws that address disparities (National Park Service, 2011b).

Finally, the recently published Institute of Medicine report *Educating the Student Body: Taking Physical Activity and Physical Education to School* (IOM, 2013a) recommends actions that The City Project has been urging throughout its history. These actions include enforcing physical education laws in schools; building and modernizing schools; and arranging for the joint use of schools, pools, and parks.

Disparities as Civil Rights Issues

The disparities affecting low-income and minority communities are not just about parks, schools, and education, García stated. They are about human health and development, economic vitality, conservation values, culture, heritage, and spirituality. Disparities in access to parks, green space, physical activity, and physical education are civil rights issues that can be addressed in the courts, García emphasized. The focus may be race, color, or national origin, as in Title VI of the Civil Rights Act of 1964, or it may be gender, as in Title IX of the Education Amendments of 1972, but defined areas of inequity enable the application of legal frameworks that can yield progress. Furthermore, civil rights issues can be pursued not just in the courts but also through coalition building, policy advocacy, and other measures aimed at obtaining voluntary compliance with legal requirements. These approaches can extend beyond parks and physical education to encompass other areas, such as access to health care, that involve federal financial assistance and are marked by disparities based on protected characteristics. In such efforts, public health researchers, government officials, and concerned citizens can learn valuable lessons from working with civil right attorneys.

García quoted from a commencement address given a few days before the workshop at Harvard University School of Public Health in which Larry Brilliant, president of the Skoll Global Threats Fund,

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referenced Martin Luther King, Jr.'s statement that "the arc of history is long, but it bends towards justice":

> The arc of the universe needs your help to bend towards justice. It will not happen on its own.... Public health needs you to ensure health for all.... Bend that arc. I want you to leap up, to jump up, and grab that arc of history with both hands, and yank it down, twist it, and bend it. Bend it towards fairness, bend it towards better health for all, bend it towards justice!

García suggested that the public health community needs to work with the civil rights community to bend the arc of justice toward public health for all. Civil rights laws have important implications for addressing, alleviating, and eliminating health disparities. Title VI of the Civil Rights Act of 1964 and its regulations, President Clinton's Executive Order 12898 on Environmental and Health Justice, parallel state laws, and other laws establish an equal protection framework for addressing health disparities.

Discussion

During the discussion period, García talked in greater detail about ways of getting parks into underserved areas. Creating more parks takes more money, which can require raising taxes. According to García, discussion of higher taxes may be anathema for politicians, but voters, including minority voters and voters with a high school degree or less, have demonstrated that they are willing to tax themselves to support parks and schools. Low-income and high-minority communities suffer from environmental degradation much more than do other communities, and they have demonstrated their willingness to work hard to make improvements. It is then important to ensure that these communities get their fair share of the benefits they made possible. Furthermore, García pointed out that even within existing budgets, steps can be taken to increase access to parks and physical education, such as by lighting more parks at night or creating cooperative joint-use agreements to make better use of existing facilities.

Outreach on these issues to the members of these communities and to nontraditional audiences is important, García said. Videos and social media can disseminate information much more widely than can legal briefs. Translating materials into Spanish is also important, despite the

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expense, because so many of the communities served by The City Project are predominately Spanish speaking.

New technologies also can contribute to initiatives to expand access to parks. The City Project has used geographic information systems (GISs) mapping along with demographic analysis and census data to document disparities in environmental justice. In partnership with the GreenInfo Network, it has mapped the entire state of California at the census tract level to show which communities are park poor—defined as less than 3 acres of parks per 1,000 residents—and which communities are income poor—defined as a median household income of less than $47,000 per year (García and Strongin, 2011). García stated that such metrics are essential to measure equity, to invest resources, to determine progress, and to hold public officials accountable.

García also called attention to the record of the Civilian Conservation Corps during the New Deal, which contributed to a massive expansion of parks and their use. Expansion of park space should be a central component of contemporary public works projects to get the nation back to work, he said.

> *"If you don't recall anything else from today's meeting, remember this lesson: The civil rights laws are a tool for you in the public health community to look at, to use, and to consider to achieve health justice for all." —Robert García*

ADVANCING HEALTH EQUITY THROUGH PUBLIC PARKS AND RECREATION SERVICES

Summary of Remarks by Myron Floyd

Public parks and recreation services can help eliminate disparities in physical activity and childhood obesity. In a study of more than 20,000 adolescents, those living in areas with more parks and recreational facilities engaged in more moderate and vigorous physical activities and had lower rates of being overweight (Gordon-Larsen et al., 2006). According to another study, girls living within 1 mile of parks get 35 more minutes of nonschool moderate or vigorous physical activity per week than girls living farther away from parks (Cohen et al., 2006). Even

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more fundamental measures of health disparities can be affected by access to parks. In a study in England, areas with the least amount of green space had the greatest disparities in mortality (Mitchell and Popham, 2008).

How parks are designed and managed also affects physical activity, Floyd pointed out. For example, energy expenditure measured in 8 types of activity areas in 10 Tampa, Florida, neighborhood parks ranged from relatively high for basketball and tennis facilities to relatively low for fishing areas, picnic areas, and dog play areas (see Figure 2-1).

Although the data on park availability are mixed, Floyd stated that some studies clearly indicate the existence of disparities. For example, areas of Los Angeles with predominantly Latino or black populations have far less park acreage per 1,000 residents than areas with predominantly white populations (Wolch et al., 2005). Similarly, blacks in Baltimore have less access than whites to park acreage (Boone et al., 2009), and census tracts in Maryland, New York, and North Carolina with more than 60 percent minority populations are more likely than those with smaller minority populations not to have a recreational facility (Moore et al., 2008). Disparities also exist in areas with higher or lower proportions of college-educated residents (Gordon-Larsen et al., 2006).

Floyd noted that equal access to parks does not mean that the parks are of equal quality. In many low-income and high-minority areas, parks

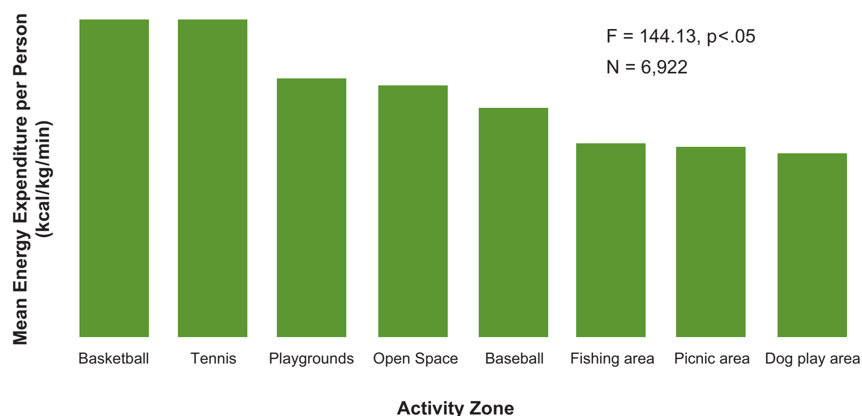

FIGURE 2-1 Energy expenditure is higher in some activity areas of parks than in others.
SOURCE: Floyd et al., 2008.

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are smaller than in other areas (Boone et al., 2009; Sister et al., 2009). In a study in Los Angeles, white children had more access than minority children to play equipment, basketball courts, and walking and jogging tracks (Sister et al., 2010), which are the types of facilities that promote physical activity. And for some parks, less use has been associated with crime in the neighborhoods where they are located (Baran et al., 2013).

The existing evidence indicates that realizing the potential of parks to reduce health disparities will require increased proximity, better quality and safety, and promotion of their use, Floyd said. He cited a strategy from the National Physical Activity Plan calling for increased funding for parks, recreation, fitness, and sports programs and facilities in areas of high need.[3] Floyd noted that a major source of funding for state and local park development in the United States since the 1970s has been the Land and Water Conservation Fund, a major source of state and local park development funding, but in recent years its funding has been declining (see Figure 2-2). He suggested that returning appropriations to the levels of the first half of the past decade could make significantly more money available for developing and improving parks and recreational facilities. In addition, to receive grants through this fund, each state must prepare a comprehensive outdoor recreation plan and provide a 50/50 funding match. If these comprehensive plans were required to document how they will impact health and target areas of high need, health disparities could be reduced, Floyd said.

Floyd also suggested intentionally designing and managing parks to balance active and passive recreation. In addition, school facilities, which are often closed after hours and on weekends, could be used to promote physical activity through joint-use agreements or intentional programming, particularly in areas without high-quality parks and recreational facilities.

During the discussion period, Floyd talked about how to reclaim areas within neighborhoods for parks and recreational facilities. Doing so will require consideration of the connections between such areas and the surrounding neighborhoods. Are there convenient ways for people to get to the parks and facilities? Have they been designed to meet the needs of nearby residents? What is also needed, Floyd suggested, is cross-sector collaboration entailing regular dialogue among transportation planners, landscape architects, and parks and recreation planners and extension of

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[3]The plan is available at http://www.physicalactivityplan.org/NationalPhysicalActivityPlan.pdf.

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that conversation to public lands, social service, and public health agencies.

Floyd commented that research is needed to better understand how funding is allocated to communities, including the capacity and expertise of local communities to write grant proposals to receive philanthropic support. Floyd also suggested that research is needed on standards for parks and recreational facilities, including how many and what types of facilities a community needs. In particular, to support efforts to reduce disparities, this research needs to identify which facilities and activities in parks contribute to better health. These features then can be designed into new parks, and funding can be pursued to incorporate them into existing parks.

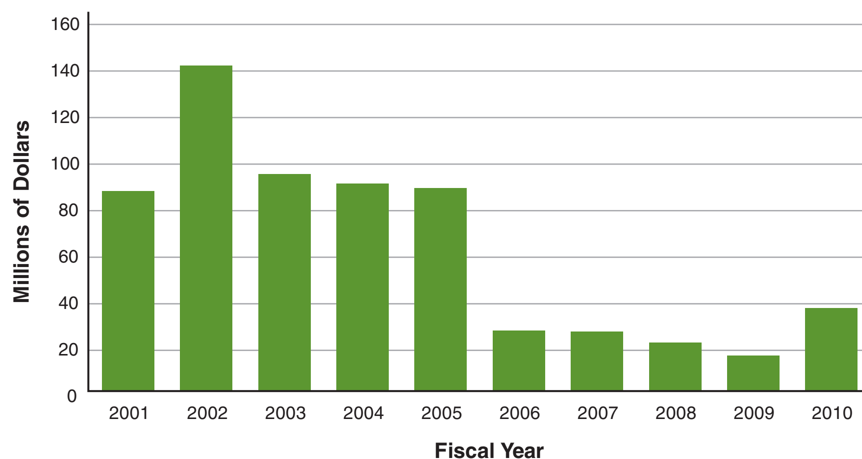

FIGURE 2-2 The Land and Water Conservation Fund has been a major source of funding for state and local park development, but its funding has declined in recent years.
SOURCE: Vincent, 2010.

> *"There is an important role for parks to play in reducing and eliminating health disparities." —Myron Floyd*

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3

Combating Disparities in the Food and Beverage Environments of Ethnic Minority and Low-Income Communities

Important Points Made by Speakers

- Straightforward measures such as eliminating sugary drinks from schools, promoting the drinking of tap water, and providing calorie information to consumers can improve the food and beverage environments for members of vulnerable populations. (Story)
- A combination of media campaigns, menu labeling laws, school nutrition policies, and incentives for food and beverage outlets in Philadelphia has contributed to a recent decline in obesity among the city's children. (Schwarz)
- The Healthy, Hunger-Free Kids Act of 2010 was a significant step forward in improving the quality of the foods and beverages offered in schools and child care settings. (Fox)
- Other local, state, and federal initiatives, many of which originate with local advocacy, can help reduce obesity rates and population disparities. (Fox)

The second goal of *Accelerating Progress in Obesity Prevention* (IOM, 2012a) focuses on the food and beverage environments that people encounter every day (see Box 3-1). As the report notes, major changes have occurred in recent decades in the nation's food system and in food and eating environments, driven by technological advances; U.S. food and agriculture policies; population growth; and economic, social, and lifestyle changes. These environmental changes have influenced

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BOX 3-1
Goal 2 from *Accelerating Progress in Obesity Prevention*

Goal: Create food and beverage environments that ensure that healthy food and beverage options are the routine, easy choice.

Recommendation: Governments and decision makers in the business community/private sector should make a concerted effort to reduce unhealthy food and beverage options and substantially increase healthier food and beverage options at affordable, competitive prices.

what, where, and how much Americans eat, and they have had disproportionate impacts on vulnerable populations.

Three speakers addressed food and beverage environments in the context of health disparities. Mary Story, professor in the Division of Epidemiology and Community Health in the School of Public Health at the University of Minnesota, Minneapolis, described ways of pursuing the strategies offered in *Accelerating Progress in Obesity Prevention* (IOM, 2012a) for reducing such disparities. Donald Schwarz, deputy mayor for health and opportunity and health commissioner for the City of Philadelphia, described steps taken in the city that serve as a case study for approaches to halting and reversing the rise in obesity among minority populations. Finally, Tracy Fox, president of Food, Nutrition and Policy Consultants, detailed some of the policies affecting the food and beverage environments in schools, restaurants, and neighborhood stores.

STRATEGIES FOR CHANGING FOOD AND BEVERAGE ENVIRONMENTS

Summary of Remarks by Mary Story

The availability of healthy foods is limited in some areas, especially in low-income and minority communities (Larson et al., 2009). These communities tend to have small grocery stores and convenience stores with higher prices than those of large suburban supermarkets (Larson et al., 2009). Unhealthy foods also are marketed more prominently in these communities (IOM, 2012a). And Hispanic and black students are more likely than white students to attend schools surrounded by convenience stores and fast food restaurants (Larson et al., 2009).

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The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity states that "individual behavior change can only occur in a supportive environment with accessible and affordable healthy food choices and opportunities for regular physical activity" (U.S. Department of Health and Human Services, 2001, p. 16). The Institute of Medicine (IOM) report *Promoting Health: Intervention Strategies from Social and Behavioral Research* makes a similar point: "It is unreasonable to expect that people will change their behavior easily when so many forces in the social, cultural, and physical environment conspire against such change" (IOM, 2000, p. 4).

Accelerating Progress in Obesity Prevention (IOM, 2012a) outlines five strategies for changing food and beverage environments. The first for governments and decision makers in the business and private-sector community to make a concerted effort to adopt comprehensive strategies for reducing overconsumption of sugar-sweetened beverages. This strategy runs counter to some powerful trends, Story noted. On any given day, 70 percent of males and 60 percent of females between the ages of 2 and 19 consume sugar-sweetened beverages,[1] with higher rates of intake among black and Mexican American adults and low-income youth and adults (Ogden et al., 2011). Although the amount of calories consumed in sugary drinks among children and adolescents has declined somewhat over the past decade for almost all age and racial and ethnic groups (the exception being black children aged 2-5), marked disparities persist (Kit et al., 2013). For example, the most recently available data show that black preschoolers consume 114 calories per day from sugary drinks, compared with 61 calories for their white and 72 calories for their Mexican American counterparts (Kit et al., 2013). As an example of how to implement this strategy, Story mentioned efforts to promote the drinking of tap water. Measures such as clean drinking fountains, convenient hydration stations, and signage near beverage outlets identifying sources of tap water could help reduce the consumption of sugar-sweetened beverages (Patel and Hampton, 2011).

One way suggested by Story to help achieve equity in health opportunities would be to eliminate access to sugary drinks in schools and other settings where children spend their time. According to recent

[1]Sugar-sweetened beverages are defined to include all beverages containing added caloric sweeteners, including, but not limited to, sugar or other calorically sweetened regular sodas, less than 100 percent fruit drinks, energy drinks, sports drinks, and ready-to-drink teas and coffees (IOM, 2012a).

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data, only 12 percent of elementary schools offered access to sugary drinks, compared with 63 percent of middle schools and 88 percent of high schools (Turner et al., 2012). Extending bans from elementary schools to middle and high schools would reduce consumption of these beverages, Story observed. Also, as was pointed out in the discussion session, labels indicating the amount of sugar added to foods, in addition to the sugar already in such foods as milk and yogurt, would help parents, students, and other consumers make informed choices.

The second strategy in *Accelerating Progress in Obesity Prevention* for changing food and beverage environments is to increase the availability of lower-calorie and healthier food and beverage options for children in restaurants. Story explained that this strategy is important since low-income and minority neighborhoods are surrounded by fast food restaurants.

The third strategy for changing food and beverage environments is to apply strong nutritional standards for all foods and beverages sold or provided through the government. In addition, business community and private-sector entities operating venues frequented by the public[2] should ensure that these healthy options are available at all times. Simply making standards known can have a dramatic effect on consumption, Story noted. For example, providing calorie information about sugary beverages in four corner stores in low-income black neighborhoods in Baltimore reduced purchases of these beverages among youth. Especially effective was a sign saying, "Did you know that working off a bottle of soda or juice takes about 50 minutes of running?" (Bleich et al., 2012).

