



WORKSHOP REPORT

LONDON APRIL 7, 2008

Obesity, Associated Diseases, and Personal Health: Addressing the Global Nutrition Challenge

An Advance Workshop of the Pacific Health Summit

On April 7, 2008, the Wellcome Trust and The National Bureau of Asian Research's Center for Health and Aging (CHA)—the Secretariat for the Pacific Health Summit—convened 60 leaders from science, policy, public health, industry, and medicine to discuss the rapidly emerging threat of obesity and its associated diseases in both developed and developing societies. The “Obesity, Associated Diseases, and Personal Health: Addressing the Global Nutrition Challenge” workshop was one of two Advance Workshops of the Pacific Health Summit. Key action points and agreements generated at this workshop will feed directly into the 2008 Pacific Health Summit process and beyond. The workshop pursued three key goals:

1. To identify gaps and opportunities for coordinated or joint responses from scientists, policymakers, funders, and industry to

KEY THEMES

- The obesity epidemic: Costs and risk factors
- Joining forces with the private sector: How do we leverage strengths and opportunities effectively?
- What works? The role of public health and behavioral interventions
- Where should obesity sit on the global health agenda? Connecting Science, Industry, and Policy
- Toward the Pacific Health Summit

address increasing challenges associated with obesity and related diseases.

2. To capitalize on the strengths of each sector and investigate options to collaborate effectively through new partnerships.
3. To inform the 2008 Pacific Health Summit process and complement the “Undernutrition: Creating New Responses” workshop held in Tokyo in February. The theme for the 2008 Summit is “The Global Nutrition Challenge: Getting a Healthy Start.”

Four panel discussions addressed key themes, such as the financial and social costs of the obesity epidemic, as well as the challenge of incentivizing healthy behavior among individuals and more effective partnerships between government, industry, and academia. Discussions also focused on the role and

strengths of the private sector, as well as on how to prioritize the issue of obesity and its associated diseases on the global health agenda. All the discussion sessions addressed the issue of obesity and being overweight as a serious problem in both developing and developed countries. Workshop participants acknowledged that the continuum between under and overnutrition would remain a major problem, especially for nations experiencing a nutrition transition.

THE OBESITY EPIDEMIC: COSTS AND RISK FACTORS

“The short answer,” according to **Nicolaus Henke**, Director of McKinsey’s Health System Group based in London, when asked about the economic costs associated with obesity, “is US\$700 billion.” He saw rising direct healthcare costs as a major concern for governments, compounded by a concomitant reduction in economic activity through loss of workdays, as well as loss of life.

From a socioeconomic viewpoint, **Ricardo Uauy**, Professor of Public Health Nutrition at the University of Chile’s Institute of Nutrition and Food Technology and the London School of Hygiene and Tropical Medicine, explored the disease etiology in developing countries, where the double burden of both undernutrition and obesity or being overweight continues to grow.

He highlighted appropriate nutrition for babies and infants as an area of concern, as stunted growth has emerged as a risk factor for obesity in later life, especially when energy-rich food



Marc Van Ameringen, Executive Director,
Global Alliance for Improved Nutrition.

products high in fat and sugar are available at low cost. “It’s not just an issue of food or energy,” he said, “it is about the quality of the macronutrient supply and the micronutrients within that food.”

Carlos Monteiro, Professor of Nutrition at the University of Sao Paulo’s School of Public Health, expressed particular concern about the increase in obesity-related diseases in countries where healthy, traditional staple foods rich in cereals and pulses are being replaced with processed, readily available, high-energy, nutritionally deficient foods. He advised, “As we embrace modernization in many areas, we have to be careful to support and protect natural, traditional, healthy diets in developing countries.”

