SUMMARY REPORT



LESSONS LEARNED FROM GLOBAL EFFORTS

CASE STUDY CHILDHOOD OBESITY Robert Wood Johnson Foundation



"Researchers, parents, public health, health care, government, and business leaders across the globe are working to find solutions to our worldwide childhood obesity epidemic. Over the past 10 years, we've made great strides in the United States toward building the evidence for such solutions. But we don't have all the answers by any means. We want to look beyond our borders to harness global learning."

- C. Tracy Orleans, PhD

TABLE OF CONTENTS

INTRODUCTION	
PANEL 1: Global Findings on Promising and Effective Environmental and Policy Strategies to Reduce Childhood Obesity at the Population Level	2
PANEL 2: Global Approaches to Assess and Address Sociodemographic Inequities and Disparities in Population-Level Childhood Obesity Prevalence	6
PANEL 3: Developing Effective and Accountable Public Health and Industry Partnerships — Transnational Insights and Lessons Learned	10
PANEL 4: Building Public Demand for Healthy Eating and Active Living Policies and Environments — What the United States Can Learn from Other Countries	14
CLOSING SESSION: Learning from Other Countries: Key Insights for Building a Culture of Health Around Obesity Prevention	18
APPENDICES	21



C. Tracy Orleans, PhD Senior Program Officer and Senior Scientist, Robert Wood Johnson Foundation



Brian Quinn, PhD Assistant Vice President, Research, Evaluation and Learning, Robert Wood Johnson Foundation

INTRODUCTION

Obesity is a global problem. Around the world, rates of overweight and obesity have increased significantly since the 1980s. Obesity is a major source of disease, disability, and health care costs, and research indicates that childhood is the time to intervene.

Harnessing lessons learned from countries around the world on the drivers of childhood obesity and potential solutions offers insight that can accelerate the knowledge base and spur action.

In 2006, the Robert Wood Johnson Foundation (RWJF) launched and sustained a team of international researchers who worked together over a seven-year period to explore the drivers of the childhood obesity epidemic in four developed countries - the United States, United Kingdom, Australia, and Canada – and to identify the policy and environmental interventions needed to halt and reverse them. Named the Childhood Obesity Modeling Network (COMNet), this team pioneered the use of collaborative statistical and computational modeling approaches to gain insights into the most effective ways to prevent childhood obesity. With additional support from the National Institutes of Health (NIH) Office of Social and Behavioral Science Research (OBSSR) and the NIH Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), COMNet's work was incorporated into a wider systems science research and modeling network known as Envision, a core project of the National Collaborative on Childhood Obesity Research (NCCOR).



In October 2014, RWJF and NCCOR continued to build upon this work of looking beyond our borders for solutions to childhood obesity by convening an interdisciplinary group of 18 leading international and U.S. researchers (including many RWJF grantees and staff members) for a one-day forum to explore cross-cutting goals related to reducing childhood obesity. From establishing effective partnerships to building demand for healthier choices, the forum explored promising and innovative strategies for promoting healthy eating and active living among children, families, and communities around the world to accelerate U.S. and global progress toward interventions with the power to reverse rising childhood obesity levels. The forum summaries, highlighted in this booklet, are a continuation of the work that NCCOR and RWJF had previously begun and will continue to be a driving force behind finding and creating a Culture of Health.

RWJF has announced a bold new mission to build a Culture of Health in which all members of our diverse society are able to lead healthier lives now and for generations to come. The vision behind this mission is described in RWJF's President and CEO. Dr. Risa Lavizzo-Mourey's blog titled, "Top 10 Signs We are Building a Culture of Health."¹ In a recent issue of the American *Journal of Preventive Medicine*,² Dr. Alonzo Plough, Vice President and Chief Science Officer at RWJF, presents the "action model," shown in Figure 1, as a roadmap for the efforts required to achieve this vision - working in partnership with other leading organizations and funders. Reading through this booklet, you will notice that the work of building a Culture of Health cannot be achieved within any one silo; this audacious goal seeks to work with and learn from others.

C. Trocy Orleans 73 Con

C. Tracy Orleans

Brian Quinn

International Innovations in Physical Activity Promotion

James Sallis, Distinguished Professor, Family Medicine and Public Health, University of California, San Diego, and Director, Active Living Research Program, Robert Wood Johnson Foundation

SUMMARY

PANEL ONE

Inactivity is a global pandemic. Around the world, we are seeing countries at all income levels shift toward more sedentary lifestyles and increased rates of obesity. However, many countries are taking bold actions to promote physical activity and reverse these societal norms. During a discussion of physical activity research and innovation around the world. several programs emerged as promising examples for moving toward a Culture of Health. Exploring what makes these programs work may offer insight into more effective ways of increasing physical activity worldwide.

INTERNATIONAL EVIDENCE: THE BUILT ENVIRONMENT MATTERS FOR PHYSICAL ACTIVITY

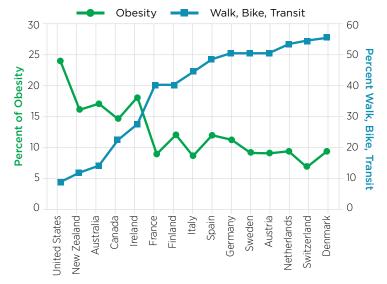
There is strong international evidence that the built environment matters for physical activity, according to the International Physical Activity and Environment Network (IPEN) Adult Study. Recent studies show that several environmental factors, including walkability, park access, and aesthetics, are related to various types of physical activity across diverse countries, as shown in Figures 1 and 2.^{3,4,5} IPEN's findings further highlight the need for collaboration among many sectors — from transportation to parks — to improve the built environment.

GETTING COMMUNITIES ACTIVE: Social Cohesion and Shared Values of Health

The cultural shift toward a shared value of health is at the heart of numerous physical activity programs worldwide. Mass participation initiatives, like Academia da Saúde in Brazil, Siyadlala in South Africa, the multicountry program Cicloviá, and Open Streets inspire communities to be active in public spaces like parks, community centers, streets, and schools. These programs empower community members to take the lead. Siyadlala, for example, recruits and trains local youth to be coaches. Increasing visibility and access to physical activity programs sets the foundation for thinking about physical activity as a social norm. These efforts are further bolstered by strong government support. Brazil has committed more than \$1 billion in funding to scale up *Academia da Saúde* nationwide. *Siyadlala* has grown to more than 1,600 participating schools in South Africa.

One of the few countries in the world with an increasing level of physical activity is Canada. Its program, *ParticipACTION*, integrates a media campaign and social media to change norms and create a culture of physical

Figure 1: Lower Obesity Rates Are Strongly Related to Walking, Cycling, and Transit Use



Source: Pucher J, Dijkstra L. Promoting safe walking and cycling to improve public health: Lessons from the Netherlands and Germany. Am J Public Health. 2003;93(9):1509–16.

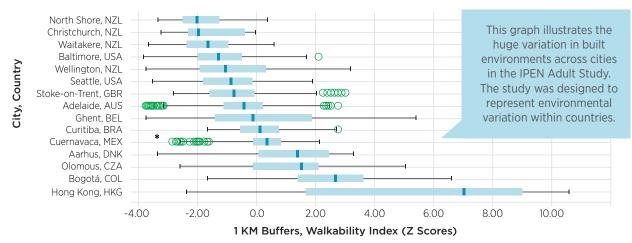


Figure 2: Walkability Scores Across Cities and Countries Within Participants' 1 Kilometer Network Buffer Circles represent outliers and asterisks represent extreme outliers.

Source: Adams M, Frank L, Schipperijn J, et al. International variation in neighborhood walkability, transit, and recreation environments using geographic information systems: The IPEN Adult Study. *Int J Health Geogr.* 2014;13(1):43.

activity. Established in 1971, this program has used strong partnerships, public service announcements, and broadcasts to become one of the most widely recognized and longest-running physical activity programs.