The fourth strategy is to introduce and utilize health-promoting food and beverage retailing and distribution policies. In this area, Story mentioned incentives, such as taxing strategies, to purchase healthier foods.

The final strategy is to broaden the examination and development of U.S. agriculture policy and research to include implications for the American diet. As Story noted, this strategy involves large-scale food systems and agricultural policies that currently are not aligned with obesity prevention efforts.

[2]"Places frequented by the public" include, but are not limited to, privately owned and/or operated locations frequented by the public such as movie theaters, shopping centers, sporting and entertainment venues, bowling alleys, and other recreational/entertainment facilities.

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> *"[When] the City of Minneapolis created what they called Tap Minneapolis ... they had blind taste tests, and most people couldn't tell the difference between tap water and bottled water. In fact, many people preferred the tap water." —Mary Story*

CASE STUDY: OBESITY PREVENTION INITIATIVES IN PHILADELPHIA

Summary of Remarks by Donald Schwarz

Philadelphia is the poorest of the 10 largest cities in the United States, and among those cities for which data are available, it has the highest rate of obesity among adolescents (CDC, 2012; Census Bureau, 2011, 2012). Among counties with more than 1 million residents and the highest population density, Philadelphia county also has the third highest rate of adult obesity, exceeded only by the counties of Bexar, Texas, and Wayne, Michigan (CDC, 2013b; Census Bureau, 2013a).

Responding to these high obesity rates and building on previous initiatives, the city of Philadelphia initiated the Get Healthy Philly program in 2010. Among respondents to a survey of approximately 500 caregivers in the city, the majority did not consider their children overweight or obese, but many were concerned about diabetes (Jordan et al., 2010, 2012b). Approximately 70 percent of respondents understood the health risks of sugar-sweetened beverages and perceived these beverages as an important contributor to obesity (Jordan et al., 2010).

A media campaign used this information to formulate messages that rang true and were salient for minority populations (Jordan et al., 2012b). These messages were seen or heard 40 million times over 15 months, Schwarz stated, and 78 percent of caregivers, who were exposed to a message once every 2 days on average, recalled them. Exposure to a particular television ad called "The Talk" was associated with the belief that consumption of sugary drinks is linked to weight gain and diabetes (Jordan et al., 2012a). Exposure to a radio advertisement called "Jump Rope" targeting African Americans was associated with greater recognition of the sugar content of sugary drinks and increased intentions to replace such drinks with healthier options (Jordan et al., 2012a). In 2012 the Philadelphia City Council reinforced the campaign by passing a

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law limiting advertising to 20 percent of window and door space and smaller portions of wall space, Schwarz stated. The consumption of one or more sugary drinks per day in the city has fallen by 20 percent among teens since 2007 and by approximately 5 percent among adults since 2010.[3]

In 2008, Philadelphia passed the nation's most comprehensive menu labeling law, which requires that menus provide not just calorie content but also information on sodium, fat, and carbohydrates. Although the law was preempted by the Patient Protection and Affordable Care Act (Public Law 111-148, 111th Cong., March 23, 2010), it was implemented in January 2010. Even though Philadelphia cannot enforce the law because of its preemption, compliance among restaurants has been high. Philadelphia also has implemented comprehensive school nutrition policies since 2004 (Robbins et al., 2012). The city's schools no longer offer sugary beverages in vending machines, they are subject to snack and á la carte standards, and nutrition education is now provided in classrooms through funds from the Supplemental Nutrition Assistance Program (SNAP). Schools also have removed fryers from their kitchens and have switched to 1 percent milk. The city created wellness councils in 171 schools in 2010 and has assessed school food procurement and contracting processes (Get Healthy Philly, 2011). In 2012 it become the first school district in Pennsylvania to implement new federal school nutrition standards.

Of the more than 2,400 corner stories in Philadelphia, more than 600 are offering and promoting healthier products in exchange for modest incentives, marketing materials, and training (Get Healthy Philly, 2011). Schwarz stated that more than 150 stores have received shelving or refrigeration units with which to display and store perishables. The city's new zoning code also encourages the incorporation of fresh food sales into commercial and mixed-use developments by offering density bonuses that do not count the square footage of produce display areas against the maximum area for commercial activity. In corner stores, while the availability of healthy foods has improved, purchases have not yet changed. Improving awareness of healthier choices through school

[3]Based on data for teens in grades 9 through 12 from the Centers for Disease Control and Prevention's Youth Risk Behavior Surveillance System (2007-2011) and data on adults from the Public Health Management Corporation's Community Healthy Data Base 2012 Southeastern Pennsylvania Household Health Survey (2010-2012).

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and community nutrition education could alter this lack of response, said Schwarz.

Schwartz mentioned additional changes in the city, including

- Ten new farmers' markets have opened in low-income communities in partnership with The Food Trust (Get Healthy Philly, 2011).
- Participating farmers' markets offer an incentive to SNAP recipients by providing $2 of free fruits and vegetables for every $5 of SNAP benefits spent at the market. Between 2010 and 2012, this program contributed to a 335 percent increase in SNAP redemption at farmers' markets citywide (Get Healthy Philly, 2011).
- A universal feeding pilot program in 200 public schools has been carried out in Philadelphia since 1990, which eliminates the need for distributing and collecting income eligibility paperwork. Under this program, eligibility for the school breakfast and lunch programs is based on the proportion of low-income children in schools. Participation in both programs has increased as a result, Schwartz said.

The above changes have been associated with a decline in obesity among schoolchildren in Philadelphia from 2006-2007 to 2009-2010 (see Figure 3-1), Schwarz reported. He added that the city has also seen a slight reduction in adult obesity as measured by the prepregnancy weight of women on birth certificates.

From his experiences, Schwarz drew several conclusions:

- Cross-sectoral collaboration is key both within and outside of government.
- Effective programs should be scaled up when funding allows.
- Citywide and organizational policies must undergird programmatic efforts.
- Policies and programs take time to have a cumulative effect.
- Evaluation is critical. Not all interventions will succeed as initially designed.

To these conclusions, Schwarz added, during the discussion session, that people need to be given a voice and that ways of accomplishing this differ across jurisdictions. As members of minorities become population

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majorities in many jurisdictions, their preferences eventually will be heard and make themselves felt.

Schwarz also listed several questions that need increased attention:

- How can school food programs be supplemented when public school budgets are being slashed?
- How can the marketing of unhealthy products be reduced or eliminated?
- How can physical activity be promoted, especially for girls?
- How can federal public health funding for prevention and nutrition assistance be sustained in a period of deficit reduction?

During the discussion period, standing committee member Thomas Robinson, Irving Schulman, M.D., Endowed Professor in Child Health at Stanford University, noted that the advocacy and public health communities are ahead of researchers in knowing what programs are effective in changing public attitudes and behaviors. Schwarz responded that much still remains to be learned about interventions at the environmental level, where both politics and the diversity of population groups are prominent factors.

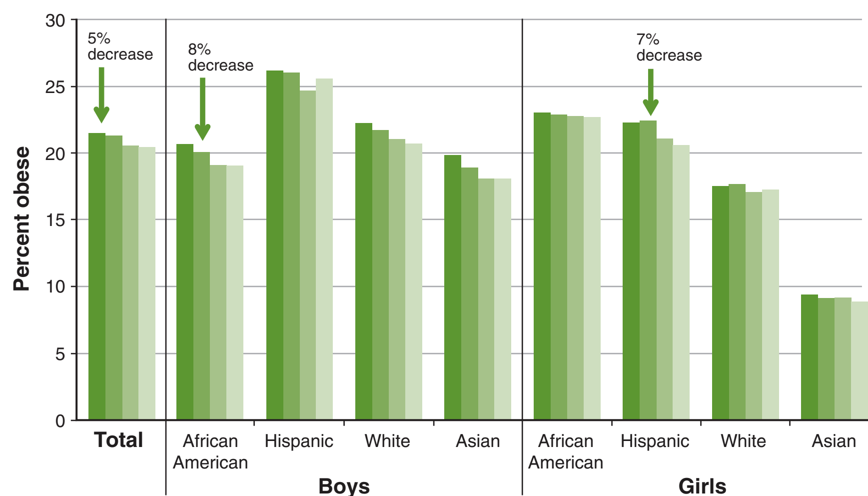

FIGURE 3-1 Obesity rates among Philadelphia schoolchildren (aged 5-18), 2006-2007, 2007-2008, 2008-2009, and 2009-2010.
SOURCE: Robbins et al., 2012.

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> *"Small programs that have been piloted are incredibly important tests, but government has to be courageous and have the resources to scale them for the whole population. It's the only way to ultimately reach disadvantaged populations." —Donald Schwarz*

POLICY ISSUES

Summary of Remarks by Tracy Fox

Vulnerable populations have fewer opportunities than others to make healthy choices (RWJF, 2012). The foods to which they have ready access often are of poor nutritional quality (RWJF, 2012). Fast food marketing targets these populations (Kunkel et al., 2013), and their neighborhoods tend to have more fast food restaurants and convenience stores (RWJF, 2012).

Students in schools in these neighborhoods also are disadvantaged. They are less likely to attend a school with a wellness policy or nutrition education and to have access to healthy foods and beverages (Bridging the Gap, 2013). They are less likely as well to participate in school sports programs or attend a school that shares its recreational facilities outside of school hours (Bridging the Gap, 2013).

Given this background, Fox explained that the passage of the Healthy, Hunger-Free Kids Act of 2010 (Public Law 111-296, 111th Cong., December 13, 2010) was a significant step forward in improving the quality of the foods and beverages offered in schools and child care settings. The act improves the nutritional quality of the meals served in these settings, increases access to school meals, establishes nutrition standards for all foods sold in schools, strengthens local wellness policies, expands the after-school meal program, and reduces the administrative burden in child nutrition programs. School meals now have less unhealthy fat, less salt, fewer calories, more low- and nonfat dairy, more fruits and vegetables, and more whole grains. Fox explained that under proposed standards for the Smart Snacks in School program, which were about to be finalized at the time of the workshop, students would consume more fruits, vegetables, whole grains, low-fat dairy, and lean proteins; less fat, sodium, and sugar; fewer sugar-sweetened beverages; and more water.

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Other federal nutrition programs also have gained a new emphasis on obesity prevention, Fox pointed out. The food packages under the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) were revised in all states by 2009, and retail outlets that accept WIC vouchers are now providing healthier products. The U.S. Department of Agriculture is working to update the meal patterns in the Child and Adult Care Food Program. And at the time of the workshop, the Food and Drug Administration was working on a final ruling on menu labeling and updating the nutrition facts panel on packaged goods.

Also at the time of the workshop, Congress was debating the Farm Bill, which has a major impact on the nutrition of vulnerable populations, Fox noted. Historically, about three-quarters of the funding under the Farm Bill has gone to SNAP, in which approximately 46 million people have participated since June 2012 (CBO, 2012).[4] More than 90 percent of SNAP participants are children, the elderly, or those with disabilities, and the program has one of the lowest fraud rates of all federal programs, yet it often is subject to political attack, Fox observed. The Farm Bill also features several incentive-based approaches that would help SNAP participants use their benefits in nutritionally sound ways, said Fox, including support for farmers' markets and financing for healthy food.

Fox noted that states and localities, as well as the federal government, have instituted innovative programs designed to reduce obesity rates. For example, many cities are promoting the development of healthier public places. The idea is that when people are playing outside or returning from a hike, they should not be confronted with an array of unhealthy snacks and beverages. The City of San Antonio has limited sugary beverages in county government offices (Bauch, 2010). The New York City Department of Health has been emphasizing procurement policies that promote health, as has the federal government—for example, the Department of Defense through its Healthy Base Initiative.[5]

Many of these programs, even at the federal level, started with local advocacy. Good ideas percolate up from the local level and then can spread nationally through federal legislation, Fox noted. These programs have been influential in reducing disparities. If funding levels for such

[4]See http://www.fns.usda.gov/pd/29snapcurrpp.htm for details by state.
[5]Details are available at http://www.defense.gov/releases/release.aspx?releaseid =15867.

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programs are reduced, the vulnerable populations they serve will be negatively affected, said Fox.

> *"The reason why we need these programs protected is because the target populations are those ... that really need these programs. Threats to funding levels will significantly impact these populations."*
> *—Tracy Fox*

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4

Equity-Focused Approaches to Obesity Prevention in Workplaces

Important Points Made by Speakers

- The number of workplace wellness programs has been growing as employers increasingly recognize their potential to reduce medical spending, absenteeism, and employee turnover. (Crawford)
- New tools and approaches used to improve the health of employees should be tailored to the needs, belief systems, and histories of particular groups. (Baxter)
- Wellness programs can be kept quite low in cost while generating large health benefits. (Anthony)

Goal 4 in *Accelerating Progress in Obesity Prevention* (IOM, 2012a), directed at health care providers, insurers, and employers (see Box 4-1), was discussed during two different sessions at the workshop: the first, summarized in this chapter, looked at workplace environments; the second, summarized in the next chapter, examined the role of health care providers and insurers in obesity prevention.

As noted in *Accelerating Progress in Obesity Prevention*, many jobs have become more sedentary in recent decades, and the resulting decrease in energy expended at work has been associated with increased obesity. Increased obesity, in turn, raises employers' costs through greater use of sick leave, more absenteeism, greater use of disability benefits, more workplace injuries, and higher health care costs. Obesity prevention can reduce these costs, leaving both employers and employees better off.

Three speakers examined the workplace as a venue for increasing employee wellness and decreasing health disparities. Standing committee

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BOX 4-1
Goal 4 from *Accelerating Progress in Obesity Prevention*

Goal: Expand the role of health care providers, insurers, and employers in obesity prevention.

Recommendation: Health care and health service providers, employers, and insurers should increase the support structure for achieving better population health and obesity prevention.

member Patricia Crawford, cooperative extension nutrition specialist in the Department of Nutritional Science and Toxicology and adjunct professor in the School of Public Health at the University of California, Berkeley, described the rapid expansion of workplace wellness programs and their potential to improve health. Ray Baxter, Kaiser Permanente's senior vice president for community benefit, research, and health policy, summarized the approaches being used by his company to improve the health of its employees and customers. Finally, Sharen Anthony, with the Public Health Foundation Enterprises Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), discussed how the benefits of an employee wellness program can extend beyond individual employees.

THE POTENTIAL OF EMPLOYEE WELLNESS PROGRAMS

Summary of Remarks by Patricia Crawford

More than 60 percent of Americans are in the workforce, and employed adults spend a quarter of their lives at their worksite, noted Crawford. Work can have both negative and positive effects on health. Sedentary jobs can contribute to decreased fitness and increased body mass index (BMI) levels (Choi et al., 2010; Church et al., 2011). In addition, foods available at worksites may not contribute to a healthy diet. But worksites also can offer wellness programs, and in recent years the number of such programs has been growing (Stoltzfus, 2009). Today, 77 percent of large manufacturers have some type of worksite wellness program, as do 22 percent of small businesses (Baicker et al., 2010; MetLife, 2010). Worksite wellness is a $6 billion business, and hundreds of vendors offer such programs to employers (Forbes, 2013).

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The majority of worksite wellness programs have focused on preventing weight gain and changing the environment, whether by making physical activity opportunities or healthy foods more available (Salinardi et al., 2013). Some target high-risk behaviors such as smoking. Some include obesity management or weight loss programs at the worksite, while others focus on obesity prevention. Crawford explained that workplaces can help reduce the overconsumption of sugar-sweetened beverages, deliver messages about physical activity and nutrition, ensure proper labeling of foods, and promote breastfeeding-friendly environments. The field is evolving rapidly, she said, driven partly by the needs of organizations and partly by external policies such as the Patient Protection and Affordable Care Act of 2010.[1]

Research results have been mixed on the effectiveness of worksite wellness programs. Some have found little change in measures of health (Salinardi et al., 2013). On the other hand, others have found that such programs create a culture of health within organizations (Anderko et al., 2012). This culture of health in the workplace may have effects that are difficult to document in the short term but in the longer term may yield such benefits as lower employee turnover (Isaac, 2010). Studies also have shown that wellness programs are associated with lowered medical costs, reduced absenteeism, and improved work productivity (Goetzel and Ozminkowski, 2008; Heinen and Darling, 2009; Merrill et al., 2011).

The presentations at the workshop focused on the particular strategy from *Accelerating Progress in Obesity Prevention* of creating or expanding healthy environments by establishing, implementing, and monitoring policy initiatives that support wellness. Crawford concluded, however, by noting that obesity prevention efforts in the workplace inevitably overlap and merge with those implemented in other settings.

> *"The workplace can be a microcosm for society." —Patricia Crawford*

[1]Patient Protection and Affordable Care Act, Public Law 111-148, 111th Cong. (March 23, 2010).

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CASE STUDY: TOTAL HEALTH AT KAISER PERMANENTE

Summary of Remarks by Ray Baxter

Kaiser Permanente, a prepaid fully integrated health care delivery system that began about 70 years ago in the shipyards of Oakland, California, has a diverse workforce that is scattered throughout the San Francisco Bay Area. Baxter explained that although all members of its workforce have access to the same health care system, their health conditions mirror those of the neighborhoods in which they live, reflecting the influence of social and environmental factors on peoples' choices and behaviors.