In deliberating risk factors, the outcome of the UK’s Government Office for Science’s Foresight Report, “Tackling Obesities: Future Choices,” was also a focal point for discussion. **Susan Jebb**, Head of MRC Nutrition and Health Research at the University of Cambridge and an Expert Advisor on the Foresight Report, told participants that “Obesity is a consequence of our biology and the social and cultural context in which we find ourselves.” Participants agreed broadly with the report, which explained that the causes of obesity are the multifaceted and interrelated consequences of biology interacting with our environment, at the heart of which lies the key issue of energy balance.

John Potter, Director of International Research at the Fred Hutchinson Cancer Research Center, noted that obesity is not a new problem and that human biology has not fundamentally



John Potter, Director, International Research, Fred Hutchinson Cancer Research Center.

evolved from times of historical food scarcity to 21st-century lifestyles where abundant, energy-dense, highly calorific foods coupled with limited physical activity is the norm in many areas of the developed and developing worlds. He quoted Roman poet and philosopher Lucretius in 50 BC to illustrate: “In primitive times, lack of food gave languishing bodies to death; now, on the other hand, it is abundance that buries them.”

Participants also discussed the issue of food security and the industrialization of agriculture, and Dr. Potter noted that the concept of food as a commodity rather than a basic need has been a contributing factor to current problems of food insecurity.

In terms of psychological risk factors, the panel agreed that there is a clear gap between the intentions of individuals and their actual behavior and that the societal context plays a major role in determining individual responses

to known risk factors. Of concern was the normalization of obesity as an inevitable condition for certain people, which would further affect individual behavior. While participants acknowledged that the biological drivers were important, discussions also concluded that individuals with strong coping strategies are indeed able to control responses to food availability.

Data on reductions in physical activity as a risk factor have not been well documented, and participants noted that there are not currently a great deal of incentives for the broader disciplines of nutrition and exercise to collaborate on research. **Rachel Ballard-Barbash**, Associate Director of the U.S. National Cancer Institute's Applied Research Program within the Division of Cancer Control and Population Sciences, reminded participants that multidisciplinary

teams should work to strengthen the evidence base for these correlations. The moderator for this panel, **Mark Walport**, Director of the Wellcome Trust, reminded participants that “For society, obesity is a problem that affects many sectors; no one is off the hook.”

JOINING FORCES WITH THE PRIVATE SECTOR: HOW DO WE LEVERAGE STRENGTHS AND OPPORTUNITIES EFFECTIVELY?

“People want foods that fit into their lifestyle and are therefore convenient, and manufacturers make products for which there is a demand. That’s simply good business,” noted **Helen Munday**, Director of Food Safety and Science at the UK’s Food and Drink Federation. “As a result, we need to find ways to increase demand for foods that can contribute to a healthier diet. That means educating the public about the benefits of healthier diets, and making healthy food accessible and readily available, safe, convenient, and tasty.”

The workshop’s second panel discussion explored the role of the private sector in tackling malnutrition through research and development and in delivering and marketing new, innovative products. While industry has created many innovative products that help address the problem of undernutrition—products such as fortified biscuits and rice—the challenge of how to use the key tools of the private sector to fight obesity remains largely unmet.

Some consider consumption of whole grains, rather than highly-processed sugars, as one effective way to reduce the risk of acquiring diseases associated with obesity.



Mark Van Ameringen, Executive Director of the Global Alliance for Improved Nutrition, introduced the session by calling on participants to acknowledge clear linkages between under and overnutrition, as well as the need for dual strategies to address all elements of the global nutrition challenge. As understanding of the global nutrition challenge continues to grow, the link between both sides of the nutrition spectrum becomes increasingly apparent. For example, fetal malnutrition and child undernutrition and stunting increase the probability of becoming obese and suffering from diabetes, hypertension, cardiovascular diseases, and associated diseases into adolescence and adulthood.

“Addressing malnutrition should be a part of a company’s core business, not simply an add-on

Public-Private Information and Research Partnerships

Panelists concluded that governments, academia, and industry should share with one another their understandings of the risk factors contributing to obesity, as well as combine research efforts. However, participants noted that even a broad, common understanding may not always lead to obvious and effective interventions. Initiatives that include interdisciplinary teams that target the wide range of risk factors are necessary to ensure effective responses to the problem.