MULTI-SECTOR COLLABORATION AND PARTNERSHIPS

Moving the needle in physical activity requires synergistic efforts from a variety of partners and sectors. A leading example is Thailand's Health Promotion Foundation. The foundation provides catalytic funding for projects that change public values, people's lifestyles, and the social environment. By integrating numerous sectors and all levels of government, Thailand's multi-component effort ranges from a media campaign to a physical activity research center. Taxes on alcohol and tobacco fund the foundation, resulting in approximately \$150 million dedicated to health promotion in 2014 alone.

IMPROVED AND EQUITABLE OPPORTUNITIES FOR HEALTHY CHOICES AND ENVIRONMENTS

International programs are also demonstrating that their benefits extend beyond health to include improved equity and mobility. *Cicloviá*, the open streets program in Bogotá, Colombia, was specifically designed to improve equity. Started more than 30 years ago, *Cicloviá* has opened more than 70 miles of city streets for walking, running, and biking every Sunday and holiday. In addition to meeting physical activity recommendations, users report a higher perception of safety and social capital.

South Africa's *Bike Empowerment Network*, which distributes donated bikes to low-income communities, reveals several benefits to their use. The program alleviates poverty and improves health by linking mobility with exercise. Through collaborative efforts with local and international partners, the program is expanding its network of bicycle paths.

KEY DISCUSSION POINTS

- These promising interventions have the following in common: they are well-funded, wellcommunicated, comprehensive, systematic, and multi-sectoral.
- The social capital generated by programs like *Cicloviá* can be harnessed to push for broader investments in physical activity.
- Many of these interventions are now in the early stages of implementation in the United States and require further evaluation and adaptation.

DISCUSSANTS

Ginny Ehrlich Senior Program Officer, Robert Wood Johnson Foundation

Simón Barquera

Director, Nutrition Policy and Programs Research and President, Nutrition Board of Professors, Center for Nutrition and Health Research, Mexico National Institute of Public Health

Promising Obesity Prevention Strategies to Benefit Young People in Low- and Middle-Income Countries

Barry Popkin, W. R. Kenan Jr. Distinguished Professor of Nutrition, University of North Carolina, Chapel Hill

SUMMARY

PANEL ONE

Broad shifts in physical activity and diet are major drivers of child and adult obesity worldwide. Examining these global trends — their causes and the population-based strategies aimed at reversing them — with special attention to the food system, is the focus of this discussion.

The players we are dealing with on food systems are no longer governments. Today the people we're thinking about are retailers, food manufacturers, global agribusinesses, and food chains.

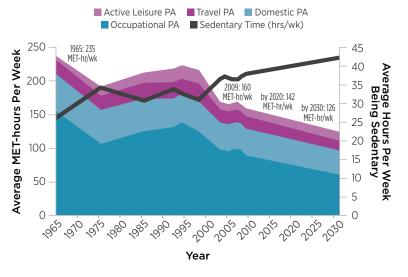
MAJOR DRIVERS OF CHILD AND ADULT OBESITY

According to longitudinal trends from the 1960s to early 2000s, many countries have foregone burning calories through physical activity and, as technological innovation transforms transportation, the workplace, and home life, the trend toward sedentary lifestyles continues. Figure 1 illustrates this trend in U.S. adults. In parallel, food systems have undergone rapid changes in the past 20 years with calorie-dense and nutrient-poor diets becoming increasingly common.

CASE STUDY: MEXICO — THE UNDERPINNINGS OF SUCCESS

Facing significant increases in obesity rates, Mexico developed an integrated, systematic response that serves as a beacon for creating system-wide change. Significant changes to major levers within the food system have resulted in front-of-package labeling, improved school nutrition guidelines, and taxes on sugar-sweetened beverages (SSBs) and nonessential food (also referred to as "junk food"). When taxing SSBs came up for public vote, 70 percent of the public favored a tax revenue tied to obesity and diabetes prevention. Reaching this groundswell of public support began with a coordinated strategy that engaged government agencies as well as industry, consumers, and academia. Medical and public health leaders began to speak with one voice as they developed consensus around the impact of SSBs on diabetes and obesity. A far-reaching public awareness campaign capitalized on these efforts,

Figure 1: U.S. Adults Metabolic Equivalent (MET) Hours/Week of All Physical Activity (PA) and Hours/Week of Time in Sedentary Behavior: Measured for 1965-2009 and Forecasted for 2010-2030



Source: Ng SW, Popkin BM. Time use and physical activity: A shift away from movement across the globe. *Obes Rev.* 2012;13:659-680. doi:10.1111/j.1467-789X.2011.00982.x.

providing a strong rationale for the tax and encouraging permanent public debate on the issue. Staunch political support from the president, champions in the Senate, and an active lobbying strategy targeting members of Congress also contributed. These collective efforts were sufficiently funded and tax revenues were earmarked for potable water in schools, bringing the efforts full circle toward healthier food and beverage consumption.

An evaluation of these efforts is currently underway and will account for changes in price, marketing, and food purchases. Initial results from March 2014 suggest that the tax has led to a 10 percent decline in purchases of SSBs and a significant reduction in intake of nonessential food.

PROMISING POPULATION-BASED STRATEGIES AROUND THE WORLD

Improving food environments requires a mix of strategies, and like Mexico, many countries are taking action to improve food systems and educate the public. These efforts offer a melting pot of ideas and learning opportunities for researchers, policy makers, and practitioners.



Economic tools like pricing, subsidies, and trade controls are widely used. Many Latin American countries are considering beverage and junk food taxes, and more than 10 countries in Asia, Latin America, and the Middle East are implementing bans on these products and their marketing within schools. The Pacific Islands and Singapore are subsidizing select healthy foods in schools and Brazil implemented strong requirements for school foods.

Regulations targeting front-of-package labeling, nutrition and health claims, educational efforts, and food marketing to children have been introduced in Asia and Latin America. Ecuador, for example, has banned the use of animal characters, cartoon personalities, and celebrities to promote junk food. Thailand's village-level effort on reducing waist circumference and Brazil's meal-based dietary guidelines are examples of tailored interventions to improve nutrition.

IMPLICATIONS FOR BUILDING A CULTURE OF HEALTH

The lessons learned from global efforts to change the food environment illuminate the path to a Culture of Health. Mexico's public campaign was successful largely due to its ability to build on the shared values of Mexican society. In addition, efforts aimed at improving food in schools and limiting marketing showcase the importance of working across sectors to improve health.



- There are many examples of improving nutrition, but efforts have been minimally evaluated.
 Systematic evaluations are needed, within and outside the United States, to assess large-scale impact and to understand food industry incentives and responses.
- Strong public survey data are important in securing a place in the political agenda, and adequate funding is necessary to compete with the massive amounts of steep redirects companies can use to build demand for their products.
- Industry is shifting the way they react to public health approaches.
 Previously the focus was on the strength of scientific information; now campaigns are becoming more focused on emotion. This gets to the core of shared values around health.

DISCUSSANTS

Ginny Ehrlich

Senior Program Officer, Robert Wood Johnson Foundation

Simón Barquera

Director, Nutrition Policy and Programs Research and President, Nutrition Board of Professors, Center for Nutrition and Health Research, Mexico National Institute of Public Health

Global Approaches to Assess Sociodemographic Inequities and Disparities for Childhood Obesity

Tim Lobstein, Director, World Obesity Policy and Prevention, World Obesity Federation

SUMMARY

PANEL TWO

As countries around the world reach levels of childhood obesity similar to those of the United States, exploring the interplay between childhood obesity and inequity can offer valuable insight. Innovations in policy and in the design and implementation of interventions

There is a correlation between the degree of income inequality that a country has and its child obesity levels.

have the potential to positively affect those who are at the greatest risk for childhood obesity.