Recognizing the influence of these factors, Kaiser Permanente has been taking an integrated approach to four diseases—cardiovascular disease, diabetes, cancer, and chronic respiratory disease—and four modifiable risk factors that play a role in these diseases—unhealthy diet, inactivity, the use of tobacco, and the harmful use of alcohol (see Figure 4-1). These risk factors can be difficult to change because they involve behaviors that are easy to adopt and are accepted by society, Baxter said. At the same time, however, these risk factors also can be modified by a wide range of interventions. Stairways, sidewalks, and traffic features that protect pedestrians can help increase physical activity, for example, while marketing can promote healthy instead of unhealthy products. No one approach alone is sufficient, said Baxter. But a combination involving individuals, families, schools, worksites, neighborhoods, communities, and society in general—which Kaiser Permanente has termed "Total Health"—can make a difference (see Figure 4-2).

Powerful tools now are available with which to engage with patients and help them change their behaviors, Baxter pointed out. Online health coaching, mobile apps, social media, and other applications of new media can engage many consumers. Clinical care can include reference to optimal resources and support; for example, any patient seen by a Kaiser Permanente provider is asked about smoking and physical activity. Support for healthy pregnancies can include support for breastfeeding. Prediabetics can receive interventions to keep them from converting to full-blown diabetics.

Baxter emphasized that all of these tools and approaches can be used for obesity prevention and treatment. To be most effective, however, they need to be tailored to the needs, belief systems, and histories of

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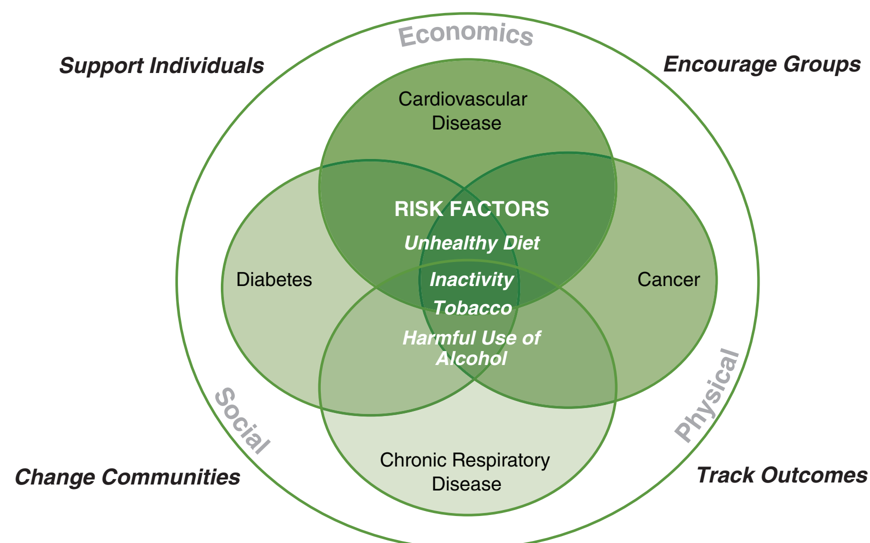

FIGURE 4-1 Kaiser Permanente is taking an integrated approach to diseases and risk factors.
*Aligns with the World Health Organization's framework for monitoring non-communicable diseases.
SOURCE: Recreated from the World Health Organization (http://www.who.int/ncdnet/about/4diseases/en).

particular groups. For example, culturally grounded health education might include cooking classes or translations of health education materials, while tapping into traditions such as dance or foods can resonate with particular groups. Community partners can bring to bear competencies and models that health care providers may lack. The real challenge, said Baxter, is to scale up successful culturally appropriate programs to promote equity.

Last year Kaiser Permanente reached a labor agreement[2] with the coalition of unions that represents nearly 100,000 of its workers. That agreement includes a collective incentive program to achieve a 5 percent improvement in BMI, smoking, blood pressure, and cholesterol by the end of 2016. Rewards recognize the collective achievement of groups, not changes in individual employees, thereby taking advantage of the

[2]See http://www.lmpartnership.org/what-is-partnership/national-agreements/2012-national-agreement.

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social mechanisms that drive behavior change. (Baxter noted in the discussion session that more research on incentives and behaviors would help companies structure such programs.)

The company also is making its Total Health approaches available to its customers. It offers a portfolio of services to help organizations improve the health of their workforce, including lifestyle health coaching, communications, analytics, and reporting. The company is bringing workforce health resources to almost 500 cities in California.[3] Beyond working with employers, the company is working with more than 40 communities to support local groups (Kaiser Permanente, 2011). And in this work it is focusing on individuals and communities with the least access to healthy foods and activities and engaging them in the design of solutions.

During the discussion period, Baxter noted some of the specific ways in which Kaiser Permanente has addressed disparity issues. Rather than adopting what Baxter called "peanut butter programs," in which the same approach is applied universally, the company uses unit-based teams—small groups working on problems that are aligned with its priorities.

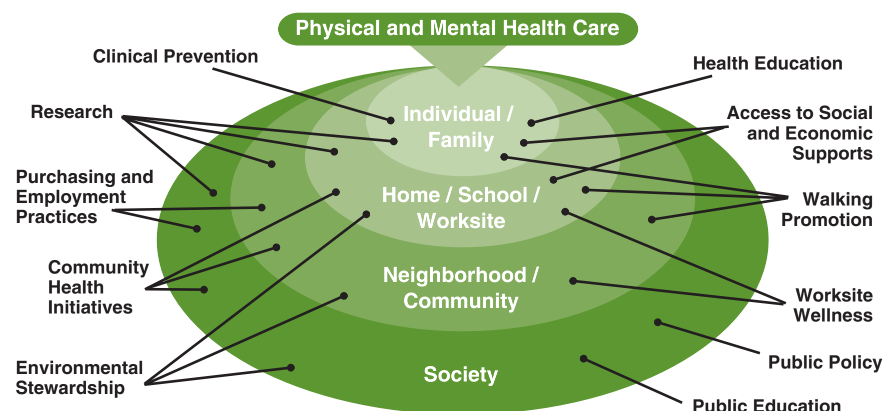

FIGURE 4-2 Changing deep-seated behaviors requires deploying a wide range of assets.
SOURCE: Kaiser Permanente, internal graphic used to outline Total Health efforts.

[3]See http://www.cacities.org/Top/Partners/Cities-for-Workforce-Health.

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These small groups can adopt ideas used elsewhere and tailor those ideas for their own purposes. For example, a group with particularly inflexible schedules might work on ways to increase physical activity.

> *"We have to engage everyone in the organization in changing behavior and in changing the culture of the organization in a fundamental way. And to do that we have to support each other. We have to do it collectively, not as a payment or punishment on an individual basis but on a collective basis. This is a grand experiment in doing things differently." —Ray Baxter*

IMPROVING THE HEALTH OF WIC EMPLOYEES

Summary of Remarks by Sharen Anthony

The California WIC program is the nation's largest, with 3,500 staff serving almost 1.4 million mothers and children each month (National WIC Association, 2013). The California WIC Association, a nonprofit organization formed by the directors of local WIC agencies, has a WIC Worksite Wellness program whose motto is "work well, be well, live well." To become a wellness worksite, a WIC agency needs to make a commitment to the program, designate a wellness coordinator and team, conduct a staff wellness preprogram survey, complete a 10-step workplan, and request to be certified. The workplan covers the following elements:

- healthy foods,
- community building,
- physical activity,
- wellness coordinator,
- general health,
- wellness communication,
- mental health support,
- senior-level and board support,
- lactation accommodation, and
- periodic evaluation.

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At the time of the workshop, 30 WIC agencies were certified as wellness worksites.[4]

Anthony described the activities of the local WIC agency with which she works, the Public Health Foundation Enterprises WIC Program, which has more than 650 employees. Building on the WIC food package changes made in 2009, the wellness program, known as Health is Wealth, promotes and reinforces healthy eating and active lifestyles among WIC employees. Staff members track health indicators such as blood pressure, glucose levels, and BMI in a health passport. Staff also submit ideas for the program and vote on suggested options. A "Health is Wealth" link on the internal intranet provides staff success stories, local opportunities for fitness, and other information.

The program is run on a shoestring budget, said Anthony, but the WIC agency has worked hard to get staff buy-in and support. A Health is Wealth advisory board comprising administrative and front-line support staff oversees the program, and the program has enlisted allies to further the agency's wellness activities. According to Anthony, experience with the program has shown that inexpensive steps, such as canvas bags with wellness messages, pedometers, and exercise DVDs for Instant Recess®, can make a difference in helping staff be more active and make better dietary choices.

The cost of the wellness program for the agency is about $100 per employee per year, or about $2 per employee per week, and the benefits to employees are immense, Anthony said. Furthermore, although change cannot happen overnight, the program's impacts go well beyond individual employees. Behavior changes made by one employee can have a ripple effect, extending to coworkers, WIC clients, families, friends, and the community. For example, some staff in the agency have championed Kaiser Permanente's "Everybody Walk" program, and employees are now walking 6 to 7 miles daily. Such activities do not have a direct cost to the agency but can have major health benefits, Anthony explained.

Anthony had one recommendation that would increase the benefits of the WIC employee wellness program. Nutrition services and administrative expenditures under WIC should be expanded, she said, to allow for evidence-based training and interventions and for materials and tools to engage WIC employees in healthy habits and active living.

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[4]See http://www.calwic.org/focus-areas/wic-worksite-wellness/certified-well-wic-worksites for a list of certified agencies.

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By meeting the wellness needs of their employees, WIC agencies can better meet the wellness needs of the people they serve, Anthony said, including people affected by disparities. In addition, as she noted in the discussion session, documenting this effect through research could help generate support and additional funding for such efforts.

> *"We knew that we needed to walk the talk so that we could be role models and cheerleaders for our WIC participants. Therefore, we needed to develop a strategic plan that could have an impact on our staff." —Sharen Anthony*

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5

Pathways to Obesity Prevention for Ethnic Minority and Low-Income Children and Adults in Primary Care

Important Points Made by Speakers

- More is known about public health strategies than about clinical strategies for preventing obesity. (Dietz)
- Education and training for health professionals need to be improved at all levels to address obesity. (Dietz)
- Clinical approaches are essential to achieve the caloric deficits necessary for severely obese people to lose weight. (Burnet, Dietz)
- The time and effort invested in building relationships pay off in engagement and sustainability. (Burnet)
- Obesity prevention and treatment programs can engage not only patients but also health care providers. (Buchholz)

The preceding chapter summarizes the workshop session addressing goal 4 of *Accelerating Progress in Obesity Prevention* (IOM, 2012a) with respect to workplace environments. This chapter summarizes a second session on that same goal as directed at health care providers and insurers. This session looked at the health care system and at its interactions with other organizations, including schools. *Accelerating Progress in Obesity Prevention* calls for health care professionals to make obesity prevention part of routine preventive care and for insurers to cover obesity prevention, screening, diagnosis, and treatment. However, many barriers exist to achieving these objectives, and disadvantaged populations have difficulty accessing health care in general, much less health care emphasizing obesity prevention.

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Standing committee member William Dietz, recently retired director of the Division of Nutrition, Physical Activity, and Obesity in the National Center for Chronic Disease Prevention and Health Promotion at the Centers for Disease Control and Prevention (CDC), reviewed the strategies outlined in *Accelerating Progress in Obesity Prevention* for involving the health care system in obesity prevention and some of the steps that can be taken in pursuing those strategies. Deborah Burnet, professor of medicine and pediatrics at the University of Chicago, described a medically based after-school program that has been successful and could be applied elsewhere. Finally, Ryan Buchholz, a pediatrician and internist at Unity Health Care, described a similar program instituted at a federally qualified health center that also has succeeded in reducing weight among patients and family members.

STRATEGIES FOR HEALTH CARE PROVIDERS AND INSURERS IN OBESITY PREVENTION

Summary of Remarks by William Dietz

Relatively little is known about optimal approaches to preventing and treating obesity in primary care, Dietz stated. In the context of the health care system, obese individuals are an underserved group (Puhl and Brownell, 2003).

Accelerating Progress in Obesity Prevention (IOM, 2012a) outlines three strategies for expanding the role of health care providers and insurers in obesity prevention and treatment. The first is to provide standardized obesity-related care and advocate for healthy community environments. While some progress has been made in this area, many trends still point toward an insufficient rate of change in obesity. Among boys and men, the prevalence of obesity has continued to increase, driven in particular by increases among African American boys (Ogden et al., 2012). Also, the prevalence of severe obesity has continued to increase among all groups (Flegal et al., 2012). When severe obesity is defined as a body mass index (BMI) greater than or equal to 120 percent of the 95th percentile (Flegal et al., 2009), about 9 percent of African American boys and more than 12 percent of African American girls fall into this category (Wang et al., 2011). Severe obesity also is increasing among adults, with especially high levels among African American women (Flegal et al., 2012).

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Clinical approaches are essential to achieve the caloric deficits necessary for severely obese people to lose weight, said Dietz. One relevant model is the chronic care model, in which a patient's environment—including family, school, worksite, and community—interacts with the medical system around obesity prevention and care (Dietz et al., 2007). Dietz mentioned several programs that have used elements of this model to achieve measures of success:

- Group sessions with the parents of overweight preschoolers conducted in a primary care setting had an effect on weight (Quattrin et al., 2012). Intriguingly, changes in children's weight predicted changes in parental weight, with parents in the study losing two BMI units.
- A descriptive pilot study of community-based treatment in a YMCA led to an overall weight loss among children and adolescents, with greater losses among those who attended more sessions (Foster et al., 2012).
- Treatment of extreme adult obesity in primary care practices using behavioral counseling, structured diets, and medications produced substantially greater weight loss than occurred in a control group (Ryan et al., 2010).
- Primary care delivered through both in-person and remote support has demonstrated effectiveness in some obese patients (Appel et al., 2011; Wadden et al., 2011).

An important characteristic shared by these studies, Dietz noted, is that the care was delivered by care extenders such as nutritionists and nurse practitioners. Engagement of a broad range of staff is critical in dealing with chronic diseases, and physicians need to partner with other staff members, he said.

The second strategy in *Accelerating Progress in Obesity Prevention* is to ensure coverage of, access to, and incentives for routine obesity prevention, screening, diagnosis, and treatment. Lack of reimbursement often is cited as a barrier to obesity treatment, Dietz observed. Yet, an experiment under way with the Alliance for a Healthier Generation has demonstrated that even when reimbursement is available, it often is not used (Rask et al., 2013). Reasons include a lack of awareness by both providers and families of a benefit's availability, varying acceptance of billing codes, precertification or enrollment requirements, copayments, and low use of BMI-specific diagnostic codes. Dietz also called attention to the possibility of bias against obese people among medical providers

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and to a lack of self-efficacy among physicians and other providers, who may not know how to start a conversation about obesity or what to emphasize.

The third strategy in *Accelerating Progress in Obesity Prevention* is to encourage healthy weight gain during pregnancy and breastfeeding and promote breastfeeding-friendly environments. In this regard, Dietz called attention to a model for obesity prevention and care that integrates efforts in the medical system with environmental supports. Dietz said CDC has been supporting the development of Baby-Friendly Hospitals in the southeastern United States, which has the lowest rates of breastfeeding among African American mothers (CDC, 2011b, 2013a). These hospitals emphasize early initiation of breastfeeding, skin-to-skin contact, rooming in, feeding cues, limited use of pacifiers, and breastfeeding support following discharge. Another promising model program Dietz noted was developed by ChildObesity180,[1] which serves children in out-of-school programs and emphasizes drinking water instead of sugar-sweetened drinks, snacking on fruits and vegetables, and engaging in physical activity.

A major challenge is to disseminate successful approaches, said Dietz, which requires the involvement of health care professionals. For example, BMI still is not routinely measured in pediatric practices (Hillman et al., 2009). Physicians also recognize that obesity occurs in an environmental context and that restricting interventions to the walls of a clinic is not likely to be effective. But Dietz pointed out that efforts at building advocacy skills among physicians for changes in the environment are in their infancy.

The severity of a condition needs to be aligned with reimbursement for treatments, Dietz said. In the adult population, about 40 percent of obesity-related costs are generated by the 8 percent of patients with a BMI above 35, yet care is treated as though one size fits all (Arterburn et al., 2005). Dietz suggested that, as the payment structure in medicine changes in conjunction with the Patient Protection and Affordable Care Act of 2010,[2] it may be possible to incorporate changes in the medical system that will lead to more effective treatment for chronic conditions such as obesity than is the case today.

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[1]See http://www.childobesity180.org.
[2]Patient Protection and Affordable Care Act, Public Law 111-148, 111th Cong. (March 23, 2010).

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Dietz particularly emphasized the importance of education. He suggested that education for health professionals needs to be improved at all levels, with corresponding changes in curricula, to address obesity prevention, treatment, and bias. Competencies also need to be based on the needs of the population and of the health care system. As an example, Dietz noted that providers generally are not taught how to talk with their patients effectively about body weight. The terms *fatness*, *bulk*, and *obesity* are resisted by patients, whereas *weight*, *excess weight*, and *increased BMI* are much more acceptable. With African American patients, providers also need to address the validity of BMI as a measure of obesity since, Dietz pointed out, this measure is sometimes mistrusted. But weight is a marker for risk of type 2 diabetes, and many families have experience with blindness, chronic renal disease, or amputation as consequences of diabetes. Therefore, engaging patients around these family experiences may increase their understanding and motivation.