Mark Walport, Director, The Wellcome Trust.



or low-priority, corporate social responsibility item,” he said. The main barriers to great public-private collaboration in this area include lack of awareness about the problems we face and a lack of commitment, leadership, and trust from both sectors. The tides are shifting, Mr. Van Ameringen noted, but only a handful of companies have forged ahead as leaders in this area, and the public and private sectors remain wary of one another.

Participants regarded the reformulation of food products as an important but not necessarily easy task, given consumer demand for convenient and safe foods. In particular, discussants believed that research and development had largely focused on questions of food experience and gut responses rather than on metabolism and metabolic responses to food intake. Participants identified a strong need for the latter type of research. “The pharmaceutical industry spends 14–15 percent of revenues on research and development,” said **Derek Yach**,

Vice President of Global Health Policy at PepsiCo. “By contrast, the food sector spends 1–2 percent on average. As a result, expanding food companies’ R&D foci to include more experimentation, innovation, and partnership is critical.”

“Can the public and private sectors collaborate on R&D?” asked the session moderator, **William Castell**, Chairman of the Wellcome Trust. The moral imperative to address malnutrition, coupled with new scientific evidence on what is healthy and what is not, has spurred many companies to action, but all private-sector representatives agreed that the public sector has a critical role to play in creating more incentives for industry to expand its efforts. Such incentives might include new legislation and standards guidelines, as well as regulation beyond existing codes of conduct and possible tax breaks and incentives for more research and development.

Beyond developing more innovative products, food retailers and manufacturers can contribute critical information on consumer trends and habits to the global effort to address obesity. Retailers possess insightful data on consumer behavior and choice, and by sharing such marketing data with multidisciplinary research

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teams, new innovations will become possible. Information on consumer trends and habits could provide a very important research tool for the public sector to frame new research questions.

In addition to gathering more information on how consumers make decisions about what products to purchase, participants also discussed the ways in which the private sector can actively influence consumer choices through

marketing, labeling, and in-store consultations and education.

Claire Hughes, Company Nutritionist at Marks & Spencer, described how clear food labeling can help influence consumer behavior by incentivizing healthier choices. “Consumers are confused about nutrition,” she said. “There are so many conflicting voices out there telling people what to eat and how to eat it, it’s difficult to know how to make the right decisions.”

“We need more research on what motivates consumers to do the right thing,” **Rhona Applebaum**, Vice President and Chief Scientific and Regulatory Officer at The Coca-Cola Company, added. “We need to bring consumers into the dialogue.”

Dr. Munday agreed, while pointing out the need to simultaneously develop clearer definitions of



(left) **Ricardo Uauy**, Professor of Public Health Nutrition at the University of Chile’s Institute of Nutrition and Food Technology and the London School of Hygiene and Tropical Medicine; (right) **Tim Frayling**, Professor, Human Genetics, Peninsula Medical School, Universities of Exeter & Plymouth.

the “right” direction. “We need simple messages, but simplification can be a challenge with such complex, multifaceted issues that depend in part on each individual’s lifestyle and genetic make-up.”

Discussants also touched on workplace well-being as an important educational aspect of many private-sector companies’ policies, providing information and guidance to employees to enable better food and lifestyle choices. At the population level, participants felt that a simplified and standardized global system of nutritional information and labeling could be a very positive development, and that international agreement was required on how to do this in a way that would decrease consumer confusion.

Sir William Castell, Chairman, The Wellcome Trust



Participants agreed that the private sector, working with governments, should aim to provide consistent messages and labeling to facilitate informed choices.

WHAT WORKS? THE ROLE OF PUBLIC HEALTH AND BEHAVIORAL INTERVENTIONS

“Voluntary behavior change is very hard to elicit,” **Farhad Riahi**, Associate Principal at McKinsey & Company, London, said. “So how do we make incentives for change more effective?”