INTERNATIONAL TRENDS IN INEQUITY AND CHILDHOOD OBESITY

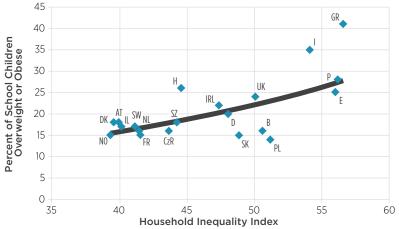
In higher-income countries, children of households with greater deprivation — lower socioeconomic status and education — are more likely to be overweight as shown in Figure 1. In lower-income countries, children in families with higher socioeconomic status and in urban areas are more likely to be overweight. Comparisons between countries, and between U.S. states, show that those with the greatest income inequalities show higher levels of child and adult obesity. Such health disparities can persist throughout the whole life course, including pre-pregnancy and pregnancy.

TACKLING INEQUITIES: POLICY DEVELOPMENTS

Policy developments focused on childhood obesity, many of which address inequity, are occurring internationally. In 2014, the World Health Organization (WHO) established a Commission on Ending Childhood Obesity⁶ with two working groups: one on science and evidence and another on implementation, monitoring, and accountability. The science and evidence workgroup published one report,⁷ which acknowledges the issue of inequalities and the importance of focusing on them throughout the policy development process. An interim report is due out in early 2015, and a final report is slated for 2016.

Similar efforts include the release of "The Plan of Action for the Prevention of Obesity in Children and Adolescents"⁸ by WHO and the Pan American Health Organization and the release of the "Action Plan on Childhood Obesity"⁹ by the European Union (EU). Both plans demonstrate a sensitivity to inequity

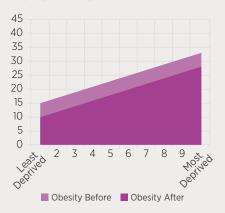
Figure 1: European Member States: Household Inequality Index



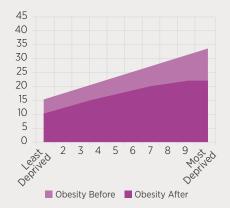
Source: Knai C, Lobstein T, Darmon N, Rutter H, McKee M. Socioeconomic patterning of childhood overweight status in Europe. *Int J Environ Res Public Health.* 2012;9:1472-1489. doi:10.3390/ijerph9041472.

Figure 2: Universal Approach vs. Universal Proportionality

'Perfect' universal approach where all benefit equally, but the gradient remains the same



Universal proportionality benefits all, with additional benefits to those at great risk



Source: Lobstein T. Inequalities and obesity: Evidence and gaps. Paper presented to Equity Action to the European Commission Expert Group on Social Determinants of Health; October 2014; Luxembourg, Belgium. but lack guidance on specific interventions to reduce inequities. In 2014, The WHO's Regional Office for Europe released "Obesity and Inequities,"¹⁰ a policy brief that provides the best analysis to date of practical actions to address inequities in overweight and obesity at the local, regional, and national level.

TACKLING INEQUITIES: RETHINKING INTERVENTION DESIGN AND IMPACT

The "Obesity and Inequities" policy brief raises an important issue: the impact that interventions can have on different groups. Some populationbased approaches can increase the gradient between obesity levels and socioeconomic status. For example, a campaign that promotes going to the gym may more likely benefit higher-income families who have the access and resources to take this action. On the other hand, highly targeted interventions focusing on low-income families can have the reverse effect, causing a reduction in the obesity levels of those in low-income families, but not having a significant effect on the overall social gradient.

Two alternative approaches are the universal approach and the universal proportionality approach, both shown in Figure 2. The universal approach aims to benefit all groups equally, but the gradient between obesity levels and socioeconomic status remains the same. Alternatively, the universal proportionality approach aims to benefit all groups, with additional benefit to those at greatest risk. The latter is the ideal scenario.

IMPLICATIONS FOR BUILDING A CULTURE OF HEALTH

Many aspects of a Culture of Health are pertinent for reducing inequities. Involving all income groups as stakeholders in the intervention design and implementation process plays a critical role in building on the shared values of society. Intervening across the life course and ensuring interventions are investments in the future can lead to more equitable opportunities for healthy choices and environments. This requires a recognition that different socioeconomic groups respond differently to interventions and careful consideration to the design and implementation of interventions in order to increase their impact for disadvantaged groups. Finally, addressing stigma and changing the social narrative about obesity in health services can play an important role in improving the quality, efficiency, and equity of health and health care systems.

KEY DISCUSSION POINTS

 Although researchers understand why inequity has to be addressed, there is a need to learn more about how the design of interventions impacts inequity.

- Interventions are often designed to target segments of disadvantaged populations, but there is an opportunity to consider strategies that approach communities — and disadvantage — in a broader way.
- In the United States, universal proportionality is evident in city-wide initiatives. Philadelphia, for example, conducted a city-wide campaign to reduce childhood obesity and targeted outreach to children of color through financial incentives, nutrition education, and school policies. The initiative reduced childhood obesity rates and disparities, especially among children of color.

DISCUSSANTS

Shiriki Kumanyika

Emeritus Professor, Epidemiology, University of Pennsylvania Perelman School of Medicine, and Director, African American Collaborative Obesity Research Network

Jasmine Hall Ratliff Program Officer, Robert Wood Johnson Foundation

Approaches to Assess Sociodemographic Inequities and Health Disparities to Prevent Childhood Obesity in Middle-Income Countries

Mauricio Hernández Ávila, Director General and Dean, Mexico National Institute of Public Health

SUMMARY

PANEL TWO

Lasting collaboration that extends beyond the health sector is required to reduce disparities and social inequities. This discussion highlights the value and challenges in taking a multi-sector approach to childhood obesity.

We need to address determinants that lie outside of the health sector and we need to develop integral policies within the health sector.

STRATEGIES TO ADDRESS OBESITY-RELATED SOCIAL INEQUITIES AND HEALTH DISPARITIES IN MIDDLE-INCOME COUNTRIES

Downstream health services — health care, health promotion, and surveillance — often have little influence beyond the sector itself. Creating change to address the upstream determinants requires the development of integrated policies that cut across multiple sectors. Multisectoral policy is essential for defining the vision, priorities, and budget for effective action.



CASE STUDY: MEXICO — Moving the focus upstream

To tackle the upstream factors that impact health, Mexico has advanced a conceptual framework to implement and monitor government actions to prevent childhood obesity. The framework includes multi-sector approaches that capitalize on synergies across all stakeholders and encourage health in all policies. Working in concert with non-governmental organizations, private industry, and faith-based organizations, these efforts can improve overall health equity and social, economic, and built environments. Mexico is also mindful of state- and community-level efforts, which produce examples of cost-effective best practices when empowered to organize for change.

PRACTICAL INSIGHTS

Mexico's policy response to the obesity crisis has seen success. The government passed taxes on SSBs and junk food and brought seven ministries together with industry to sign the "National Agreement for Alimentary Health: Strategy Against Obesity,"

LOCAL EFFORTS IN MEXICO: SALUDARTE



Aimed at schools in low-income communities, *SaludArte* provides food assistance and education on nutrition, physical activity, arts, and strengthening citizenship values. Initial evaluation efforts show an increase in knowledge and physical activity and will ultimately include insights on impact on body mass index.



a comprehensive policy targeting 10 obesity prevention-related objectives. However, with this success there have been challenges. The "National Agreement for Alimentary Health" was not binding and, without the ability to impose sanctions or conditions, it was less influential than intended. In addition, in Mexico, the principal presidential priority is hunger. Making a connection between these two policies in both political and public spheres proved difficult. While the Mexican government is becoming more active in creating policies and regulations to control obesity, there remains a strong need to improve monitoring of obesity, its determinants, and program outcomes and preconditions. These needs extend to the state and local level, where interventions tend to be short-lived, poorly funded, and lack multi-sector engagement. The health sector has to be the champion of health in all policies.