Physicians generally have not been trained to help patients change behaviors, which is one reason why other providers, including nurses, dieticians, and physician assistants, will be critical in addressing obesity prevention (Frenk et al., 2010; IOM, 2012a). In addition, Dietz explained that community-based care is essential after adults lose weight to help them keep it off. Training in behavior change, an understanding of how to work in teams, and the ability to link public health and clinical systems are the kinds of skills all health care providers are going to need to address not just obesity but other chronic conditions as well.

> *"If we start early educating [medical] students ... they change their perspective on obesity from an individually based problem to one that has many more environmental determinants." —William Dietz*

CASE STUDY: THE POWER-UP AFTER-SCHOOL PROGRAM TO PREVENT OBESITY

Summary of Remarks by Deborah Burnet

The city of Chicago has high rates of diabetes and childhood obesity (Chicago Health Atlas, 2013; City of Chicago, 2013). Building on previous successes with a diabetes prevention program, investigators with the University of Chicago School of Medicine, in partnership with

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the Woodlawn Community School, developed the Power-Up program to meet the needs of overweight African American children and their parents in an after-school setting (Choudhry et al., 2011). Burnet explained that the University of Chicago and school staff developed their relationship for more than a year so that the interests and motivations of each partner would be clear before community-based participatory research began. Champions within the school were critical and did not always come from traditional leadership positions. For example, a security guard at the school, who had the keys to every door, knew where everything was, and knew every child by name, was a pivotal partner.

The program organizers attended Parent-Teacher Association (PTA) meetings and coffees to obtain parents' input, collaborated with teachers on the curriculum, involved staff in program implementation, iteratively refined the program with teachers and parents, engaged children in "branding" and making the program their own, and shared research grant dollars with the school. Burnet explained that the program took the form of 14 weekly interactive sessions for grades K-2, 3-4, and 5-6 and was later expanded to 20 sessions. More recently, the program focused on third- and fourth-grade students. The program used the lay health leader model in which the leaders were the after-school teachers, who were trained by a behavioral psychologist and research staff and received continued support throughout the program.

Burnet described how data were collected on site, including height, weight, BMI, and blood pressure for both the children and parents, along with self-reported measures of dietary intake and physical activity and knowledge, beliefs, and attitudes regarding nutrition and physical activity. Blood was not collected so as to keep the data collection as user-friendly as possible. Of the 70 children in the after-school program, 40 were enrolled in the research—16 boys and 24 girls, all African American, ranging in age from 5 to 12. Twenty-eight parents also participated (several had two or more children enrolled). At baseline, approximately half the children were overweight or obese, which mirrors the current data for Chicago public schools and many other urban areas (Chicago Public Schools and Chicago Department of Public Health, 2013; Margellos-Anast et al., 2008).

The program produced changes in BMI z-scores after 14 weeks (Choudhry et al., 2011). Burnet explained that the changes were most pronounced in the normal-weight and overweight groups; the obese group did not exhibit significant changes in their BMI z-scores. According

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to Burnet, and consistent with Dietz's observation, the heaviest children need additional medical intervention and a more intensive program.

Burnet noted that the study was small, involving just one school; it did not have a control condition; and participants were not followed beyond 14 weeks. Also, parents had difficulty participating in person because of competing commitments. A good way to involve parents, said Burnet, was to use cell phone texting, which was common in the community and among the school's parents. The Power-Up program instituted text messages to parents twice a day on such topics as the U.S. Department of Agriculture's (USDA's) food and activity pyramid, recommended servings of fruits and vegetables, and the activities in the Power-Up sessions. The texts also included questions such as "What kind of exercise did you do with your child today?" The families that participated in the texting program were comfortable with texting and texted responses to questions more than half the time within 5 minutes, Burnet said. They reported that the texting helped them keep in touch with the program and make healthy changes within their families.

The Power-Up program has had a sustainable impact at the school. It has led to new playground equipment, a greenhouse for growing vegetables, healthy snack choices, an after-school newsletter that highlights a "veggie or fruit of the month" and healthy recipes, and weekly visits of a produce van. When the Chicago White Sox baseball team and the University of Chicago formed a partnership to work on social marketing around childhood obesity, they used Power-Up as a cornerstone of the endeavor.[3] At White Sox home games on Sundays, Power-Up All Stars booths at the park offer healthy nutrition and exercise activities, and children can go online to participate in related activities and earn prizes.

Burnet provided several lessons drawn from her experience with Power-Up:

- The time and effort invested in building relationships pay off in engagement and sustainability.
- Building on common practices, such as cell phone texting, can produce greater acceptance and change.
- Creative use of technology can address time constraints and scalability.

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[3] See http://chicago.whitesox.mlb.com/cws/downloads/y2013/power_up_all_stars.pdf for details.

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- The heaviest children need to be referred for more intensive medical care.
- Multiple policies are converging on obesity prevention—including policies affecting schools—which helps clinicians and community leaders work together.
- Partnerships can lead to broader policy changes and can open the door to research programs involving clinics, communities, workplaces, and schools.
- Providers as well as students need to learn to work in teams.

During the discussion session, the sustainability of the Power-Up program was a prominent topic. Burnet and her colleagues are no longer running the program, although they still interact with it. The program has reached the point where the school is continuing it because of the benefits it provides to participants. Collaborations with other schools on the South Side of Chicago and with other research and service delivery programs have helped support the program. Burnet stated that the political environment in Chicago also has helped, in that the leadership of the city and of the Chicago Department of Public Health are keenly interested in obesity prevention.

Burnet particularly emphasized the need to help organizations and surrounding communities find the resources to make such programs sustainable. For example, the South Side Health Resource Mapping project[4] engages high school students each summer to map all the publicly available resources in neighborhoods. Not only can these maps direct residents to nearby services, but they also can be used to advocate for additional resources in underserved communities. In addition, resources are needed to enable other schools to experience the benefits of programs like Power-Up and find ways to institutionalize such approaches.

> *"The kids became agents of change within their families. They would say, 'I want to go to the grocery store, I want to make the shopping list.' Getting their input and valuing their contributions is really important." —Deborah Burnet*

[4]See http://www.southsidehealth.org for details.

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OBESITY PREVENTION AT THE UPPER CARDOZO HEALTH CENTER, WASHINGTON, DC

Summary of Remarks by Ryan Buchholz

The Upper Cardozo Health Center sees about 400 patients per day, and more than 40 percent of the children seen between the ages of 2 and 18 are either overweight or obese, with 25 percent in the latter category, Buchholz stated. The center is part of Unity Health Care, a network of 30 health centers around the District of Columbia, which together serve more than 100,000 patients in the District. Buchholz noted that Upper Cardozo alone sees about 22,000 patients each year, drawn mainly from the surrounding ethnically and economically diverse neighborhood of Columbia Heights.

Healthy weight is not an easy topic to bring up with patients, said Buchholz. Very little time usually is left at the end of a visit to address the issue, and it needs to be raised in a sensitive way, using appropriate terminology. Buchholz explained that providers are trying to establish and maintain a rapport with their patients and do not want to be confrontational about weight.

A problem such as obesity, which has multifactorial origins, requires a multifactorial intervention, even in the primary care setting, said Buchholz. At the Upper Cardozo Health Center, such an intervention was created in 2008 by three physician assistants who adapted the Ways to Enhance Children's Activity and Nutrition (We Can!) program developed by the National Institutes of Health (NIH) to offer evening sessions for families. Every Wednesday evening, a team of providers, medical assistants, and volunteers, including patient registration clerks, meets with patients for 2.5 hours. The providers include physician assistants, family nurse practitioners, internists, family physicians, and pediatricians, all of whom wear their We Can! t-shirts at the center to engage other patients and staff in the program. The team assesses BMIs, reviews health knowledge and behaviors, offers both structured and unstructured physical activity with healthy snacking, and often joins with participants to prepare healthy food using the demonstration kitchen at the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) office in the building. Buchholz explained that people of all ages attend the sessions. The majority are children aged 5 to 15, but many are adults.

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Activities might include going to a grocery store to buy a vegetable that a patient has never tried before, playing soccer at a nearby field, or teaching participants how to read food labels. Buchholz stated that patients have played a role in shaping the program—for example, requesting times when they can be away from their children and engage in activities on their own. Patients are free to attend the sessions when they want. Although some come just once, many have attended 2 to 10 sessions. Buchholz noted that in 2010, the program had 584 visits, in 2011 about 800, and in 2012 about 1,300. Because almost all of the center's pediatric patients are covered under Medicaid, the center has been able to bill for visits without a copay, which has enabled it to offer the program on a regular basis.

The program has had measurable benefits among patients, Buchholz pointed out. Among those who have attended multiple times, children's average BMI has dropped almost 0.2 percentile points with each additional visit, and adults' average weight has declined with each successive visit (Buchholz et al., 2011).

The program has standardized some procedures and information, Buchholz noted. BMI is automatically calculated and tabulated. A single template is used to ask about healthy activity and health knowledge. Every child receives a core of basic information over time.

The program has engaged not only patients but also staff, who have become instrumental to its success. Additional programs, such as the Fruit and Vegetable Prescription program, supported by Wholesome Wave, and the farmers' market program DC Greens, have complemented the We Can! efforts. A new initiative to rank parks in Washington, DC, in terms of cleanliness, accessibility, exercise level, safety, and other measures, known as the DC Park Prescription program, enables providers to inform patients about opportunities for physical activity, Buchholz explained.

Buchholz added that federally qualified health centers are an excellent platform for such programs, and the Affordable Care Act is about to greatly expand their role in the health care system. But each center has a different patient population with different needs, Buchholz noted, so providers need to listen to the voices of their patients to know what will work in each location. Like Burnet, Buchholz emphasized the importance of staff members who devote the time and energy needed to keep a program thriving, along with champions for the program within the institution.

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The Upper Cardozo Health Center has relatively limited capability to conduct comparative effectiveness research or biostatistical analysis. Providers often have little sense of which patients are most likely to attend the program repeatedly, although Buchholz suggested during the discussion session that future research might be able to identify the factors that contribute to participation. To this observation, Dietz added that research has shown that programs designed to meet patients' rather than providers' needs have much better persistence.

In discussing the sustainability of the program, Buchholz noted that, as the health care system moves away from fee-for-service payments, it will be necessary to find new ways of supporting such programs. Unity Health Care sets aside a small budget for the program, and the DC Medicaid managed care organizations have been supportive. But the health care system will continue to evolve, driven partly by patient needs and partly by policy initiatives such as the Affordable Care Act, Buchholz noted, which will have implications for such programs.

> *"The clinical setting can be a challenging environment to address obesity compared with the great strides made in public health."*
> *—Ryan Buchholz*

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6

Advertising, Promotion, and Education: Bringing Health Equity to the Message Environment

Important Points Made by Speakers

- The food and beverage marketing environment and messages about physical activity and nutrition need to change dramatically to accelerate movement toward healthy equity. (Wartella)
- Obesity prevention messages can counter at least some of the unhealthy messaging to which people are exposed, but they need to be sustained given the ubiquity of food and beverage advertising and the time required to change behaviors. (Signorelli)
- The message environment and its targeting practices need to be examined to determine the best ways of countering the advertising of unhealthy foods. (Dorfman)

Americans are surrounded by messages about food and beverages: advertising on television, billboards, and cell phones; product placements in movies and video games; product packaging; advergames on popular websites; brand ambassadors offering free products to college students; and character tie-ins on product packages. Furthermore, many of these messages are directed with special intensity at vulnerable populations that are especially susceptible to being overweight (IOM, 2012a, 2013c).

Three speakers at the workshop considered ways of reorienting the message environment to ease the marketing pressure on vulnerable populations in accordance with goal 3 of *Accelerating Progress in Obesity Prevention* (IOM, 2012a) (see Box 6-1). Standing committee member Ellen Wartella, Al-Thani professor of communication at Northwestern University, reviewed the strategies and actions to this end

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BOX 6-1
Goal 3 from *Accelerating Progress in Obesity Prevention*

Goal: Transform messages about physical activity and nutrition.

Recommendation: Industry, educators, and governments should act quickly, aggressively, and in a sustained manner on many levels to transform the environment that surrounds Americans with messages about physical activity, food, and nutrition.

suggested in *Accelerating Progress in Obesity Prevention* while emphasizing the many challenges posed by health disparities. Anthony Signorelli, vice president and campaign director for the Advertising Council (commonly known as the Ad Council) described the Council's efforts to prevent obesity and the potential of future marketing campaigns. Lori Dorfman, director of the Berkeley Media Studies Group, a project of the Public Health Institute, talked about the four Ps of marketing—product, price, place, and promotion—and how to reduce disparities in each.

STRATEGIES FOR CHANGING THE MESSAGE ENVIRONMENT

Summary of Remarks by Ellen Wartella

As described in the recent Institute of Medicine (IOM) publication *Challenges and Opportunities for Change in Food Marketing to Children and Youth: Workshop Summary*, food advertising on television is associated with increased weight in children aged 2 to 18 (IOM, 2013c). The most frequently marketed foods and beverages are high in fats, sugars, and salt. At the same time, many health-related social marketing programs are underfunded, inadequately designed and tested, or not sustained long enough to have an effect (IOM, 2012a, 2013b). Consumers are confused by many of the front-of-package nutrition rating systems currently in use, which have been multiplying and are not necessarily consistent with each other (IOM, 2012b). Nor can consumers easily evaluate the healthfulness of many restaurant menus, Wartella stated.

Accelerating Progress in Obesity Prevention (IOM, 2012a) presents four strategies for changing the message environment. The first is to

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develop and support a sustained, targeted physical activity and nutrition social marketing program. According to the report, Congress, the administration, other federal policy makers, and foundations should dedicate substantial funding and support to the development and implementation of a robust and sustained social marketing program on physical activity and nutrition. In addition, the report states that the messages conveyed in this program should be specific, culturally appropriate, and aimed at particular audiences. The program also should provide clear goals for changing behaviors and the environment.

The second strategy is to implement common standards for marketing foods and beverages to children and adolescents. The food, beverage, restaurant, and media industries should take broad, shared, and urgent voluntary actions to make substantial improvements in their marketing aimed directly at children and adolescents, the report says. In particular, all the foods and beverages that are marketed to children should support a diet that accords with the Dietary Guidelines for Americans. Children and adolescents should be encouraged to avoid calories from foods they generally overconsume, such as products high in sugar, fat, and salt, and consume more whole grains, fruits, and vegetables. The standards should be widely publicized and apply to digital marketing as well as the more traditional media. Most important, said Wartella, if such marketing standards have not been adopted within 2 years by a substantial majority of food, beverage, restaurant, and media companies that market food and beverages to children and adolescents, policy makers at the local, state, and federal levels should consider setting mandatory nutritional standards for marketing to this age group.

The third strategy is to ensure consistent nutrition labeling for the fronts of packages, retail store shelves, and menus and menu boards that encourages healthier food choices. In particular, the U.S. Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA) should implement a standard system of nutrition labeling for the fronts of packages and retail store shelves that is harmonious with the Nutrition Facts panel.

The fourth strategy is to adopt consistent nutrition education policies for federal programs with nutrition education components. In particular, said Wartella, USDA should update policies for the educational component of the Supplemental Nutrition Assistance Program (SNAP-Ed) to encourage the provision of advice about types of foods to reduce in the diet.

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Meeting these challenges while reducing disparities will be difficult, said Wartella. As observed in Chapter 2, opportunities for safe and affordable recreation are less available in racial and ethnic minority and low-income communities than elsewhere. The lowest-cost foods and beverages often are the least healthy and the highest in calories, which means that people with low incomes may need to rely on these foods to a greater extent than people with higher incomes Wartella stated. Message environments in many minority and low-income communities are dominated by advertisements and other promotions of unhealthy foods and beverages to a significantly greater extent than in white and higher-income communities (IOM, 2013c). Black and Latino and low-income children rely heavily on television and electronic media as sources of entertainment and are thereby exposed disproportionately to advertisements for unhealthy foods and beverages (Nielsen Company, 2012; Powell et al., 2010). Television shows watched predominantly by black audiences have more fast food advertisements than shows watched primarily by white audiences, Wartella stated, and these advertisements are generally for unhealthy foods (Harris et al., 2010; Powell et al., 2010). Finally, Wartella explained that the mix of foods available in low-income communities presents a plethora of high-calorie options in quantities, at prices, and in culturally tailored avenues that are attractive to residents of these communities.

The marketing and message environment needs to change dramatically to accelerate movement toward health equity, Wartella concluded.