The workshop’s third panel addressed different ways of influencing individual behavior: for example, by educating and informing; enabling change (by giving more options); providing incentives (such as tax breaks); or making

changes mandatory (e.g., no smoking in public spaces). **Ala Alwan**, Assistant Director-General of Non-Communicable Diseases and Mental Health for the WHO, discussed lessons learned from existing and past obesity risk factor reduction programs. In particular, he said, “interventions and strategies to reduce risk factors are more effective when they combine a population-based approach with an additional focus on high-risk individuals.” He emphasized the importance of preventing the emergence of risk factors, highlighting a need for more emphasis on ensuring healthy nutrition and healthy behaviors as early as possible during childhood.

Experience shows that although modest changes in risk factors for obesity can carry significant public health benefits, more substantial reduction

of risk factors and behavior modification require interventions that can be sustained over extended periods of time at appropriate levels of intensity. The success of community-based interventions relies on several key factors: community participation; supportive policy and fiscal decisions; intersectoral action; appropriate legislation; healthcare reform; and collaboration with nongovernmental organizations, industry, and the private sector. In all cases, Dr. Alwan noted, decisions made outside the health sector often have a major bearing on elements that influence risk factors for obesity. Oftentimes more health gains—in terms of prevention—



(left) **Susan Jebb**, Head of MRC Nutrition and Health Research, University of Cambridge; (right) **Anita Cormac**, Executive Director, Focus on Food Campaign.

Finding the right message: Speaking with one voice

Individual behavioral change is one of the most effective preventive methods for combatting obesity and its associated diseases epidemic in both developed and developing countries. But getting individuals to make better choices voluntarily is a real challenge faced by policymakers. Effective, specific, and consistent messages from trusted sources will be important in providing consumers with the correct and necessary information about nutrition.

Governments can leverage industry's messaging power and ability to access key information on consumer decision-making to help create demand for more nutritious products, influence more

positive public policy, and alleviate the general confusion among consumers about what is “healthy.” Store cards and loyalty cards are one example of marketing information that could be utilized to understand consumer purchasing behavior. Building on successful public policies—policies that limit the advertisement of tobacco and alcohol and which have led to successful anti-smoking and other social marketing campaigns—governments and policymakers can raise awareness and consumer consciousness on healthy eating and lifestyle to improve purchasing habits.

Phillip James, Chairman, International Obesity Taskforce.



are achieved by influencing public policies in domains such as trade, food and pharmaceutical production, agriculture, urban development, and taxation than by changes in health policy alone. Finally, more emphasis on implementing and evaluating interventions in low and middle income countries is necessary in order to generate evidence that the scaling up of interventions that are effective in high income countries is also fiscally feasible in resource-limited countries.

Participants agreed that purely educational interventions are largely unsuccessful without at least one other complementary intervention (for example, some level of enforcement or effort to engage the target population in an active dialogue about the process). In other words, education is only the first step. With

school children, discussants explored different ways to get young people engaged in the topic—for example through policy debates. **Anita Cormac**, Executive Director of the Focus on Food Campaign, described her organization's work on raising the profile of practical food education as well as on improving the quality of food in primary and secondary schools in the UK and beyond. The core activity is a hands-on approach to education, where primary and secondary school-age children prepare and cook food themselves. In addition, school teachers are trained to teach cooking in schools. The campaign maintains that the diet and health of the nation will not change significantly unless people are taught the basic skills to cook their own tasty meals from fresh ingredients.

Participants concluded that new interventions should target children specifically and involve schools and parents. In effect, both parents and schools should be considered responsible for ensuring good nutrition in children.