IMPLICATIONS FOR BUILDING A CULTURE OF HEALTH

Creating more equitable opportunities for healthy choices and healthy environments requires recognition that many of the upstream factors that impact health occur outside of the health sector. Securing leadership and a broader political commitment from multiple sectors to a health-in-all-policies approach is needed. Governments can promote work across sectors by designing and implementing multi-sector actions, developing system-based approaches, and influencing high-level policy dialogue at the national and local level. In Mexico, eliminating inequities is an important societal value that is measurable and can be linked to reduction objectives, but it requires organized, collaborative. multi-sector engagement. Mexico has built on the nation's shared value of health by linking health inequities to the human rights agenda.

KEY DISCUSSION POINTS

- The public health community is split almost down the middle trying to deal with food insecurity and obesity, and there have to be solutions that work for both because they occur in the same populations. It is important to learn how to creatively develop a strategy that addresses obesity in communities where there is also undernutrition.
- The challenge in the United States and in Mexico is that childhood obesity and hunger are pressing and interrelated issues. Leadership seems to be taking on one or the other without necessarily addressing them both in an integrated way.
- Healthy choices are an interest for many. Showing the link between the hunger crusade and obesity can help to achieve a Culture of Health.

DISCUSSANTS

Shiriki Kumanyika

Emeritus Professor, Epidemiology, University of Pennsylvania Perelman School of Medicine, and Director, African American Collaborative Obesity Research Network

Jasmine Hall Ratliff

Program Officer, Robert Wood Johnson Foundation

Public Health–Industry Partnerships: Keys to Effective Engagement

Hank Cardello, Director, Obesity Solutions Initiative, Hudson Institute

SUMMARY

Private industry can play a critical role in creating a Culture of Health and preventing childhood obesity. Successfully engaging private industry requires different rules than traditional nonprofit approaches. Key engagement strategies demonstrate a business case, create healthy competition, understand existing power structures, and acknowledge achievements.

DEMONSTRATE THE BUSINESS CASE

Businesses respond to metrics, especially metrics that are able to demonstrate sales growth and a profitable bottom line. Showing best practices, sharing case studies, and using pilot studies to track and show progress are all effective strategies in demonstrating the business case. One example of a success story was from a study of multi-national companies involved in the Healthy Weight Commitment Foundation (HWCF) pledge. A study of HWCF company products found that 82 percent of overall retail sales growth from 2007 to 2011 was from lower-calorie foods, which were also more likely than higher-calorie versions to be on the shelf five years after being introduced.¹¹ These findings create a persuasive, data-driven business case

by demonstrating how consumer demand is good for business and for public health.

Business

Needs

CREATE HEALTHY COMPETITION

Just as businesses are driven by metrics and a healthy bottom line, they are also propelled by competition. Spurring this competition is consumer demand. J.D. Power and Associates' quality rankings for automobiles are a good example. Their rankings create competition to improve the quality of cars and boost consumer demand. Similarly, corporate social responsibility metrics, which provide an ongoing report card, could integrate health and



Public

Health

Needs

Alignment

UNDERSTAND EXISTING POWER STRUCTURES

The corporate mindset is unique and different than that of public health. Private industry must consider market share, revenue, customer loyalty,

We need to play to companies' strengths. Let's talk about ways they can help through marketing capabilities to increase the consumer demand for better-for-you products.

and reputation. In order to "speak the business language," one must understand existing power structures. Companies have a revenue side (product line management) and a cost side (financial, human resources, and support staff). Public health often engages the cost side, but engaging the revenue side, which is responsible for growth, is vital.

ACKNOWLEDGE ACHIEVEMENTS

Businesses and industry thrive on recognition. It's important for public health to strike a balance between encouraging accountability and acknowledging successes that



support the public health mission. Acknowledging companies for setting and achieving milestones is important for creating positive change. In addition, keeping private industry accountable can also be accomplished by framing shortcomings in a way that motivates businesses to pay attention and respond in a way that benefits both the bottom line and public health.

EXAMPLES OF SUCCESSFUL PUBLIC HEALTH-INDUSTRY ALLIANCES

~ -		٦.
0-		
0 -		
_	_	

Healthy Weight Commitment Foundation (HWCF)

In 2007, 16 major food and beverage companies pledged to sell 1.5 trillion fewer calories by 2015. Five years into the pledge, members met and exceeded the HWCF calorie reduction goal by removing 6.4 trillion calories from the marketplace.¹²



Partnership for a Healthier America (PHA)

With commitments from more than 60 partners in multiple sectors, including private industry, PHA collectively creates a marketplace with a wider array of healthy choices for American families in the places they work, eat, live, and play.



Convergence Center for Policy Resolution

More than 50 influential thought leaders work together to better understand incentives, messaging, and other initiatives that promote healthier food choices. Their unifying framework encourages cooperation across diverse groups and puts market forces to work.



- Creating value propositions for health may provide private industry with incentives to become part of the value chain and become vertically integrated.
- A corporation's brand is its most valuable asset. Companies want to do the right thing and succeed financially. Combining incentives and disincentives for businesses can create space for healthy competition and innovative solutions.
- Innovative solutions should include disruptive technology, a technique that improves a product or service in ways a market does not expect. In obesity prevention, disruptive technology may lower the transaction cost for physical activity and healthy eating by diminishing barriers for the consumer and providing ease for an alternate behavior. Other examples of disruptive technology include e-books, mobile banking, phone applications, and social media.

DISCUSSANTS

Kerry Anne McGeary Senior Program Officer, Robert Wood Johnson Foundation

Steve Gortmaker

Professor, Practice of Health Sociology, Harvard University Beyond Business as Usual: Ensuring Accountable and Effective Public Health–Food Industry Partnerships to Promote Healthy Food and Active Living Environments for Children

Vivica Kraak, Assistant Professor, Food and Nutrition Policy, Virginia Tech

SUMMARY

PANEL THREE

Within the public health realm, accountable and effective partnerships can have lasting impact on the promotion of healthy food and active living environments for children. Organizations partner to address unmet needs, focus on under-resourced priorities, and create synergy to add value to public health promotion efforts. Voluntary engagement is more likely to succeed if partners adopt guiding principles and use an accountability framework to reach goals, objectives, and outcomes.

INTERACTION AND ENGAGEMENT

Partnerships vary depending on the level of interaction and nature of engagement between organizations and businesses. Voluntary interaction and engagement can be as simple as networking or as complex as collaborating, which involves sharing information, resources, and activities. More complex interactions require investing more time to build trust, but in turn, they improve the capacity for all partners to achieve a mutual benefit.

BUILDING THE CASE FOR PUBLIC HEALTH OUTCOMES

It is important to monitor and evaluate public-private partnerships to demonstrate that working together leads to meaningful outputs and measurable outcomes. For example, in 2013, the U.S. Partnership for a Healthier America (PHA) released a progress report indicating that 63 public- and private-sector partners had made commitments to address childhood obesity across five pledge issues (early childhood and child care, healthy food access, healthier choices in marketplaces, increasing physical activity, and engagement).¹³

Commitments from partners led to promising actions, such as the opening of more than 370 new grocery stores in neighborhoods to improve access to healthy and affordable food. PHA partners continue to update their commitments to encourage healthy food and living environments for children. Another example of a promising public-private partnership comes from England's Department of Health; through the "Public Health Responsibility Deal Food Network," they facilitated voluntary commitments made by private and public stakeholders across 15 pledge issues to improve food environments that support obesity prevention and other public health outcomes.¹⁴

PRINCIPLES, GUIDELINES, AND ACCOUNTABILITY

Numerous guidelines, principles, and frameworks are available to assist engagement and partnership building among public, private, and non-governmental sectors. Sectors using these guidelines may range from small organizations to national governments. Examples include the WHO's guiding principles on how best to engage non-state actors¹⁵ and the Canadian Institute for Health Research's guiding principles,¹⁶ which emphasize that partnerships should be in the public interest and include innovation, compatibility, accountability, and stewardship.