> *"Advertising works, and the kinds of messages that children receive are influential." —Ellen Wartella*

CASE STUDY: THE ADVERTISING COUNCIL

Summary of Remarks by Anthony Signorelli

The Ad Council, a nonprofit organization founded during World War II, has developed communication programs around a wide range of significant public issues, including forest fires, pollution, drunk driving, seatbelts, AIDS, domestic violence, autism, texting and driving, and bullying. Currently, its campaign issues in the area of health include

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childhood asthma, children's oral health, and childhood obesity. In each area, the Ad Council selects the target audience it wants to reach and constructs an integrated campaign that can involve public service announcements, public relations, websites, social media, corporate and media partnerships, cell phone communications and apps, gaming, and events. Signorelli explained that the organization works on issues on which it thinks it can make a difference and seeks to measure the resulting exposure, recognition, engagement, and impact.

The Ad Council disseminates its messages, developed in partnership with advertising agencies that work pro bono, through major media outlets (broadcast, print, outdoor, the Internet) that donate time and space to run the ads. Each year it receives an estimated $1.5 billion in donated media support, which makes it among one of the top advertisers in the United States, according to Signorelli.

Building on programs it had created for the U.S. Department of Health and Human Services (HHS) and USDA, the Ad Council developed a new childhood obesity prevention communication program. Its advertising partners were Burrell Communications, an agency that focuses on the African American community; Casanova Pendrill, which works primarily in the Hispanic community; and the large marketing and public relations firm Ogilvy and Mather. The objective of the campaign was to encourage parents and caregivers to promote healthy eating and physical activity habits among their children aged 0 to 7. (A separate program, known as the Greatest Action Movie Ever, which Signorelli did not describe in detail, targeted children aged 7 to 17.) Specific goals for the campaign were to teach parents and caregivers about the correct amount of food to feed their children, about how to replace empty calories with nutrient-rich foods, and about how to promote and provide opportunities for children to engage in 60 minutes of physical activity daily.

Signorelli noted that the program had a special focus on minority and lower-income audiences. Messages were tested with target audiences to ensure that they were meaningful, motivating, and actionable. Signorelli stated that research already had shown that, although they are aware of the problem of childhood obesity, many mothers do not identify the problem in their own children. Signorelli explained that many mothers admit they do not always do a good job of feeding their children healthy food or of providing them with physical activity opportunities.

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Messages and Countermessages

A prominent misconception in society, said Signorelli, is that eating healthy foods and exercising more require major, unsustainable lifestyle changes—changes that are too time-consuming, too expensive, and not kid-friendly. To counter this idea, the Ad Council developed the message that "moms everywhere are discovering creative and easy ways to keep their families healthy each and every day." The message encouraged mothers to "get ideas, get involved, and get going" at the campaign website, which provides resources such as recipes and places to play, connections with other organizations, suggestions for family activities, and other information.

Among African Americans in particular, Signorelli pointed out, many mothers have more immediate and pressing concerns involving economic disparity and safety. They know that extra weight can cause problems, but when they look at their children, they see happy individuals. They do not want to spend the limited time they have with their children arguing over eating healthfully or being physically active, Signorelli said. Many in the African American community also embrace role models with full figures, he added, which can reduce concern over obesity. The message developed for this target audience was that "every day is an opportunity to make family time healthy time and guarantee your kids a better future." Print material encouraged "let's move Mondays," "walk it off Wednesdays," and "small plate Saturdays."

For Hispanics, food often is an emotional and cultural tool with which mothers demonstrate their love, Signorelli stated. They may believe their children are a little chubby, but see them as happy. According to Signorelli, most know little about body mass index (BMI), although they are open to the idea that it is a scientific measure of whether their child is healthy. The campaign took advantage of this openness by encouraging mothers to "help guarantee a better future for your children by making sure they're as healthy as they can be," with the tagline "know your child's BMI," and asking them to visit the website.

According to Signorelli, the obesity prevention campaign received approximately $45 million in donated media exposure in the first year alone, with the general market accounting for about $20 million, the African American market for about the same amount, and the Spanish-language material for just under $4 million. Signorelli explained the campaign more than doubled visits to its website, and consumer tracking surveys demonstrated changes in awareness, attitudes, and behaviors.

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Intriguingly, he pointed out, awareness of the campaign was higher among African Americans than in the general market, perhaps reflecting the greater effectiveness of messages targeting a specific audience.

Sustaining the Effort

The campaign, which launched in February 2010, ran for 2 years, after which it no longer had funding for the necessary consumer research and production costs. The Ad Council is currently working with HHS on a different program with similar obesity prevention messaging, although that program also has faced funding challenges. The Ad Council will continue to work on obesity as long as organizations are supporting the effort, Signorelli observed, but sustained funding is important for this work, especially given the amount of unhealthy advertising to which people are exposed. Also, cultural change takes time—decades in some cases—which requires that pressure to change be maintained.

In response to a question about when the Council's public service advertisements tend to run, Signorelli pointed out that 70 percent appear in desirable daytime slots, with only 30 percent in the overnight period. Furthermore, Signorelli said, they run during popular shows such as *American Idol* and *The Oprah Show*, because the media community knows that the advertisements need to reach a target audience to be effective. He also pointed to the tension between media messages about physical activity and nutrition and the lack of activity involved in using those media, although media messages do encourage children and families to get away from a screen and be active.

> *"What we want to do is make mom the hero. She is already the hero in the home to begin with, but make her a hero in the nutrition and physical activity space." —Anthony Signorelli*

UNDERSTANDING THE FOUR PS

Summary of Remarks by Lori Dorfman

Most food and beverage marketing is taking the country in the opposite direction from that advocated in *Accelerating Progress in Obesity Prevention*. Marketing, which goes beyond advertising, is

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generally understood as depending on four Ps—product, price, place, and promotion. To reach particular groups of children, marketers create products designed specifically for them; at prices they can afford; in nearby places; and promoted in terms, images, and language they can understand. Dorfman stated that almost all of this marketing is for foods and beverages children and youth should avoid.

Television, although still influential, is just part of an always-on and personalized marketing environment, Dorfman emphasized. Even when children are watching television, they often have another screen in front of them. Messages are integrated into all aspects of their lives, including their online lives. Their friends become what advertisers like to call brand ambassadors, delivering what is known as content marketing, in which the line between advertising and content is blurred or nonexistent (Elliot, 2013).

This marketing environment impedes health equity because research has shown that youth of color are more interested in, positive toward, and influenced by targeted marketing than are their white peers, Dorfman said. As a result, children of color get a double dose of advertising—that which is directed specifically at them, plus that directed at the general market. In addition, products are being developed and marketed specifically for children and for children of color (Kunkel et al., 2013). Compared with their white counterparts, African American and Latino children and youth see more advertisements for sugary and energy drinks, and more than 84 percent of all foods and beverages advertised to children on Spanish-language television shows are unhealthy (Harris et al., 2010; Kunkel et al., 2013).

Products like Lunchables, Dorfman said, are specially designed for children, and their prices are carefully targeted so that lower-income consumers can afford them. What public health workers call low-income communities are known to the food industry as value-oriented customers, Dorfman explained.

Dorfman also detailed how marketers saturate certain places with ads. Communities of color are filled with billboards, many in residential areas (Yancy et al., 2009). Sponsorships also allow marketers to expand beyond physical places to more dispersed communities, such as groups of people with shared interests; in this way, a concert, sporting event, or entertainment venue becomes a marketing place. This sort of marketing gets around some of the self-regulatory pledges companies have made, Dorfman said. If a branded Coca-Cola cup is on the counter during

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American Idol, that is not considered a child-focused advertisement because the overall percentage of children watching the program is less than 35 percent. Nonetheless, thousands more children will see that advertisement than see advertisements during cartoons or other programs viewed predominantly by children. Dorfman stated that many parents would rather leave their children at home than take them down the cereal aisle at a supermarket filled with characters on packaging at the children's eye-level. Moreover, marketers are using digital technologies to establish a highly engaging, constant marketing presence wherever youth are online, including on their mobile devices. Online marketing also can be finely targeted to reach specific racial/ethnic groups, Dorfman emphasized. For example, she pointed out that the chief executive officer of McDonald's has said that the company does not try to target people of color, but its website 365black.com indicates otherwise (Simon, 2013).

Dorfman stressed that the message environment and targeted marketing need to be examined with respect to all four Ps—product, price, place, and promotion—which requires a systems approach to research. (Such an approach is discussed in Chapter 8 of this report.) Rapidly changing message environments and marketing practices need to be monitored. Parents also need to understand basic information about targeting, susceptibility, and adolescent brain development, Dorfman emphasized. The media have evolved in such a way that a stimulating environment is always available, attracting the attention of youth. Parents tend to think of advertising as annoying but not harmful, said Dorfman, and this must change for action to be taken. Parents need to know how to work together to insist that companies and government protect their children from harmful food and beverage marketing, Dorfman said some groups, such as MomsRising[1] and the Food Marketing Workgroup,[2] are meeting with increased success in doing so.

Those who create and promulgate marketing also need to take responsibility, Dorfman noted. The industry has to strengthen its nutrition standards for self-regulation and cover all forms of marketing, such as packaging, sponsorships, marketing in and around schools, and toys or other premiums paired with meals. Media companies need to adopt nutrition standards based on established nutrition guidelines for the advertisements they carry. Dorfman stated that government policies need

[1]See http://www.momsrising.org for details.
[2]See http://www.foodmarketing.org for details.

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to be directed at marketing exposures, not just expenditures, and that policies should address all four Ps, including price and place. Increasing distrust of government is a disquieting trend in America, Dorfman said, but government exists in part to help create opportunities for good health for everyone. As parents and policy makers learn more about the consequences of food marketing for low-income communities and communities of color, they can support policies to establish health equity, Dorfman concluded.

> *"If we want ... kids to grow up in a healthier message environment, then we have to call on the industry to change the way it is marketing. Right now, they are taking up most of the space with the kinds of messages that are making it harder for people to be healthy."*
> *—Lori Dorfman*

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7

Upgrading Food and Physical Activity Options Before, During, and After School in Low-Income Neighborhoods

Important Points Made by Speakers

- Disparities in society contribute to disparities in obesity, and these disparities are mirrored in schools. (Thompson)
- Food service departments can be central to efforts in schools to improve the nutrition of students. (Taylor)
- Out-of-school time programs before, during, and after the school day can complement and augment the efforts of schools to encourage physical activity and healthy eating. (Hinkle)

The fifth goal of *Accelerating Progress in Obesity Prevention* (IOM, 2012a) focuses on schools as a critical mediator of obesity prevention (see Box 7-1). As the report notes, schools are uniquely positioned to support physical activity and healthy eating. Children and adolescents can consume the majority of their calories in schools and out-of-school time programs, which means these institutions have a unique opportunity to improve the quality of their diets. Given that young people can spend up to half their waking hours in schools and out-of-school time programs, these institutions also can reverse the trends that have made a physically active lifestyle more difficult (IOM, 2012a).

Three speakers considered schools and out-of-school programs in the context of health disparities. Joe Thompson, surgeon general for the State of Arkansas; director, Arkansas Center for Health Improvement; and professor in the Colleges of Public Health and Medicine at the University of Arkansas for Medical Sciences, reviewed the strategies in this area

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BOX 7-1
Goal 5 from *Accelerating Progress in Obesity Prevention*

Goal: Make schools a national focal point for obesity prevention.

Recommendation: Federal, state, and local government and education authorities, with support from parents, teachers, and the business community and the private sector, should make schools a focal point for obesity prevention.

laid out in *Accelerating Progress in Obesity Prevention* and the influence of broader social inequities on schools. Rodney Taylor, director of nutrition services for the Riverside Unified School District in Riverside, California, described the food service program he has created in the Riverside schools, which could be a model for comparable programs across the country. Finally, Arnell Hinkle, founding executive director of Communities, Adolescents, Nutrition, and Fitness (CANFIT), a nonprofit organization supporting efforts of after-school providers and community-based organizations to enhance nutrition, physical activity opportunities, and policy developments, discussed out-of-school time programs and their potential to complement and augment the health-promoting activities of schools.

STRATEGIES FOR MAKING SCHOOLS A FOCAL POINT FOR OBESITY PREVENTION

Summary of Remarks by Joe Thompson

Outside the home, schools and out-of-school time programs are at the center of the lives of children and adolescents; schools also can be central institutions in a community. In thinking about interventions to change environments and behaviors, Thompson said, schools are therefore an obvious focus.

The first strategy directed at schools in *Accelerating Progress in Obesity Prevention* is to require quality physical education and opportunities for physical activity in schools. This strategy has been undercut in recent years by the emphasis of the federal No Child Left Behind legislation on mathematics and reading, said Thompson, which has led some schools to devote less time to physical activities, arts, and

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music. In one survey, up to 40 percent of school administrators reported that they had eliminated or reduced recess and physical activity in elementary schools to focus on measured outcomes for education (RWJF, 2010). According to Thompson, a new bill proposed in the Senate[1] could bring more balance into the school day, but its prospects are uncertain.

Other government programs have changed the environments around schools to make them more conducive to physical activity. For example, the Safe Routes to School program has encouraged students to walk or ride bicycles to schools or bus stops, although the program has had to deal with concerns about competing transportation programs and gentrification (Safe Routes to School National Partnership, 2010, 2013). In Arkansas, more than a hundred new joint-use agreements[2] that together cost relatively little brought city and school officials together to consider how they could use limited assets in the most productive ways. As Thompson observed, a school gym can be a community gym after school and a gym for faith-based organizations on the weekend.

The second strategy for schools in *Accelerating Progress in Obesity Prevention* is to ensure strong nutrition standards for all foods and beverages sold or provided through schools, while the third is to ensure food literacy, including skill development, in schools. In these areas, too, said Thompson, progress has been made, although it often has been slow—the result of two steps forward and one step back. He noted that some of the best evidence for what does and does not work in preventing obesity comes from schools because of their relatively controlled environment (Beam et al., 2012a,b). However, schools are not the only solution, because children spend considerable time in other settings as well. Longitudinal data drawn from both within and outside schools could demonstrate factors that make a difference in obesity prevention, Thompson suggested, which in turn could support policy approaches to making changes in various environments.

Thompson reiterated the central theme of the workshop—that broad disparities in society contribute to disparities in obesity and health in general. Racism still exists in society, he pointed out, as do environmental

[1]S. 1094: Strengthening America's Schools Act of 2013, 113th Cong., introduced June 4, 2013.

[2]See http://www.arkansascsh.org/apply-it-in-your-school/584c0b1fb838fc7e23da42ce07caf9b3.php and http://www.healthy.arkansas.gov/programsServices/healthStatistics/Brfss/Documents/publications/Other/JumpStartJointUse.pdf.

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inequalities, urban blight, and cultural differences. The median household income in Mississippi is approximately $39,000 per year, while that in Maryland is approximately $72,000 per year (Census Bureau, 2013b). Under such circumstances, similar outcomes cannot be expected, Thompson suggested.

These inequities are mirrored in schools. Many schools are funded partly by property taxes, which means that schools have different financial starting points (Education Commission of the States, 2013a,b). Schools also have different community and parental resources, which likewise has an impact on students' educational outcomes. At the same time, a divergent set of issues that must be addressed to safeguard children's health converge in schools, and a focus on inequities among children can mobilize resources in ways that a similar approach focused on adults could not. Identifying ways to make people feel they have a personal stake in the issue is important, Thompson said, so they will use the available evidence to take action.

> *"Over the last decade, [we have] started to have conversations that never happened before, and conversations that have started to build an evidence base that are going to guide us to where we need to go in the future." —Joseph W. Thompson*

CASE STUDY: FOOD SERVICES IN THE RIVERSIDE UNIFIED SCHOOL DISTRICT

Summary of Remarks by Rodney Taylor

The Riverside Unified School District is the fifteenth largest school district in California, with 47 schools serving 43,000 students, 68 percent of whom are eligible for free or reduced-price meals (California Department of Education, 2013a,b). When Taylor arrived at the school district as director of nutrition services in 2002, the Nutrition Service Department owed $3.1 million to the general fund. The department had built a central kitchen for $28 million and could not make the payments on the facility. When Taylor was asked how he was going to deal with the department's problems, he said he was going to put salad bars in the schools. The response was laughter, he said.

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Today, Taylor noted, the Nutrition Service Department has erased the $3.1 million debt and has a $5.8 million reserve. It has a nationally known nutrition program, for which Taylor credits his 328 employees. His contribution, he said, was to remind his employees that the students they were serving were their children—whether literally or figuratively—and that those children were at risk.

The salad bar is called the Farmers' Market Salad Bar because it buys produce from the local farmers' market, with much of the food being less than 2 days from the fields. The salad bar provides a stand-alone meal along with access to fruits and vegetables that children may not be getting at home. It appeals to all five senses because, as Taylor was taught in the restaurant industry, people buy food with their eyes. The salad bar also is kid-friendly, with foods like oranges being peeled and ready to eat. Despite fears that the salad bar would spread disease, Taylor said, it has safely served 6 million meals to children in his schools.

Salad bars are now in all 31 elementary schools in the Riverside district. Children encounter the salad bar first and then are offered the hot lunch entrée or an alternate protein with grain. All reimbursable meals must include a fruit or a vegetable. When children have loaded their plates with fruits and vegetables of different colors, they get a sticker that says they have a rainbow in their tummy. The salad bar is introducing children to foods that they then request from their parents, and was so successful in the elementary schools that when students entered middle school, they demanded to have salad bars there as well.