Pirjo Pietin, Head of the Nutrition Unit in Finland's National Public Health Institute provided another example at the national level of an intervention that had a positive effect on changing diets. The North Karelia Project in Finland was launched in 1972 to prevent cardiovascular disease with special attention to diet. The project rapidly expanded to cover the whole country. The main goals were to change the type of fats used, to lower sodium intake, and to increase vegetable and fruit consumption. During the period 1972–97, the national diet changed and the blood pressure and serum cholesterol levels in the overall

population improved. Importantly, during this period cardiovascular mortality also decreased dramatically. The project showed that dietary changes are possible but require a persistent and comprehensive intervention. Additionally, in cooperation with the WHO, local and national authorities and experts, individuals, and community organizations have carried out comprehensive nutritional interventions targeting school lunches and increased physical activity in schools, leading to successful results.

In addition to direct education programs, the creative use of the media also emerged as a critical theme of the workshop. For example, media campaigns in the United States addressing the danger of drinking and driving have been very successful in influencing individuals' decisions not to drive while under the influence of alcohol. Additionally, participants agreed that nutrition-related legislation deserved more exploration and application. For example, the New York City Board of Health voted to make the city's restaurant chains show calorie information on their menus and menu board. The new regulation applies to any chain restaurant in New York City that has fifteen or more outlets anywhere in the United States (about 10 percent of restaurants).

"The environment is also a critical factor in healthy behavior." **Theresa Marteau**, Professor of Health Psychology at King's College, London, warned discussants about "the danger of overestimating the extent to which behavior reflects individual choice and underestimating

the often far more important role of the environment in determining people's actions and decisions." In other words, behavior is not necessarily a result of a conscious decision; individual actions are often more a result of context than individual cognition. Inexpensive bicycle rentals and safe bicycle routes, for example, incentivize physical activity. Public spaces equipped with simple exercise equipment—prevalent throughout China and Singapore—make exercise easy.

A concerted focus on mothers and infants, as well as on school-age children, can help us address

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(right) **K. Srinath Reddy**, President, Public Health Foundation of India; (left) **Pin Woon Lam**, Chief Executive Officer, Health Promotion Board, Singapore.

this problem from a prevention angle rather than through a late-stage intervention model. The moderator for this panel, **Christopher Fairburn**, Governor of the Wellcome Trust, agreed that the focus should be on young people and commented that “only enduring behavioral changes will have an impact.”

WHERE SHOULD OBESITY SIT ON THE GLOBAL HEALTH AGENDA? CONNECTING SCIENCE, INDUSTRY, AND POLICY

“Obesity is the third highest contributor—after smoking and high blood pressure—to the disease burden in the developed world,” noted **Philip James**, Chairman of the International Obesity Taskforce. **Leszek Borysiewicz**, CEO of the Medical Research Council and moderator of this panel, agreed that “chronic diseases must be center-stage” and not just in the developed world: “the tide is changing; chronic diseases are becoming more important to developing countries.”

The last session of the workshop wove together dominant themes discussed throughout the day, with a focus on how to move from talk to action. Most notable was agreement among all participants to explore and promote more enlightened and research-based policy in the area of obesity and associated diseases.

The enlightened policy challenge emerged from a discussion about the complexity of creating and updating policies and strategies in situations where the evidence base on already initiated and evaluated policies is inadequate. “We must not use a lack of evidence as an alibi for inaction,”

remarked **K. Srinath Reddy**, President of the Public Health Foundation of India. “Often, the scientific evidence on causality is strong enough to provide evidence for policy. In such situations policy interventions like smoke-free public places or elimination of trans-fats from processed foods can be introduced, and their impact subsequently evaluated, to provide evidence on policy. Additionally, enlightened policy requires scientific credibility, financial feasibility, operational sustainability and scalability, and political viability. Research must become more interdisciplinary to provide all these perspectives to policymakers.”