What we need are voluntary partnerships that promote optimal human health and wellness.

Figure 1: Accountability Framework to Achieve Public Health Goals, Objectives, and Outcomes



The governance process should be transparent, credible, verifiable, trustworthy, responsive, timely, and fair; and have formal mechanisms to identify and manage conflicts of interest and settle disputes.

Source: Kraak VI, Swinburn B, Lawrence M, Harrison P. An accountability framework to promote healthy food environments. Pub Health Nutr. 2014;17:2467.

EXAMPLES OF STRATEGIES TO HELP Consumers make healthier Decisions in the marketplace

Through alliances and public-private partnerships, governments, food and beverage companies, and nongovernmental organizations are using various strategies and policies to increase the availability of healthier products for consumers and support for healthy food environments. The International Food and Beverage Alliance, composed of 11 of the largest food and beverage manufacturers, has made several pledges to improve dietary and health outcomes of consumers worldwide. Food labeling

initiatives and healthy food retail in Europe and Australia are enabling consumers to make better informed, healthy, marketplace choices. In the United Kingdom, color-coded traffic light labeling is used to highlight the nutrient content of products including calories, fat, sugar, and sodium to help consumers make guick decisions about product purchases in food retail outlets. Another example is the "Nordic Keyhole" nutrition labeling system, used in Sweden, Denmark, and Norway for over 20 years, to highlight healthier product choices. Through consumer surveys and market analysis, results showed that just six months after implementing the Keyhole system

in Norway, 9 out of 10 consumers responsible for household grocery shopping recognized the Keyhole label.¹⁷

OVERCOMING BARRIERS TO ENABLE SUCCESS

Successful partnerships are not without challenges, and various barriers and enablers may exist. Barriers include mistrust, fears over conflict of interest, lack of transparency and leadership, and organizational differences. However, acknowledging sectoral differences, increasing solution-oriented dialogues and guidance, and building trust can all aid in enabling success partnerships.

KEY DISCUSSION POINTS

- Multi-sectoral collaboration is key for building partnerships. Accountable partnership engagement guidelines and supporting evaluations of outputs and outcomes can aid in this success.
- Rewarding companies that achieve performance metrics and incentivizing participation can lead to healthier food environments for consumers. Inspiring change may include further product innovation and product reformulation that meet U.S. government-recommended nutrition and physical activity guidelines.

DISCUSSANTS

Harvard University

Kerry Anne McGeary Senior Program Officer, Robert Wood Johnson Foundation

Steve Gortmaker Professor, Practice of Health Sociology,

PANEL FOUR

Creating Demand for Obesity Prevention Policies

Terry Huang, Professor, School of Public Health, City University of New York

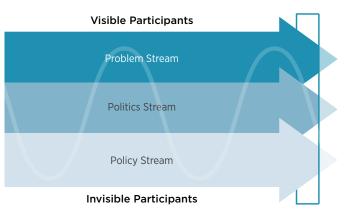


Figure 1: Kingdon's Multiple Streams Framework

Source: de Leeuw, E. Do Healthy Cities work? A logic of method for assessing impact and outcome of Healthy Cities. *J Urban Health*. 2012;89:217-231. doi:10.1007/s11524-011-9617-y.

the EU. This move required actions to restructure and reorganize the country's national finances so that it could be a competitive force within the EU. Although Slovenia's major focus was on trade and improving its capacity to compete economically, it used this opportunity to also develop a food and nutrition strategy.

The third political science framework is the "Advocacy Coalition Framework," which the Mexican Alliance for Dietary Health used to great effect to build demand for policy change. Its crosssectoral partnership created a unified voice for change, developed a platform to streamline strategies for action, framed the issue of access to healthy food as a human rights issue, and launched a series of public awareness campaigns using familiar characters and readily understood messages. These strategies successfully engaged the public, which mobilized stakeholders and led to policy changes such as the adoption of soda and junk food taxes.

So many of our decisions are made based on fear, yet, for many disadvantaged communities, what really motivates them is hope.

SUMMARY

Although public health scientists recommend policy change to prevent obesity, successful policy adoption has been limited. Three political science frameworks help explain the dynamics for successful action. Effective strategies used by other movements and research insights from other fields, such as systems science, also can inform efforts to create policy change in the nutrition and physical activity arena.

THEORETICAL FRAMEWORKS AND INTERNATIONAL EXPERIENCE

Three political science frameworks, illustrated by events occurring internationally, can help explain the forces necessary to create policy change and to ensure that when policies are adopted, stakeholders and the public respond optimally. These frameworks include "Kingdon's Multiple Streams Framework" (see Figure 1), which highlights the need to focus not only on the problem and the policy, but also the politics. This framework has been used to understand the successful *Healthy Cities Movement* around the world, which has systematically engaged social change agents across different sectors over time.

A second framework, the "Punctuated Event Framework," can be used to explain the success of Slovenia's food and nutrition strategy. The strategy was formulated against the backdrop of Slovenia's accession to

A visual representation of Kingdon's stream model (1995) in which a window of opportunity is opened.

ADOPTING STRATEGIES FROM OTHER MOVEMENTS

The lesbian, gay, bisexual, and transgender (LGBT) movement's struggle for human rights provides lessons that can inform efforts to change policy for obesity prevention. This movement began in response to the lack of action taken by U.S. policymakers in the early days of the AIDS crisis. This event brought organizations together to think broadly about strategies that could advance policy change to support LGBT rights. Over time, several key strategies emerged:

- Coalesce around a limited number of common goals.
- Enhance the power of action by creating strong lobbying and potent fundraising efforts, both for programs and political mobilization.
- Create coalitions of legal teams to influence the courts through litigation and the public through associated media coverage.
- Streamline messages and develop strong media advocacy efforts. For example, Gay & Lesbian Alliance Against Defamation Network Responsibility Index



tracks the quality, diversity, and relative quantity of LGBT representations in the media, which propels changes in representation and ultimately in public attitudes and perceptions. Another aspect of this strategy is a willingness to change how messages are framed if they are not working as intended.

INSIGHTS FROM SYSTEMS SCIENCE APPROACHES

Systems science findings offer substantial insight into how to

create public demand for healthy eating and active living policies. These findings demonstrate that individuals matter; they are not just passive recipients of information. Findings also show that building organizational capacity and trust among organizations and stakeholders is key. Operational success depends on distributed actions, clear accountability, cooperative teams, and creative competition. Finally, monitoring and evaluation are essential; understanding failure is just as important as documenting success.



- Investments over time are needed to build a favorable political environment for change. This involves developing a broad coalition of actors and a network of change agents across sectors.
- Researching and identifying appropriate message frames, engaging the public in the policy process, and actively managing multimedia communications are essential components of efforts to increase the demand for change.
- Building public demand must take into account stages of innovation. An idea may seem outlandish at first, then controversial, then progressive, then obvious. Different types of evidence are needed at different stages.

DISCUSSANTS

Sharon Roerty Senior Program Officer, Robert Wood Johnson Foundation

Claire Wang

Associate Professor, Health Policy and Management, and Co-Director, Obesity Prevention Initiative, Columbia University

PANEL FOUR

to expect and demand physical and

ACTIVITY AS A BYPRODUCT OF

A number of successful international

programs have helped to increase

physical activity even though their

social cohesion, and social equity.