Taylor said he is in the nutrition business. For example, he has converted an employee cafeteria into a restaurant that now feeds members of the public, and the district does catering and prepares food for 15 entities outside the school district, such as Meals on Wheels. A chef works on creating healthier meals that are still popular, so that when chicken nuggets came off the school menu, they were replaced by foods that still appeal to students. Students participate in taste tests of foods prepared by the chef and respond to surveys. When children asked why French fries and chips were no longer available at the school, they were told that the school had a responsibility to ensure that they lived long and healthy lives and that part of the school's role was to teach them life-long healthy eating habits. The program also has a marketing supervisor and engages in a wide range of marketing activities directed at parents and students. For example, it has staff who promote the food service program during the first week of the school year.

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Changing a food service program requires changing a culture, said Taylor. Most food service employees are accustomed to heating and serving food, whereas Taylor was asking his employees to prepare fresh foods. But changing the food makes it possible to change marketing and outreach, even if the obstacles to change are sometimes substantial.

High schools pose special challenges, which Taylor likened to the challenges of appealing to college students. He sought to change the ambiance of food service in the Riverside district. For example, he removed the railings that kept students in line and treated them like grownups. The food was fresh, not previously frozen and heated, and it was culturally appropriate for the students in the school.

When Taylor came to the school district, only 40 percent of the students attending schools were eating there. Now 70 percent are, and the Food Service Fund, a separate fund within the school district, is self-sufficient. Taylor said the budget has risen from $8 million in 2002 to $19 million today.

The school system is continuing to experiment with and expand its nutrition programs. For example, the chef for the district developed five different rubs that could be applied to the government commodity chicken—rotisserie, barbeque, lemon herb, grilled ranch, and sesame. The result was an economical, popular meal that provided students with less processed and more fresh food. The district also has an adult eating program whereby teachers who text, e-mail, or call before 9 AM can have a lunch delivered to any 1 of 51 locations by 11:30 AM.

The district also has a summer feeding program since, as Taylor put it, hunger does not take a vacation. The program offers barbecues at 24 parks, and Taylor expected to serve half a million meals through the program in 2013, up from 32,000 meals in 2008.

Finally, the district is offering three breakfast programs:

1. Classroom Breakfast—Students eat breakfast in their classroom at the beginning of the academic day.
2. Grab-and-Go Breakfast—All the components of school breakfast are conveniently packaged so students can grab a breakfast and go.
3. Second Chance Breakfast—Breakfasts are available between first and second periods in the cafeteria and from grab-and-go carts placed in high-traffic areas.

These programs are producing healthier and better-behaved students without taking time away from instruction, Taylor said. Sometimes he

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gets calls from principals saying he needs to feed students well during a week of testing, but students need to be fed well year-round, he replies. What he has done in Riverside could be done in any district, Taylor added. The percentage of students eating food prepared at school is a good indicator of success, he pointed out, although more affluent schools tend to have lower numbers. Taylor emphasized that increasing this percentage requires engaging with the customer.

> *"When we get serious about education, we will get serious about ensuring that every child is fed in the morning, prepared, and ready to go to school. You can't focus and you can't learn when you are hungry." —Rodney Taylor*

OUT-OF-SCHOOL TIME

Summary of Remarks by Arnell Hinkle

In addition to their time in school, youth spend considerable time in out-of-school programs—after-school programs, summer camps, church activities, community-based programs, and so on. Many low-income youth also are in alternative schools, the juvenile justice system, or the foster care system, and in Hinkle's experience, these programs often are overlooked in obesity prevention. Nationwide, more than 8 million school-age children are in out-of-school time programs (Afterschool Alliance, 2009).

Young people get information in different ways than did previous generations, Hinkle said. More than 90 percent of them use the Internet, with 57 percent posting their own content (Jones and Fox, 2009; Lenhart and Madden, 2005). Youth also remain surprisingly segregated. California, for example, is one of the nation's three most segregated states for Latino students and one of the five most segregated for African American students (Torlakson, 2011).

CANFIT was started in 1993 to work with communities and policy makers to develop culturally resonant policies and practices that improve food and physical activity environments for adolescents in low-income communities and communities of color. Its organizing framework is that culture determines values, values shape behavior, and behavior is the explicit language of culture. The organization provides training, technical

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assistance, and consultation to youth-serving organizations; develops effective and culturally appropriate educational materials on nutrition and physical activity; and advocates for nutrition and physical activity policies at the local, state, and national levels.

Among CANFIT's current priorities are implementing snack, meal, and physical activity policies; using peer-led social media to encourage healthy behaviors; and examining the quality of meals being implemented through child nutrition programs. The organization promotes the concept of being healthy at every size rather than emphasizing obesity prevention or weight reduction. It also is working on improving food systems and the built environment in communities of color and on developing youth engagement strategies.

As an example of such strategies, Hinkle mentioned the E-Advocates project, in which youth create YouTube videos, tweets, and Facebook entries about health activities in their communities.[3] Another example is the Oakland Unified School District's After School Learning Community,[4] in which staff from after-school sites are encouraged to think of themselves as community advocates for physical activity. CANFIT also serves on state and local policy groups and provides technical assistance for several foundation initiatives.

CANFIT's website (www.canfit.org) offers a variety of resources, including "99 Ways to Make Your After-School Program Healthier," physical activity toolkits, a cultural needs assessment guide, a healthy snack and meal guide, and policy briefs.

Progress and Challenges

Hinkle cited several indicators of progress in reducing disparities in food and physical activity environments outside of school:

- The importance of out-of-school time healthy eating is widely recognized.
- Several state and national organizations are creating nutrition and physical activity standards specifically for out-of-school time programs.
- More after-school meals are being served as part of the Healthy, Hunger-Free Kids Act.

[3]More information is available at http://canfit.org/our_work/programs/eadvocates.
[4]See http://canfit.org/our_work/programs/PALearningCommunity.

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- Communities are making greater use of school grounds and fields.
- More research on out-of-school time is being conducted.
- Technology is being adapted to encourage youth in out-of-school time settings to eat well, be active, and inventory the resources available in their communities.
- Out-of-school nutrition education programs, such as gardens and activity options, have increased.
- Racial equity is receiving more attention in out-of-school time.

However, much room for improvement remains, Hinkle said. A typical after-school meal, even after passage of the Healthy, Hunger-Free Kids Act, might consist of a bag of Doritos, a bagel sandwich, a pineapple spear, a juice box, and a milk box. The implementation of policies is inconsistent, often depending on the resources of the school, program, or community, Hinkle stated. In higher-income districts, stellar programs are being established, while in low-income districts, much less is being done.

Nutrition education often is not correlated with access or with health, Hinkle stated. For example, well-intended people may teach students with no access to a blender how to make smoothies. Physical activity often consists only of games of tag. Staff training is a major issue because of low wages, frequent turnover, or difficult working conditions. The effects of budget sequestration had just begun at the time of the workshop but threatened to intensify, and could lead to programs or even schools being closed, according to Hinkle. Even in Berkeley, the center of the farm-to-school movement, school gardens and school nutrition are being cut.

The monitoring and evaluation of government and industry standards have been lacking, Hinkle pointed out. Because food and beverage companies are being shut out of schools, they are marketing heavily in after-school settings. To illustrate, Hinkle cited instances of soft drink companies donating millions of dollars to charitable organizations that serve children (Boys & Girls Clubs of America, 2013; PepsiCo, Inc., 2012; Public Health Law & Policy, 2011). Also, Hinkle said, many after-school program providers tend to overemphasize weight status and reduction, stoking a fear of fat rather than a passion for health in youth. CANFIT emphasizes healthy behaviors at every weight so that even if weight does not change, behaviors do.

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Policy Recommendations

Hinkle had several policy recommendations:

- Include after-school programs in school wellness and farm-to-school policies.
- Revise the Child and Adult Care Food Program standards to be consistent with school lunch and competitive food standards.
- Establish programs that channel college students (especially female athletes) into community after-school programs as coaches and volunteers.
- Educate out-of-school programs about joint-use agreements.
- Promote physical activity programming that provides lifelong skills (such as swimming, walking, yoga, Tai Chi, martial arts, dance, and community walks and races).
- Support regular staff training and professional development in nutrition and physical activity.
- Investigate the interrelationship between mental health issues and obesity.
- Extend food and activity guidelines to alternative schools and juvenile justice agencies.
- Emphasize youth engagement and health at every size.

An important aspect of making changes, Hinkle said during the discussion period, is building leadership among young people. Students can take the reins in such areas as the development of community gardens or physical activities other than organized sports. If students who were involved in these programs were tracked over time, their leadership potential could be recognized and nurtured. Taylor agreed, adding that a sense of purpose, not money, is the motivating force behind the actions of most young people.

> *"It is harder to find someone who knows how to work with young people than it is to teach them about healthy eating and fitness. We always strive to find the groups of people who have that connection with young people and then work with them to give them the skills about eating and fitness." —Arnell Hinkle*

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8

Bringing the Pieces Together

Important Points Made by Speakers

- Because of the complexity of the systems involved in people's eating and physical activity, no single initiative is likely to be sufficient to prevent obesity. (Hammond)
- The multiple actions that need to be taken must be coordinated to work together as effectively as possible. (Hammond)
- Systems approaches can focus and prioritize actions, coordinate policy and programs, guide implementation, and engage nontraditional partners. (Hammond)

A prominent theme of *Accelerating Progress in Obesity Prevention* is a systems perspective. The report observes that "an impressive body of evidence confirms that the drivers of the [obesity] epidemic involve interactions among several complex, ever-changing systems, including the food system, transportation systems, community infrastructure, school systems, health care systems, and the intricate behavioral and physiological systems that influence individual physical activity and eating behaviors and body weight" (IOM, 2012a, p. 21). Making changes in such a complex system requires a systems approach that focuses "on the whole picture and not just a single element, awareness of the wider context of any action, and an appreciation for interactions among different components of the problem" (IOM, 2012a, p. 21). The final speaker at the workshop—Ross Hammond, senior fellow in economic studies at the Brookings Institution—considered the implications of such a systems approach for creating equal opportunities for a healthy weight. A systems approach is more difficult to pursue than a more piecemeal effort because of the difficulties entailed in understanding and changing systems, but it also offers the prospect of much greater effectiveness.

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SIMPLICITY AND COMPLEXITY

Obesity is both simple and complex, Hammond began. It results from a simple imbalance between the energy embodied in the substances a person consumes and the energy that person expends. Yet energy balance, in turn, depends on the interactions of a long list of factors at many different levels, including individual decisions, marketing, the physical environment, and public policies. Obesity also potentially involves many different actors, including families, schools, retailers, the media, city planners, employers, and insurance companies, each of which has different incentives and goals. Finally, each individual and group affected by obesity is different and experiences highly varied circumstances.

One implication of this complexity is that the standard scientific tool set may have limited ability to capture the dynamics of the overall system in which the obesity epidemic is embedded. No one can hold all aspects of such a complex system in mind at the same time. As a result, mental models and intuitions about how an action might affect the system can be misleading, and no single solution will fit all circumstances and contexts.

To address equity issues, policies need to be broad enough to influence the overall system while being tailored to meet the needs of specific subpopulations, Hammond said. Yet, the complexity of the system is likely to result in unanticipated consequences of policy decisions.

KINDS OF SYSTEMS MODELS

Systems approaches have been generating great interest in public health over the past decade, Hammond stated. At the most fundamental level, a systems approach means taking the interactions among factors, agents, and levels into account to design a coordinated package of policies or interventions. Thus, discussions of the public health problems posed by obesity also involve agriculture, economics, marketing, and so on.

In addition, a systems approach means thinking carefully about the importance of circumstances in which events occur to understand the

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implications of actions for different groups. For example, which actions would have the greatest impact most quickly to address a problem?

At a more formal level, systems approaches can include a qualitative approach called systems mapping. This process involves identifying the different parts of a system and their interactions, often through partnerships with stakeholders, and developing a visualization that includes feedback loops, synergies, leverage points, and gaps that can be filled to accelerate progress. Appendix B of *Accelerating Progress in Obesity Prevention* contains such a model and demonstrates how it can be used (IOM, 2012a).

The most formal level of a systems model is quantitative. At this level, the model quantifies the knowledge from theory, from data analysis, and from experience to create a computational simulation with which policy choices can be explored to provide on-the-ground guidance. Such models also create new possibilities for the evaluation of policies because they can help reveal the mechanisms behind outcomes. These models should not be seen as crystal balls, Hammond warned; they do not eliminate the need to make difficult decisions or judgment calls. But they can serve as guides to policy and help policy makers deal with uncertainty by identifying policies that are robust despite uncertainty. Training and standards must be in place for the results of models to be used appropriately, Hammond added.

LINKS AMONG STRATEGIES

The systems map developed in *Accelerating Progress in Obesity Prevention* (IOM, 2012a) focuses on one type of link—that between strategies and goals. For example, a single strategy can serve multiple goals both directly and indirectly, creating synergies that may not be apparent without a systems model.

Earlier presentations in the workshop pointed to other types of links and examples of synergies. Hammond cited as one important kind of synergy what he called prerequisites, in which one action depends for at least some of its success on a previous action. An example is seen in menu and food labeling, one of the strategies from *Accelerating Progress in Obesity Prevention* discussed in Chapter 6, which can be much more effective if accompanied by nutrition education. The more consumers know about the elements of a food label and understand what that information represents, the more they will be able to use the information

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to make healthy choices. Nutrition education and food labeling are likely to occur in different sectors, but they work together, and Hammond suggested that they may be prerequisites for each other if each is to realize its full potential impact.

Another example involves investment in parks and recreational infrastructure, discussed in Chapter 2. Previous or simultaneous investments in crime reduction, transportation, adult supervision, and infrastructure can make parks much more useful than they would otherwise be. Similarly, the availability of healthy food options near a park can help ensure that people who have just been active do not then fill up on sugar-sweetened beverages.

A final example involves the beneficial effects of media literacy on reducing the impacts of advertising, discussed in Chapter 6. Even if advertising were reformed, Hammond stated, some people would still be exposed to unhealthy marketing. Greater media literacy could help those still exposed filter messages and avoid unhealthy behaviors.

Another type of link is complementarity, Hammond explained. For example, investments in parks and recreational infrastructure can complement advertising reform by reducing the amount of time people spend in front of screens. Similarly, an emphasis on breastfeeding can be complemented by access to healthy food for both mothers and their children.

In addition, multiple actions can be focused on the same goal but from different parts of a system. For example, breastfeeding can be promoted through primary care consultation, changes in social norms, the elimination of deterrents, reductions in poverty and teenage pregnancy, supportive worksite policies, and breastfeeding-friendly hospitals. Employing all of these approaches will have the greatest impact and could yield more than the sum of the parts.

COORDINATED ACTION

Systems thinking provides an opportunity to coordinate policy and action for obesity prevention, stressed Hammond. Policies and actions in schools, for example, can complement those in doctors' offices and worksites. Coordinated approaches provide synergies while increasing the motivation of those who need to act.

Computational models can help focus and prioritize actions, suggested Hammond. They also can help with timing in that some steps

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can be taken initially and others later to leverage the complexity of the system.

Systems thinking can provide insights into implementation. Good ideas must be converted into on-the-ground action. Implementation involves many actions, many actors, and many things that can go wrong, and systems thinking can reveal the dynamics involved, said Hammond.

Finally, systems thinking can help engage nontraditional partners, such as civil rights lawyers, economists, and systems analysts, who do not fit into a traditional public health mold.

The application of systems tools, whether qualitative or quantitative, requires data, funding, partnerships, and complementary approaches. It also requires coordinating policies and actions across many different sectors, which often is not easy, Hammond explained. However, obesity prevention has some features that make systems approaches promising. The centrality of the community in both originating and implementing ideas provides a logical nexus for coordination. Coalition building and stakeholder engagement can enable coordination. And interdisciplinary approaches, while always difficult, are becoming more common and more powerful, said Hammond.

In considering the five environments diagrammed in Figure 1-1 in Chapter 1 of this report, *Accelerating Progress in Obesity Prevention* states that action in any one of the five areas would accelerate progress in preventing obesity, but the effect of action taken in all areas together would be reinforced, amplified, and maximized (IOM, 2012a). A systems approach could make such optimization possible, Hammond concluded.

> *"A theme we heard a lot today is the importance of having sufficient activation energy, outrage, political will—it has been called a lot of things, but I think we are talking about the same thing. There has to be enough engagement by enough people that there is momentum for change." —Ross Hammond*

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A

Workshop Agenda

CREATING EQUAL OPPORTUNITIES FOR A HEALTHY WEIGHT: A WORKSHOP

A public session hosted by the Institute of Medicine Standing Committee on Childhood Obesity Prevention
June 6-7, 2013
National Academy of Sciences (NAS) Building, NAS Auditorium
2101 Constitution Avenue, NW, Washington DC

Follow the conversation via Twitter: #IOMobesity@theIOM

Description: The workshop will examine obesity prevention through the lens of working to achieve health equity, focusing on health equity issues and solutions related to the key obesity prevention recommendations and strategies outlined in the 2012 Institute of Medicine (IOM) report *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation*. The report's recommendations encompass physical activity; healthy food access; marketing and messaging about food and physical activity; the roles of employers, health care professionals, and schools; and the importance of approaching implementation of these recommend-dations from a systems perspective. Through presentations and focused discussions, workshop speakers and attendees will explore the health equity issues inherent in each of these critical aspects of obesity prevention, while discussing potential future research, policy, and action in each area that could lead to equity in opportunities to achieve a healthy weight.