Originating in Bogotá, Colombia,

in the Americas. In Bogotá, the

in the 1970s. Cicloviá Recreativa has

now spread to more than 100 cities

Cicloviá network consists of about

113 kilometers of connected streets

primary aims are to build community,

OTHER PROGRAMMATIC AIMS

INCREASING PHYSICAL

built environments that promote health.

Building Public Demand for Active Living Policies and Environments: What Can the United States Learn from Latin America?

Deborah Salvo, Adjunct Researcher and Faculty Member, Mexico National Institute of Public Health and Postdoctoral Fellow, Michael and Susan Dell Center for Healthy Living, School of Public Health, University of Texas – Austin

SUMMARY

Two programs in Latin America demonstrate that interventions designed primarily to promote social goals can have measurable effects on increasing physical activity and improving health.

Cicloviá provides a safe place for the whole family to enjoy the city and its public spaces.

HEALTH CARE AS A Common good

While in many countries, health is viewed as a fundamental human right, in the United States, it is regarded primarily as an individual privilege and responsibility. However, there is an opportunity to shift public attitudes toward viewing health as a common good, the way that public education is viewed. This shift can build the foundation for the public

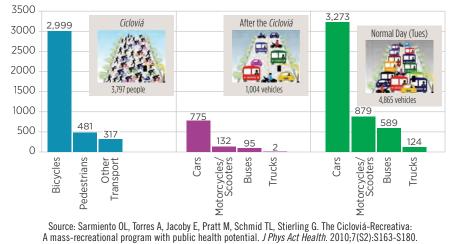


Figure 1: Cicloviás: Traffic and Social Equity

city-wide, and 600,000 to 1.2 million people participate in any single event. Free aerobics, dance, and fitness classes take place in spaces adjoining the streets in the network. The purpose of the program, which involves temporary closure of the streets to cars, is to allow citizens to use the streets and other public spaces as safe and free spaces for recreation. The notion is that public taxes were used to create these spaces, and therefore everyone should

have the right to use them.

Data show that the program has had a positive impact on physical activity for adults and children. Figure 1 highlights the increase in biking, and pedestrian traffic during *Cicloviá*. Perhaps even

16

more convincing to decision makers are data showing that air pollution levels are 13 times greater and noise levels are 7 times greater on normal days than on *Cicloviá* days. Endorsements from community members have been convincing expressions of public demand for the program.

Originating in Recife, Brazil, Academia da Cidade offers free fitness and recreation classes taught by professional instructors in public spaces across the city. The program's strong social equity focus is evident in its name, which means "city gym." By rehabilitating community centers, public squares, parks, beaches, parking lots, and other public spaces, the city itself becomes a free gym to help people, particularly those in underprivileged neighborhoods, improve their health and quality of life. An extensive evaluation of the program by the *Guide for Useful* Interventions for Physical Activity project found that more people used parks and plazas in Academia da *Cidade* areas than in those without the program. In addition, both past and current users of the program were more likely to meet physical activity guidelines than were non-users. The enormous popularity of the program has encouraged policy makers to support its rapid expansion (as shown in Figure 2); Brazil has allocated \$1 billion to spread the program to 4.000 cities nationwide.

FACTORS FOR SUCCESS AND THE ROLE OF RESEARCHERS

Cicloviá Recreativa and *Academia da Cidade* share characteristics that contribute to their success:

Figure 2: Academia da Cidade Exported to Other Cities, Including Those in the United States



Source: Adapted from Hino, AF. Physical Activity and Quality of Life Research Group. Pontificia Universidade Catolica do Parana, Curitiba, Brazil.

- Multi-level strategies that are carried out with the involvement of multiple stakeholders across government, universities, the private sector, non-governmental organizations, international partners, and the media
- Extensive evaluation, which is possible because of U.S.-based organizations that provide training and funding
- Political will provided by champions at the city level who believe in and support the program
- Cultural adaptations of programs to suit local contexts
- Strong focus on social equity and social interaction and programs that take place regularly
- Avid support and participation from the community

Researchers have a critical role to play in building public demand for active living programs and policies because they can identify and systematically assess novel strategies and programs that may have an impact on active living, even if the main purpose is not to increase physical activity. They also can develop measures, indicators, and protocols, and they can broadly disseminate program findings.

KEY DISCUSSION POINTS

 A key to generating public demand for active living policies and environments is highlighting and marketing the idea that individuals have the right to access public spaces and that these spaces have value beyond physical activity and health.

.....

- Cicloviá and similar programs that emphasize social equity and community are "stealth interventions" that contribute to changing cultural norms about when and where weekend activities take place, and may encourage people to adopt new activities that improve health.
- We need to understand the value that practices bring to the community and measure "return on community" along with return on investment.

DISCUSSANTS

Sharon Roerty Senior Program Officer, Robert Wood Johnson Foundation

Claire Wang

Associate Professor, Health Policy and Management, and Co-Director, Obesity Prevention Initiative, Columbia University

CLOSING SESSION

MODERATOR:

Deborah Bae, Senior Program Officer, Robert Wood Johnson Foundation

PANELISTS:

Bill Dietz, Director, Sumner M. Redstone Global Center for Prevention and Wellness, Milken Institute School of Public Health, The George Washington University

Bruce Lee, Associate Professor, International Health, Director, Global Obesity Prevention Center, and Director of Operations Research, International Vaccine Access Center, Bloomberg School of Public Health, Johns Hopkins University

Michael Pratt, Professor, Hubert Department of Global Health, Rollins School of Public Health, Emory University

SUMMARY

The panelists discussed key take-home messages from the day's presentations and opportunities for future action.

CHANGING THE PARADIGM FROM INDIVIDUAL RESPONSIBILITY TO THE COMMON GOOD

The foundation of many health promotion efforts in other countries is the concept of health as a fundamental human right, in contrast to the United States, which regards health as an individual responsibility. This "common Michael Rodriguez, Director, Blum Center on Poverty and Health in Latin America, University of California, Los Angeles

Harry Rutter, Senior Clinical Research Fellow, London School of Hygiene and Tropical Medicine

Mary Story, Professor, Global Health and Community and Family Medicine, Duke University, and Director, Healthy Eating Research Program, Robert Wood Johnson Foundation

good" conceptual foundation has provided a mandate for action and facilitated broad thinking about programs and interventions that promote social cohesion and social equity. In so doing, program planners contribute to the population's sense of ownership over the program, which builds public demand, contributes to its sustainability, and increases pressure on decision makers to support the program. The United States may not regard health as a human rights issue, but it does have a deep history of civil rights. Building on this movement and its efforts for social equity may be one

avenue for creating public demand for healthy environments.

Interventions founded on the notion of promoting the common good may not be focused primarily on specific health issues, such as increasing physical activity or reducing obesity, but they have these effects anyway because they provide opportunities for activity in contexts that are enticing for other reasons. These experiences provide a backdrop conducive to the development of international nutrition and physical activity guidelines that are broadly based and relevant to all cultures, such as promoting eating together socially and making physical activity a regular part of daily life.

THE IMPORTANCE OF THINKING BIG AND THINKING DIFFERENTLY

The full range of possibilities to improve healthy eating and active living environments is only now beginning to be explored. Out of all of the possibilities, however, researchers tend to focus on programs and policies for which hard evidence is available. This focus on certain types of evidence leads the field into a corner, and skews efforts to what can be easily measured, not to broader upstream benefits. Evidence is necessary, but it is not enough to shift policy.

A grand 20-year vision is needed to guide the field's thinking in how to get to where it wants to be and how to change social norms for eating and physical activity. The vast majority of impacts may be decades down the line. Taking a long view, a systems perspective will allow room for objectivity and scientific rigor and also leave room for novel ideas. Programs carried out by the four countries that have changed population physical activity levels (Canada, Finland, Colombia, and Brazil) have several common characteristics that point to the value of broad thinking:

- Supportive public policies
- Community-based physical activity programs
- Availability of public space and facilities that can be used for physical activity
- Cultural attitudes that value
 physical activity
- A strong focus on social equity
- A multi-sectoral approach to
 program design and execution
- National government investment
- Evaluation and ongoing surveillance

COMMUNICATING WITH AND LEARNING FROM OTHERS ARE THE TOUCHSTONES OF PROGRESS

The obesity prevention field in the United States can learn an enormous amount from other countries and from other fields. The field needs to establish better connections and understand the perspectives of other stakeholders. Including a diversity of people at the table is essential for understanding the problems, identifying solutions, and encouraging bidirectional communication and learning. The United States also can make significant contributions to programs in other countries by sharing its vast research capability and expertise in evaluation.

SEVERAL UNEXPLORED AREAS NEED ATTENTION

Diversity and Inequity

The United States has an extraordinarily heterogeneous population. More information on the characteristics of obesity in populations with homogeneous populations or large indigenous populations would be useful because it could shed light on how obesity rates are confounded by other factors. A better understanding of ethnic differences is necessary to devise culturally appropriate solutions.



Role of Bias and Stigma

Bias and stigma toward obesity play out in different ways in different countries. Building an understanding of how this works in various cultural contexts would be valuable. For example, in countries with indigenous populations, do people with obesity suffer a double stigma?



Strategies to Address People Already Affected by Obesity

Strategies discussed during the meeting focused on prevention, but these will not help people already affected by obesity. Providers across the globe lack the tools to talk about this issue. Only Australia has a medical curriculum related to treating obesity.

OPPORTUNITIES FOR ACTION

Panelists had several suggestions for actions to spur knowledge and action:

- Brokering understanding between diverse stakeholders and emphasizing how each can benefit is a necessary condition for change.
- Identifying innovations occurring around the world and exploring ways to apply these strategies in the United States can drive further experimentation and insight into measurement.

- Reducing obesity is very difficult. Many strategies have limited population effects. Providing funding and encouragement to scale up efforts can offer more reliable insight into population-level effects.
- Given the ease of worldwide community and sharing, it is important to promote ways that U.S. researchers and evaluators can assist other countries to improve research methods and conduct evaluation.





APPENDICES

APPENDIX 1: Lessons Learned from Global Efforts Agenda	22
APPENDIX 2: Recommended Reading	24
APPENDIX 3: References	26

APPENDIX 1: Lessons Learned from Global Efforts Agenda



	Remarks from Risa Lavizzo-Mourey Prevident and CEO, RWIF	CLOSING BESSH	3Ne
12:15-1:15	LUNCH (ATRIUM)	4:00-4:50	Learning from other countries: key insights for building a culture of health around childhood obesity prevention
AFTERNOON SES			Moderated by Deborah Bae, Senior Program Officer, Global Health Work Group, RWJF
1:15-2:30	Panel 3: Developing effective and accountable public health and industry partnerships — Transnational insights and		 Bill Dietz, Director, Sumner M, Redstone Global Center for Prevention and Wallness, Milkon Institute School of Public Health, George Washington University
	Inssons Inamed Hank Cardello, Director, Obesity Solutions Initiative, Hudson Institute Vivica Kraak, Assistant Professor, Food and Nutrition Policy, Virginia Tech		 Bruce Lee, Associate Professor, International Health, Director, Global Obesity Prevention Center (GOPC), and Director of Operations Research, International Vaccine Access Center, Johns Hopkins Bloomberg School of Public Health
	Implications for U.S. research, policy, and actions Kerry Anne McGeary, Senior Program Officer, Business Engagement Team,		 Hickeel Prats, Professor, Hubert Department of Global Health, Rollins School of Public Health, Emory University
	RWJF Steve Gortmaker, Professor, Practice of Health Sociology;		 Michael Rodriguez, Director, Blam Center on Poverty and Health in Latin America, University of California, Los Angeles
	Harvard University		Harry Rutter, Serior Clinical Research Fellow, London School of Hygiene and Tropical Medicine
2:30-3:45	Panel 4: Building public domand for healthy eating and active		 Mary Story, Professor, Global Health and Community and Family Medicine, Duke University and Director, Healthy Eating Research Program, RWJF
2:30-3:43	fiving policies and environments — What the U.S. can learn from other countries		Discussion
	Terry Huang, Professor, School of Public Health, City University of New York Deborah Salvo, Researcher, Mexico National Institute of Public Health- and Visiting Assistant Professor, Stanford University	4:50	Wrap up: RWJF and RCCOR actions, products, and next steps Todd Phillips and Elaine Arkin, NCCOR
	Implications for U.S. research, policy, and actions		Tracy Orleans, RWJF
	Sharon Roerty, Senior Program Officer, Catalyzing Demand Portfolio, RWJF Claire Wang, Associate Professor, Health Policy and Management and Co-Director, Obesity Prevention Initiative, Columbia University	5:00	ADJOURN
	Discussion		
3:45-4:00	BREAK		
	CONTINUE	Biologe Week Chronic Internetincipalinary resis Internetinational advantation enhanced advantation workshelds. White has this interestive force insatts Work Strong, Chrothogol Observity 3 Portfesion, Stauteen sale moustaneous the address Powerbalation's goots of annexistic a publicity of the annexistic a public public powerbalation.	nting, funded through a grant from the is to converse leading international and arthors, and grantifications to thickness evidence in the strend States (U.S.) and ng citationoid obesity as a "coast study", - with representation (coarting limit, management Years, Catalycoag Demand management Years, Catalycoag Demand management Years, Catalycoag Demand and international coast outling "One studied acadities of the modeling the Wald Science and the W

APPENDIX 2: Recommended Reading

JOURNAL ARTICLES

Adams M, Frank L, Schipperijn J, et al. International variation in neighborhood walkability, transit, and recreation environments using geographic information systems: The IPEN Adult Study. *Int J Health Geogr.* 2014;13(1):43.

Barquera S, Campos I, Rivera JA. Mexico attempts to tackle obesity: The process, results, push backs and future challenges. *Obes Rev.* 2013;14:69-78. doi:10.1111/obr.12096.

Cerin E, Cain KL, Conway TL, et al. Neighborhood environments and objectively measured physical activity in 11 countries. *Med Sci Sports Exerc.* 2014;46(12):2253-64. doi: 10.1249/ MSS.000000000000367.

de Leeuw, E. Do Healthy Cities Work? A Logic of Method for Assessing Impact and Outcome of Healthy Cities. *J Urban Health.* 2012;89:217-231. doi:10.1007/s11524-011-9617-y.

Fallah-Fini S, Rahmandad H, Huang TTK, Bures RM, Glass TA. Modeling US adult obesity trends: A system dynamics model for estimating energy imbalance gap. *Am J Public Health.* 2014;104:1230-1239. doi:10.2105/AJPH.2014.301882. Huang TT, Cawley JH, Ashe M, Costa S. Mobilizing public support for policy actions to prevent obesity. *Lancet.* 2015;385(9966):27-36.

Knai C, Lobstein T, Darmon N, Rutter H, McKee M. Socioeconomic patterning of childhood overweight status in Europe. *Int J Environ Res Public Health.* 2012;9:1472-1489. doi:10.3390/ijerph9041472.

Kraak VI, Swinburn B, Lawrence M, Harrison P. An accountability framework to promote healthy food environments. *Public Health Nutr.* 2014;17(11):2467-83. doi:10.1017/ S1368980014000093.

Lang T, Rayner G. Overcoming policy cacophony on obesity: An ecological public health framework for policymakers. *Obes Rev.* 2007;8:165-181. doi:10.1111/j.1467-789X.2007.00338.x.