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Welcome and Opening Remarks

8:30 am	Opening Remarks: Health Equity and Obesity Prevention *Shiriki Kumanyika, University of Pennsylvania

Panel 1: Building Physical and Social Environments for Physical Activity in High-Risk Communities: What Will It Take?

9:00	Moderator: *James Sallis, University of California, San Diego Case Study Robert García, The City Project, Los Angeles Policy Issues Myron Floyd, North Carolina State University
9:45	Moderated Intra-Panel Discussion
10:05	BREAK

Panel 2: Making Healthy Foods and Beverages Available: Combating Disparities in the Food and Beverage Environments of Ethnic Minority and Low-Income Communities

10:25	Moderator: *Mary Story, University of Minnesota, Minneapolis Case Study Don Schwarz, City of Philadelphia Policy Issues Tracy Fox, Food Nutrition & Policy Consultants, LLC
11:10	Moderated Intra-Panel Discussion

Town Hall: Panel 1 and 2

11:30	Moderator: *William Purcell, III, Jones Hawkins & Farmer, PLC Q&A/Discussion with Audience
12:00 pm	Public Statements

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12:15	Panel Discussion and Wrap-Up
12:30	LUNCH (on your own)

Panel 3: Equity-Focused Approaches to Obesity Prevention in Workplaces: What? Where? How?

1:30	Moderator: *Patricia Crawford, University of California, Berkeley
	Case Study Ray Baxter, Kaiser Permanente
	Case Study Sharen Anthony, WIC Fit, California
2:15	Moderated Intra-Panel Discussion
2:35	Instant Recess Activity Break

Panel 4: Pathways to Obesity Prevention for Ethnic Minority and Low-Income Children and Adults in Primary Care

2:55	Moderator: *William Dietz, Retired, Centers for Disease Control and Prevention
	Case Study Deborah Burnet, University of Chicago
	Case Study Ryan Buchholz, Upper Cardozo Health Center and Unity Health Care, Washington, DC
3:40	Moderated Intra-Panel Discussion

Town Hall: Panel 3 and 4

4:00	Moderator: *Eduardo Sanchez, American Heart Association
	Q&A/Discussion with Audience
4:30	Public Statements
4:45	Panel Discussion and Wrap-Up
5:00	ADJOURN Day One

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Welcome Day 2

8:30 am	Welcome *Shiriki Kumanyika, University of Pennsylvania

Panel 5: Advertising, Promotion, and Education: Bringing Health Equity to the Message Environment

8:40	Moderator: *Ellen Wartella, Northwestern University
	Case Study Anthony Signorelli, Ad Council
	Policy Issues Lori Dorfman, Berkeley Media Studies Group
9:25	Moderated Intra-Panel Discussion
9:45	BREAK

Panel 6: Upgrading Food and Physical Activity Options Before, During, and After School in Low-Income Neighborhoods

10:00	Moderator: *Joseph Thompson, University of Arkansas
	Case Study Rodney Taylor, Riverside Unified School District
	Policy Issues Arnell Hinkle, CANFIT, California
10:45	Moderated Intra-Panel Discussion

Town Hall: Panel 5 and 6

11:05	Moderator: *Celeste Clark, Retired, Kellogg Company
	Q&A/Discussion with Audience
11:35	Public Statements
11:50	Panel Discussion and Wrap-Up

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Closing Remarks

12:05 pm	Workshop Summary and Highlights *Shiriki Kumanyika, University of Pennsylvania
12:20	Closing Speaker: Bringing the Pieces Together for Accelerated Progress Toward Health Equity Ross Hammond, Brookings Institution, Washington DC
12:45	ADJOURN Day Two

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B

Speaker Biographical Sketches

Sharen Anthony has worked with the Public Health Foundation Enterprises Special Supplemental Nutrition Program for Women, Infants, and Children (PHFE WIC) Program for more than 15 years. Recent projects include the WIC Empowers Teens program for 15,000 pregnant and parenting teen participants and the Beyond 9-state funded Preconception Health care training. In 2006, Ms. Anthony spearheaded and later became coordinator of the Health is Wealth PHFE WIC Employee Wellness Program for more than 650 employees. Health is Wealth served as a model for the California WIC Association's (CWA's) WIC Worksite Wellness Program. Ms. Anthony currently serves in an advisory capacity for the CWA WIC Worksite Wellness Program and was instrumental in establishing PHFE WIC as one of the pioneering WIC Worksite Wellness Certified Programs. Ms. Anthony has utilized her expertise as a clinician to provide internal training and technical assistance on special topics such as child abuse and domestic violence. In the past few years, she has participated in many local initiatives, such as the Department of Public Health's Early Childhood Obesity Prevention Project and Los Angeles County's Healthy Weight for Women of Reproductive Age Learning Collaborative. Currently, she serves as co-chair of the Los Angeles Adolescent Health Collaborative Steering Committee. She also has participated in numerous work groups and roundtables focused on teens, including the Inter-Agency Council on Child Abuse and Neglect's (ICAN's) Task Force on Pregnant and Parenting Adolescents, the Teen Family Life Network, the Community Network Council, and the Orange County Teen Collaborative Network. In addition to holding her full-time position at PHFE WIC, Ms. Anthony is pursuing her license as a marriage and family therapist.

Raymond J. Baxter, Ph.D., is Kaiser Permanente's senior vice president for community benefit, research and health policy. As a member of Kaiser's National Leadership Team, Dr. Baxter leads the organization's

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activities to fulfill its social mission, including care and coverage for low-income people, community health initiatives, environmental stewardship, and support for community-based organizations, as well as research and the Kaiser Permanente Institute for Health Policy. He also serves as president of KP International. In 2004 he served as interim president for Kaiser Permanente's Southern California Region, serving more than 3 million members. Dr. Baxter has more than 30 years of experience managing public health, hospital, long-term care, and mental health programs, including heading the San Francisco Department of Public Health and the New York City Health and Hospitals Corporation. He also led The Lewin Group, a health policy firm. Dr. Baxter holds a doctorate from the Woodrow Wilson School of Public and International Affairs, Princeton University. He serves on the board of directors of Grantmakers in Health; the advisory board of the University of California, Berkeley, School of Public Health; the Technical Board of the Milbank Memorial Fund; and the National Public Health and Hospital Institute. He is also a member of the Canadian Academy of Health Sciences Expert Panel. In 2001 the University of California, Berkeley, School of Public Health honored him as a public health hero for his service during the AIDS epidemic in San Francisco. In September 2006 he received the Centers for Disease Control and Prevention's (CDC's) Foundation Hero Award for addressing the health consequences of Hurricane Katrina by supporting public health teams in the Gulf Coast and for his long-standing commitment to improving the health of communities.

Ryan M. Buchholz, M.D., practices pediatrics and internal medicine at Unity Health Care, a community health center that serves an ethnically diverse immigrant community in Washington, DC, and is the medical home for more than 22,000 patients. He serves on the steering committee of the American Academy of Pediatrics' Institute for Healthy Childhood Weight. As a practitioner, assistant medical director, and quality improvement team leader at the health center, Dr. Buchholz is actively engaged—through Unity's Ways to Enhance Children's Activity and Nutrition (We Can!) team—with clinicians, community partners, and patients in innovative efforts to diagnose, prevent, and treat overweight and obesity in a predominantly low-income community. Dr. Buchholz completed his residency training and a chief residency at the University of Cincinnati and Cincinnati Children's Hospital Medical Center, where

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he obtained additional qualifications in the management and continuous improvement of outcomes and services in health care.

Deborah Burnet, M.D., M.A., is a professor of medicine and pediatrics and serves as section chief for general internal medicine and vice chair for faculty development in the Department of Medicine at the University of Chicago. Dr. Burnet comes from a background in the humanities and social services. She earned a bachelor's degree in English with a theology minor from Georgetown University. She went on to work at Youth Enrichment Services, providing foster care for troubled teenagers on Chicago's South Side. Dr. Burnet attended the Pritzker School of Medicine at the University of Chicago, earning her M.D. degree and a master's degree in public policy from the Harris School of Graduate Studies in Public Policy at the University of Chicago. She served a 4-year combined residency in internal medicine and pediatrics at the University of Chicago. Dr. Burnet cares for a panel of primary care patients (adults and children) at the University of Chicago Primary Care Group. She also performs translational research on obesity and risk of type 2 diabetes in youth. She conducted focus groups with African American children and families on Chicago's South Side to assess community habits and preferences regarding nutrition and exercise behaviors, and used these insights to implement a community-based, family-oriented diabetes risk reduction program for African American youth. This program, the Reach-Out Chicago Children's Diabetes Prevention Project, was subsequently adapted for use in the after-school setting as the Power-Up After-School Collaborative Child and Family Obesity Prevention Program. Dr. Burnet serves as director of the Community-Based Participatory Research Unit for the University of Chicago Institute for Translational Medicine and as a member of various National Institutes of Health (NIH) review panels concerned with community-based research.

Patricia B. Crawford, Dr.P.H., R.D., is director of the Dr. Robert C. and Veronica Atkins Center for Weight and Health, Cooperative Extension nutrition specialist in the Department of Nutritional Science and Toxicology, and adjunct professor in the School of Public Health at the University of California, Berkeley. Dr. Crawford directed the National Heart, Lung, and Blood Institute's Growth and Health Study, a longitudinal study of the development of cardiovascular risk factors in African American and white girls, as well as the Five-State FitWIC Initiative to Prevent Childhood Obesity. She has developed numerous

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obesity prevention materials, including the Fit Families novella series for Latino families and Let's Get Moving, an activity program for those who work with young children. Dr. Crawford has served on a number of advisory committees, including the California Legislative Task Force on Diabetes and Obesity. Her current studies include evaluations of large community-based obesity initiatives and school-based policy interventions. Dr. Crawford is currently a member of the Standing Committee on Childhood Obesity Prevention and has served as a member or chair of three Institute of Medicine (IOM) obesity-related planning committees. She also served as a member of the Committee on Accelerating Progress in Obesity Prevention. She earned a Ph.D. in public health and completed her training as a registered dietitian at the University of California, Berkeley.

Lori Dorfman, Dr.P.H., directs Berkeley Media Studies Group (BMSG), a project of the Public Health Institute, overseeing BMSG's research, media advocacy training, and strategic consultation for public health advocates and professional education for journalists. BMSG works with advocates to build their capacity to use media advocacy in confrontational policy environments so they can focus attention on transforming systems and structures to foster health. Dr. Dorfman's research examines how the media portray health issues, including alcohol, tobacco, nutrition, food, children's health, health inequities, and violence, among others. Dr. Dorfman is part of an interdisciplinary team that helped news organizations include a public health perspective in their crime and violence coverage. With colleagues at the Center for Digital Democracy, she has been conducting research on how food and beverage companies are using digital marketing to target children and youth (see http://digitalads.org). With colleagues at the Center for Science in the Public Interest, she co-convenes the Food Marketing Workgroup, a national network of organizations and experts concerned about the proliferation of marketing of unhealthful foods and beverages targeting children and youth. Dr. Dorfman also serves on Voices for America's Children's Board of Trustees.

Myron F. Floyd, M.S., Ph.D., is professor and director of graduate programs in the Department of Parks, Recreation and Tourism Management at North Carolina State University. Along with colleagues and graduate students, he conducts research examining effects of the built and natural environments on physical activity and health. Dr. Floyd specializes in understanding racial/ethnic disparities in access to parks

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and open space. His research appears in a wide variety of scientific journals, including *Leisure Sciences*, *Journal of Physical Activity and Health*, and *American Journal of Preventive Medicine*. Dr. Floyd holds degrees from Clemson University (B.S., M.S.) and Texas A&M University (Ph.D.). He is a fellow of the Academy of Leisure Sciences and is the 2008 recipient of the Theodore and Franklin Roosevelt Award for Excellence in Recreation and Park Research, the highest honor for research given by the National Recreation and Park Association.

Tracy Fox, R.D., is president of Food, Nutrition & Policy Consultants, LLC, with more than 25 years of experience working in the federal government and the private sector. Her areas of expertise include child nutrition and school health; nutrition education; food labeling and marketing; federal, state, and local nutrition policy; advocacy; and government relations. Clients range from federal, state, and local agencies, including the U.S. Department of Agriculture and the Centers for Disease Control and Prevention, to the Robert Wood Johnson Foundation, Feeding America, and Partnership for a Healthier America. Ms. Fox has served (and serves) on numerous boards and committees, including the IOM committees on Nutrition Standards for Foods in School, Local Government Actions to Prevent Childhood Obesity, and Front of Package Nutrition Rating Systems and Symbols. Her previous positions include serving as policy analyst with the U.S. Department of Agriculture's Food and Nutrition Service and the Academy of Nutrition and Dietetics (Washington, DC, office) and as past president of the Society for Nutrition Education and Behavior. Ms. Fox is also a retired commander, U.S. Navy.

Robert García, J.D., is founding director and counsel of The City Project, a nonprofit legal and policy advocacy organization based in Los Angeles, California. He has extensive experience in public policy and legal advocacy, mediation, and litigation involving complex social justice, civil rights, human health, environmental, education, and criminal justice matters. Mr. García graduated from Stanford University and Stanford Law School, where he served on the board of editors of the Stanford Law Review. As reported in the *New York Times*, "The City Project [is] working to broaden access to parks and open space for inner city children, and ... to fight childhood obesity by guaranteeing that ... students get enough physical education." Mr. García's work in the past decade has focused on equal access to park, education, and health resources. He is a recognized leader in the urban park movement,

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bringing the simple joys of playing in parks and school fields to children in communities that are park poor, income poor, and disproportionately of color. Mr. García received the American Public Health Association's President's Citation Award in 2010 for helping to make public health and the built environment a social justice imperative. He served as chairman of the Los Angeles Unified School District's Citizens' School Bond Oversight Committee for 5 years, helping to raise $27 billion to build new and modernize existing public schools as centers of their communities. He previously served as an assistant U.S. attorney in the Southern District of New York and as western regional counsel with the National Association for the Advancement of Colored People Legal Defense & Educational Fund, Inc. Mr. García taught at the Stanford and University of California, Los Angeles, law schools and practiced law at a large New York law firm.

Ross A. Hammond, Ph.D., is senior fellow in economic studies at the Brookings Institution, where he is also director of the Center on Social Dynamics & Policy. His primary area of expertise is modeling complex social dynamics in economic, political, and public health systems. He has more than 15 years of experience with mathematical and computational complex systems science techniques. His current research topics include obesity, behavioral epidemiology, tobacco control, corruption, ethnocentrism, segregation, trust, and decision making. Dr. Hammond received his B.A. from Williams College and his Ph.D. from the University of Michigan. He has authored numerous scientific articles, and his work has been featured in *New Scientist*, *Salon*, *The Atlantic Monthly*, and major news media. Dr. Hammond currently serves on the editorial board of the journal *Childhood Obesity*, on the steering committee for the NIH Comparative Modeling Network of the National Collaborative on Childhood Obesity Research, and as a member of the NIH MIDAS (Models of Infectious Disease Agent Study) and NICH (Network on Inequality, Complexity, and Health) networks. He has been a consultant to The World Bank, the Asian Development Bank, the IOM, and NIH. He has taught systems science and computational modeling at the University of Michigan, Harvard School of Public Health, Washington University, and the NIH/CDC Institute on Systems Science and Health. Dr. Hammond previously held positions as the Okun-Model fellow in economics, a National Science Foundation fellow in the Center for the Study of Complex Systems at the University of Michigan, a

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visiting scholar at The Santa Fe Institute, and a consultant at PricewaterhouseCoopers, LLP.