Ng SW, Popkin BM. Time use and physical activity: A shift away from movement across the globe. *Obes Rev.* 2012;13:659-680. doi:10.1111/j.1467-789X.2011.00982.x. Popkin BM, Adair LS, Ng SW. Global nutrition transition and the pandemic of obesity in developing countries. *Nutr Rev.* 2012;70:3-21. doi:10.1111/j.1753-4887.2011.00456.x.

Pratt M, Charvel Orozcoc AS, Hernandez-Avila M, Reise RS, Sarmientob OL. Obesity prevention lessons from Latin America. *Prev Med (Baltim)*. 2014;69(Suppl):S120-S122. doi:10.1016/j. pcad.2014.09.002.

Pratt M, Perez L, Goenka S, Brownson R. Can population levels of physical activity be increased? Global evidence and experience. *Prog Cardiovasc Dis.* 2014;57(4):356-367.

Sallis JF. Environmental and policy research on physical activity is going global. *Res Exerc Epidemiol.* 2011;13(2):111-117.

Swinburn B, Vandevijvere S, Kraak V, et al. Monitoring and benchmarking government policies and actions to improve the healthiness of food environments: A proposed government healthy food environment policy index. *Obes Rev.* 2013;14:24-37. doi:10.1111/obr.12073.

NCCOR RESOURCES

Bures RM, Mabry PL, Orleans CT, Esposito L . Systems science: A tool for understanding obesity, *Am J Public Health.* 2014 Jul;104(7):1156. doi: 10.2105/AJPH.2014.302082.

Gortmaker SL, Swinburn BA, Levy D, Carter R, Mabry PL, Finegood DT. Changing the future of obesity: Science, policy, and action. *Lancet.* 2011 Aug 27;378(9793):838-47. doi: 10.1016/S0140-6736(11)60815-5.

Hall KD, Sacks G, Chandramohan D, Chow CC, Wang YC, Gortmaker SL, Swinburn BA. Quantification of the effect of energy imbalance on bodyweight. *The Lancet.* 2011 Aug 27;378(9793):826-837. doi: http://dx.doi.org/10.1016/S0140-6736(11)60812-X.

Mabry PL, Bures RM, Systems science for obesityrelated research questions: An introduction to the theme issue. *Am J Public Health.* 2014 Jul;104(7):1157-9. doi: 10.2105/AJPH.2014.302083.

Swinburn BA, Sacks G, Hall KD, McPherson K, Finegood DT, Moodie ML. The global obesity pandemic: Shaped by global drivers and local environments. *Lancet*. 2011 Aug 27;378(9793): 804-14. doi: 10.1016/S0140-6736(11)60813-1.

Wang YC, McPherson K, Marsh T, Gortmaker SL, Brown M. Health and economic burden of the projected obesity trends in the USA and the UK. *Lancet.* 2011 Aug 27;378(9793):815-25. doi: 10.1016/S0140-6736(11)60814-3.

REPORTS

Government Office for Science. Tackling Obesities: Future Choices project report. October 2007.

Hudson Institute. Better-for-you foods: It's just good business. October 2011.

Hudson Institute. Lower-calorie foods and beverages fuel growth at Healthy Weight Commitment Foundation companies. October 2014.

Hudson Institute. Lower-calorie foods: It's just good business. February 2013.

World Obesity Federation. Obesity prevention in children in pre-school years: Policies and evidence. 2014. Available from http://www. worldobesity.org/site_media/uploads/obesity_ Prevention_in_Preschool_Children.pdf.

WEBSITES

Alianza por la Salud Alimentaria. Available from: http://alianzasalud.org.mx/.

Cicloviá: Bogotá, Columbia. Available from:http://www.streetfilms.org/ciclovia/.

Guide for Useful Interventions for Physical Activity in Brazil and Latin America. Available from: http://www.projectguia.org/en/.

Open Streets initiatives: Measuring success toolkit. Available from: http://activelivingresearch.org/.

APPENDIX 3: References

- 1. Robert Wood Johnson Foundation. Top 10 signs we are building a Culture of Health. Published Dec 17 2014. Available from: http://www.rwjf.org/en/blogs/culture-of-health/2014/12/top_10_signs_we_are.html.
- Plough A. Building a culture of health: Challenges for the public health workforce. Am J Prev Med. 2014;47(5S3):S388–S390.1. doi: 10.1016/j.amepre.2014.07.037.
- Sugiyama T, Cerin E, Owen N, et al. Perceived neighborhood environment attributes associated with adults' recreational walking: IPEN Adult Study in 12 countries. *Health and Place*. 2014;28:22-30. doi: 10.1016/j. healthplace.2014.03.003.
- Cerin E, Cain KL, Conway TL, et al. Neighborhood environments and objectively measured physical activity in 11 countries. *Med Sci Sports Exerc.* 2014;46(12):2253-64. doi: 10.1249/MSS.00000000000367.
- Adams MA, Frank LD, Schipperijn J, et al. International variation in neighborhood walkability, transit, and recreation environments using Geographic Information Systems: The IPEN Adult Study. *Int J Health Geogr.* 2014;13(43). doi: 10.1186/1476-072X-13-43.
- 6. World Health Organization. About the work of the Commission on Ending Childhood Obesity. 2014. Available from: http://www.who.int/endchildhood-obesity/en/.
- World Health Organization. Report of the first meeting of the Ad hoc Working Group on Science and Evidence for Ending Childhood Obesity; June 18-20, 2014; Geneva. Available from: http://www.who.int/end-childhood-obesity/ commissioners/first-meeting-report/en/.
- 8. Pan American Health Organization. The plan of action for the prevention of obesity in children and adolescents. 2014. Available from: http://www.paho. org/Hq/index.php?option=com_content&view=article&id=10057<emid=1926&l ang=en.

- 9. European Union Action Plan on Childhood Obesity. 2014. Available from: http://ec.europa.eu/health/nutrition_physical_activity/docs/ childhoodobesity_actionplan_2014_2020_en.pdf.
- World Health Organization. Health and Inequities. Guidance for addressing inequities in overweight and obesity. 2014. Available from: http://www.euro.who. int/en/publications/abstracts/obesity-and-inequities.-guidance-for-addressinginequities-in-overweight-and-obesity.
- Cardello H, Wolfson J. Lower-calorie foods and beverages drive Healthy Weight Commitment Foundation companies' sales growth. Interim report. May 2013. Available from: http://www.hudson.org/content/researchattachments/ attachment/1107/lowercalhealthyweightcommitment--may2013.pdf.
- 12. Healthy Weight Commitment Foundation. Working together to change the outlook of a generation. Available from: http://www.healthyweightcommit.org/ images/uploads/HWCF_5_Report_2014/HWCF_5YearAnniversary_FW.pdf.
- 13. Partnership for a Healthier America. In it for good: 2013 annual progress report executive brief. 2013. Available from: https://drive.google.com/file/d/ 0B-6Ewy5pv-vZQzgzLVd6YI91dWM/edit?pli=1.
- 14. England Department of Health. Public Health Responsibility Deal. 2015. Available from: https://responsibilitydeal.dh.gov.uk/.
- World Health Organization. Framework of engagement with non-state actors.
 67th World Health Assembly A67/6. Provisional agenda item 11.3, May 5, 2014.
- 16. Canadian Institute for Health Research. Ethics framework for partnerships with the private sector. 2013. Available from: http://www.cihr-irsc.gc.ca/e/34746.html.
- 17. Swedish National Food Agency. The Keyhole Symbol. 2015. Available from: http://www.slv.se/en-gb/Group1/Food-labelling/Keyhole-symbol/.

For more information and to view videos of the panel presentations, please visit www.nccor.org/projects/globallessons



Exploring the strategies that are being used around the world to tackle childhood obesity can inform our work and accelerate progress toward our goals.

—Brian Quinn, PhD