Arnell J. Hinkle, R.D., M.P.H., is founding executive director of Community Adolescent Nutrition and Fitness (CANFIT), a national nonprofit organization that provides training, technical assistance, and strategic consultation on nutrition, physical activity, and policy development for after-school providers and community-based organizations. Ms. Hinkle has experience working directly with African American, Latino, Southeast Asian, Filipino, and American Indian low-income communities throughout the nation. She has served as a technical assistance provider for a variety of foundation initiatives, including The California Endowment's Healthy Eating Active Communities (HEAC) Program and the W.K. Kellogg Food and Fitness Initiative. Her efforts to produce culturally appropriate nutrition and physical activity education training and policy resources emphasizing youth leadership are nationally recognized, and she has provided training, technical assistance, and consultation to community and after-school organizations and numerous local, state, and national agencies, including 100 Black Men of America, Inc.; the South Dakota Lakota Sioux Diabetes Education Project; Region 10, U.S. Bureau of Maternal and Child Health; and CDC. She is a recipient of the 2003 Robert Wood Johnson Community Health Leader Award. As a Eureka communities leadership fellow in 2004, Ms. Hinkle worked with the Washington, DC-based policy group Forum for Youth Investment to examine how the youth development field can incorporate nutrition and physical activity standards into after-school programs. In 2005, she received the Rockefeller Foundation's Bellagio, Italy Study Center Fellowship in recognition of her experiences designing and implementing nutrition and physical activity programs for Asian American, Pacific Islander, Latino, and African American adolescents. Ms. Hinkle was a 2008-2010 food and society policy fellow and has served on the California Department of Education's After School Healthy Snacks, Physical Activity, and Physical Activity Expert Panel Steering Committees. In 2010, Ms. Hinkle was selected as an Ian Axford public policy fellow, examining healthy eating and physical activity programs in Māori and Pasifika communities for the New Zealand government. Prior to her work at CANFIT, she was a professional chef, clinical dietitian, and organic farmer.

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Donald Schwarz, M.D., M.P.H., is deputy mayor for health and opportunity and health commissioner for the City of Philadelphia. In his role as deputy mayor, he oversees the Departments of Human Services and Behavioral Health and Intellectual Disability Services and the Office of Supportive Housing. As health commissioner, Dr. Schwarz has worked to initiate antiobesity and smoking cessation programs, condom promotion efforts, electronic health records for the city's eight federally qualified (look-alike) health centers, and risk-based restaurant inspections. Rates of HIV continue to decline in Philadelphia, and the city has reached its lowest rates of infant mortality (and smallest disparities in infant deaths) and highest rates of immunization (with the highest rate of human papillomavirus [HPV] immunization among America's large cities). Before entering government service, Dr. Schwarz served as vice chairman of the Department of Pediatrics at the University of Pennsylvania School of Medicine and as deputy physician-in-chief and Craig-Dalsimer division chief for adolescent medicine at The Children's Hospital of Philadelphia. He was Mary D. Ames professor of pediatrics in the University of Pennsylvania Schools of Medicine and Nursing at The Children's Hospital of Philadelphia and a senior fellow at the Leonard Davis Institute for Health Economics at the University of Pennsylvania. Dr. Schwarz was an active researcher in the area of adolescent risk behaviors for more than 22 years. He received both public and private funding for work examining the issues of injury and its prevention in urban minority communities, public policy approaches to adolescent violence, and physician- and nurse practice-based interventions to improve outcomes for high-risk infants.

Anthony Signorelli, M.B.A., is vice president campaign director at the Advertising Council. Mr. Signorelli leads the strategic development, creation, and evaluation of numerous multimedia advertising and cause marketing campaigns, including initiatives for the U.S. Department of Health and Human Services, the U.S. Department of Agriculture, the Office of the First Lady, Feeding America, the U.S. Olympic Committee, and the American Heart Association. His work includes Association for Manufacturing Excellence and ADDY award–winning communications programs, as well as collaboration with global brands such as Disney, PepsiCo, NFL, and Kraft. Mr. Signorelli also leads strategic partnership development across the Ad Council's many issues, working with media companies, entertainment partners, and corporations to extend the organization's important campaign messages. Mr. Signorelli received his

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M.B.A. from Fordham's Graduate School of Business in 2005 and currently serves as an adjunct professor in the Communications & Media Studies Department at Fordham University. He has been a featured speaker on panels and at major conferences on behalf of the Centers for Disease Control and Prevention, Novartis Pharmaceuticals, Grocery Manufacturers of America, Partnership for a Healthier America, and the Children's Advertising Review Unit.

Rodney K. Taylor is director of nutrition services for the Riverside Unified School District in Riverside, California. A noted pioneer and expert in farm-to-school salad bars, he is known in particular for establishing the Farmers' Market Salad Bar program in 1997 while working as director of food and nutrition services in the Santa Monica-Malibu Unified School District in Santa Monica, California. As a result of his work for this and other programs in the Santa Monica-Malibu Unified School District and Riverside Unified School District, Mr. Taylor is frequently invited to speak at workshops, participate in panels, conduct training, and speak directly to government agencies and officials. Mr. Taylor also serves on the California State Board of Food and Agriculture, the University of California President's Advisory Commission for Agriculture and Natural Resources, and the Network for a Healthy California's executive committee.

Joseph W. Thompson, M.D., M.P.H., is surgeon general of the State of Arkansas, director of the Arkansas Center for Health Improvement, and associate professor in the Department of Pediatrics at the University of Arkansas for Medical Sciences. Dr. Thompson has led efforts involving planning and implementing health care financing reform; worked with tobacco- and obesity-related health promotion and disease prevention programs in Arkansas, including documenting the state's success in halting the progress of the childhood obesity epidemic; and helped implement ARHealthNet, Arkansas' health insurance waiver for low-income workers. He has served as Robert Wood Johnson Foundation clinical scholar at the University of North Carolina at Chapel Hill, Luther Terry fellow in preventive medicine in the Office of the Assistant Secretary for Health in the Department of Health and Human Services, and assistant vice president and director of research at the National Committee for Quality Assurance in Washington, DC. In 1997, he served as a child and adolescent health scholar for the U.S. Agency for Healthcare Research and Quality (then the U.S. Agency for Health Care Policy and Research) before returning to Arkansas. Dr. Thompson is a

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current member of the Standing Committee on Childhood Obesity Prevention. He earned his M.D. from the University of Arkansas for Medical Sciences and an M.P.H. from the University of North Carolina at Chapel Hill.

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C

Workshop Participants

Juan Carlos Aguirre, HTV Studio
Signe Anderson, Food Research & Action Center
Shavon Arline-Bradley, National Association for the Advancement of Colored People
Niiobli Armah IV, National Association for the Advancement of Colored People
Lula Beatty, American Psychological Association
Sara Bleich, Bloomberg School of Public Health
Andrew Blundell, American Frozen Foods Institute
Ann Bouchoux, SR Strategy
Gene Brenowitz, District of Columbia Department of Health
Leighton Brown, Edelman
Whitney Brown, Academy of Nutrition and Dietetics
Jenny Cao, American Heart Association
Steffi Castillo, National Council of La Raza
Deirdra Chester, U.S. Department of Agriculture, National Institute of Food and Agriculture
Ashley Cook, Food Directions
Brian Culp, Indiana University-Purdue University, Indianapolis
Laura Cunliffe, Unknown
Nicole Dickelson, U.S. Department of Health and Human Services, Office of Minority Health
Wesley Dixon, District of Columbia Department of Health
Joni Eisenberg, District of Columbia Department of Health, Community Health Administration
Andrea Farmer, U.S. Department of Agriculture
Eileen Ferruggiaro, U.S. Department of Agriculture, Food and Nutrition Service
Sheila Fleischhacker, National Institutes of Health
Teresa Green, National Consumers League
Heather Hartline-Grafton, Food Research & Action Center

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Nicole Hines, International Food Information Council
Tim Hughes, Trust for America's Health
Nicole Keith, Indiana University-Purdue University, Indianapolis
Leonard Kish, VivaPhi, Inc.
Albert Lang, Trust for America's Health
Janette Lopez, HTV Studio
Steven Lopez, National Council of La Raza
Jane Clary Loveless, U.S. Department of Agriculture, National Institute of Food and Agriculture
Ashley Lowe, Center for Science in the Public Interest
Lisel Loy, Bipartisan Policy Center
Sara Mac, George Washington University
Melissa Maitin-Shepard, American Cancer Society Cancer Action Network
Giridhar Mallya, Philadelphia Department of Public Health
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Rachel Manes, DASH-NY (Designing a Strong and Healthy New York) at New York Academy of Medicine
Robin McKinnon, National Cancer Institute
William Jahmal Miller, Kaiser Permanente
Sarah Mott, Bipartisan Policy Center
Jason Pelzel, International Food Information Council
Errol Philip, Memorial Sloan-Kettering Cancer Center
Allison Plopper, Indiana University-Purdue University, Indianapolis
Zoila Sanchez, National Council of La Raza
Joy Spencer, Center for Digital Democracy
Zoe Stahl, National Consumers League
Ellen Swary, Food Directions
Makani Thembay, Praxis Project
Linda Thompson, Howard University
Alexander Vigo, Towson University
Senbagam Virudachalam, Children's Hospital of Philadelphia
Isabel Walls, U.S. Department of Agriculture, Office of the Chief Scientist
Shirley Wasswa-Kintu, U.S. Department of Agriculture
Ann Webster, Snack Food Association
Harry Weiss, Unknown
Alicia White, U.S. Department of Agriculture
Laura Zatz, Bipartisan Policy Center

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D

Statements at the Workshop

During the town hall sessions of the workshop, 10 speakers made statements—summarized below by the rapporteurs—related to issues discussed by the workshop presenters.

UNDERSTANDING AND ACTING ON INEQUITY

Shavon Arline-Bradley, senior director of health programs for the naional office of the National Association for the Advancement of Colored People (NAACP), discussed the need to address historical and present issues of racism, classism, and political and social power dynamics when working for health equity. In the past, the focus on reducing disparity gaps has overlooked opportunities for movement on policy change, she said. Individuals are directly affected by the communities and institutions around them, so changing the physical environment in a community is an important step toward reducing obesity. However, that change does not affect the political and social landscape for many communities of color. Such a change requires incorporating an understanding of inequity into all actions.

The NAACP has three recommendations. First, communities of color should be informed about any policy that will affect their community and included in the process of shaping and passing legislation. Second, economic resources from a diverse portfolio—including those of the business community, government, and public health—should be included in efforts to increase physical activity in communities of color. Third, funds for improving access to parks and other opportunities for physical activity should be distributed in such a way that communities of color have an active voice in pursuing long-term policy change.

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COMMUNITY ASSESSMENTS AND TAILORED SOLUTIONS

Effective public health interventions are based on thorough assessments, said Jason Pelzel, program coordinator at the International Food Information Council. Community assessments and solutions go hand in hand, and different communities have different needs, which requires tailored interventions. However, several barriers impede successful assessments, including a lack of expertise, a lack of collaboration, and a lack of technology or data. Pelzel encouraged participants to ask themselves whether untapped resources and new approaches to obesity prevention exist, such as partnerships with agents in the field who have access to valuable data. Establishing a framework for community assessment at the local level would make it possible to leverage the existing capacity for assessment while identifying the gaps and needs of individual communities.

THE POTENTIAL OF FARMERS' MARKETS

As a member of the board of directors for the Ward 8 Farmers' Market, located in a low-income community in Washington, DC, Linda Thompson, assistant professor of nutritional sciences at Howard University, has directly experienced the benefit of such markets to residents. Through a grant program allowing residents to purchase additional produce on the spot or at a later time, farmers' markets in Washington communities at high risk for obesity double the value of vouchers from the Supplemental Nutrition Assistance Program (SNAP); Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); and Senior Farmers' Market Nutrition Program. The markets also provide nutrition education and food demonstrations so residents can learn how to prepare their produce, as well as activities to keep children entertained while their parents shop.

The biggest challenge, Thompson said, is getting people to come to the market, even with a shuttle service stopping at six different sites. To address this challenge, the board is starting a texting program and working to use social media; peer education also has proven successful.

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THE IMPORTANCE OF SUPPLEMENTAL PROGRAMS

Heather Hartline-Grafton, senior nutrition policy and research analyst at the Food Research and Action Center (FRAC), asserted that disparities in healthy eating and obesity will not be solved without higher employment rates, more full-time jobs, better wages and benefits, stronger income support and nutrition programs, and quality health care. Almost all the topics discussed at the workshop involve growing inequality, declining assets and income among those of the lowest socioeconomic status, and growing economic insecurity, and many discussions of obesity prevention ignore those issues.

A major facet of obesity prevention is food access, Hartline-Grafton said. Many initiatives are in place to improve food retail availability and convenience in underserved communities, but research shows that these efforts alone will not combat inequities in food access. Federal nutritional programs are critical for success; however, benefit levels for SNAP participants are currently too low, she said. Federal nutrition programs also need to partner with retailers to ensure that they accept program benefits and support rigorous community outreach. Finally, foods offered at those retail outlets need to be affordable, of high quality, and culturally appropriate.

HEALTH CARE PROVIDERS AND THEIR PATIENTS

Sara Bleich, associate professor at Johns Hopkins Bloomberg School of Public Health, said a team-based approach is critical to success in health care, particularly because doctors often are pressed for time when seeing patients. Health care providers also need to understand a patient's community. For example, global positioning system (GPS) mapping can inform counseling and increase the effectiveness of a clinical encounter.

Patients and their health care providers can have differing perspectives, such that patients feel they are working hard, but the physician sees no progress. This disconnect needs to be understood and accommodated, said Bleich. Leveraging technology can help address this problem, as can openness to different ways of communicating with patients.

Finally, any good idea must be sustainable to work. Two-way communication with a target population is essential to know what the

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population needs. Also, groups with differing objectives need opportunities to come together and discuss how to move forward.

TRAINING FOR HEALTH CARE PROVIDERS

Although not the only factor, appropriate training for health care providers in nutrition and physical activity is necessary for better prevention-oriented care, said Lisel Loy, director of the Nutrition and Physical Activity Initiative at the Bipartisan Policy Center (BPC). BPC's report *Lots to Lose: How America's Health and Obesity Crisis Threatens Our Economic Future* notes how health professionals often lack the necessary training and incentives to deliver important nutrition and physical activity counseling to patients (BPC, 2012). The center has partnered with the Alliance for a Healthier Generation and the American College of Sports Medicine to host a fall forum on innovations in medical education, where discussion will focus on several promising training models and on how providers can receive the training they need.

Multiple actors across sectors—whether insurers offering reimbursement or community-based organizations providing complementary programs—have roles to play in improving prevention-oriented care, said Loy. Appealing to the interests of these different stakeholders is a major undertaking, but offers an important opportunity to improve the prevention and treatment of obesity.

MEETING THE NEED FOR PHYSICAL ACTIVITY

Nicole Keith, associate professor in the Department of Kinesiology at Indiana University, addressed the disconnect between understanding the need for physical activity and understanding how the built environment can influence physical activity. She recommended initiating a dialogue about exercise deserts to educate voters who routinely vote against bonds to improve parks and schools. She also discussed expanding partnerships between parks and school systems to include health care providers and academic departments, which could contribute programming and expertise in kinesiology.

Indiana University has been involved in such a partnership for the past 11 years. Health care providers refer patients to fitness centers in public schools, and university students provide personal training, group

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classes, and social reporting. The collaboration also serves to give students from underserved groups exposure to physical activity disciplines as a focus for their undergraduate work.

TARGETING YOUTH OF COLOR

Joy Spencer discussed research from the Center for Digital Democracy, where she is project director for the Digital Food Marketing and Youth Initiative. Food marketers, she explained, are at the forefront of the digital age and often target youth of color. Their ability to access youth constantly with mobile phones and Internet ads and their ability to receive input to create better marketing are of great concern, particularly because they are focusing on groups that are disproportionately affected by obesity and obesity-related diseases. Spencer stressed the need for greater emphasis on holding companies accountable for their exploitation of the digital environment.

TOOLS FOR CHANGE

HTV Studio, a Los Angeles–based production company, created "The Kids Takeover,"[1] a communication program with the goal of shifting the perception of food consumption and physical activity in the Latino community, said chief executive officer and executive producer Juan Carlos Aguirre. HTV Studio has been designing and producing health communication programs for the past 10 years. Its efforts are aimed at raising awareness of such health concerns as human papillomavirus, cervical cancer, and colorectal cancer. Aguirre emphasized his concern about the obesity crisis, especially in the Latino community, and his desire to contribute to solving the problem by producing a communication program that would give children, adolescents, and their families the tools they need to adopt new behaviors and move toward healthy living.

[1] See http://www.thekidstakeover.com.

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REACHING LOW-INCOME CHILDREN

Federal nutrition programs are critical to addressing hunger and obesity in the nation, but they are not reaching millions of low-income children, said Signe Anderson, child nutrition policy analyst at FRAC. On an average day in 2011, the summer nutrition programs served lunch to 2.8 million children, whereas 19 million relied on free and subsidized school lunches during the school year (FRAC, 2012).

FRAC recommends increasing access to all federal nutrition programs and to after-school and summer programming, with strong linkages between these programs. Increasing investment in programming offered outside of normal school hours is important for children's health, and linking those programs to funding for nutrition initiatives and standards for physical activity and nutrition will reduce disparities and create a stronger child service infrastructure. In addition, implementing the recent child nutrition reauthorization would yield healthier meals and snacks in schools and in out-of-school settings and strengthen these programs.

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E

Abbreviations and Acronyms

CANFIT	Communities, Adolescents, Nutrition, and Fitness
FRAC	Food Research and Action Center
IOM	Institute of Medicine
NHB	non-Hispanic black
NHW	non-Hispanic white
NIH	National Institutes of Health
PHFE	Public Health Foundation Enterprises
SNAP	Supplemental Nutrition Assistance Program
USDA	U.S. Department of Agriculture
We Can!	Ways to Enhance Children's Activity and Nutrition
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children

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