It is also important to recognize that each stakeholder group—science, industry, and policy—has a different interest in addressing malnutrition and that cross-dialogue between stakeholders will be key to a cohesive course of action. “Companies have demonstrated that they can work with one another, as well as with science and policy to effect change through organizations such as the Leapfrog Group, for

Instead of simply waiting for new data to emerge, policymakers must simultaneously put in place changes at the policy level, evaluate their effectiveness, and be prepared to change them if they do not work

example,” noted **Martin Evans**, Head of Clinical Domain Practices for Fujitsu Services. “It is possible to identify win-win strategies; we are not all competitors.”

Participants agreed that a two-pronged strategy for action is essential. First, innovative new research conducted by multidisciplinary teams is necessary to provide policy- and other decision-makers with better information on which to base interventions and programs. Second, **Sally Davies**, Director-General of Research and Development for the UK Department of Health and National Health Service, argued that “instead of simply waiting for new data to emerge, policymakers must simultaneously put in place changes at the policy level, evaluate their effectiveness, and be prepared to change them if they do not work.”

The government of the UK has identified obesity as a priority, and a R&D strategy for obesity is expected to be announced by September 2008. In the United States, the National Institutes of Health (NIH) has expanded its focus on behavioral interventions, developing specific calls for proposals in this area. In addition, **Minh Nguyen**, Deputy in Chief of Science Event and Research Management at Vietnam’s National Institute of Nutrition, described Vietnam’s active efforts to put in place effective policies and pilot programs to combat the complexity of the double burden,



(right) **Sally Davies**, Director-General, Department of Research and Development, UK Department of Health and National Health Service; (left) **Sir Leszek Borysiewicz**, Chief Executive Officer, Medical Research Council.

where both over and undernutrition coexist. Vietnam’s National Institute of Nutrition is also sponsoring research on obesity and the paradox of overweight adults who were undernourished and stunted as children.

Pin Woon Lam, Chief Executive Officer of Singapore’s Health Promotion Board, described Singapore’s efforts to address the growing challenge of obesity and associated diseases by encouraging healthy behavior through education, collaboration with the food industry, and incentive programs for workplaces, as well as through targeted policies and national school programs that feature regular monitoring and evaluation.

Finally, **Van Hubbard**, Director of Nutrition Research Coordination at the NIH again called for more public-private partnerships that would provide added value and serve as models for future interventions at a global scale.

Maria Cattau moderating a 2007 Pacific Health Summit plenary discussion.



Leszek Borysiewicz stated that the problem of malnutrition should not be “sold” as an issue needing attention in the context of decreasing associated healthcare costs, but rather in regard to added life years and, therefore, increased manpower, productivity, and GDP for the economy. Mark Walport went further in stating that the best way to communicate the importance of this issue to treasurers, presidents, and prime ministers is by linking obesity to food security.

Recent skyrocketing food prices have placed a new strain on the most vulnerable populations in both the developed and developing worlds, pushing consumers to eat less expensive, less nutritious foods while also straining the already weak diets of many undernourished populations. While immediate assistance to the most affected is available through a coalition of aid from donor countries that have

pledged their support, long-term solutions are complex, requiring alliances across sectors and partners. Such alliances must focus not only on malnutrition but also on the linkages between energy, economic sustainability and growth, income, climate change, agriculture, technology, security, and health systems.

TOWARD THE PACIFIC HEALTH SUMMIT

The 2008 Summit theme is “The Global Nutrition Challenge: Getting a Healthy Start.” Discussions will tackle the complex challenge of too little of the right nutrition for vulnerable populations and the rapidly emerging health threat of too much of the wrong kind of nutrition in both the developed and developing world.

Nutrition touches almost every aspect of human existence. While the field is experiencing a renewed energy and optimism in 2008, spiraling food prices in recent months threaten to exacerbate shortages, hunger, as well as problems of both over and undernutrition around the globe. Both the public and private sectors have a role to play in addressing this critical issue.

Building on unprecedented opportunities in global health and the nutrition field in 2008, the Summit's Advance Workshops in Tokyo and London complement a year of events designed to foster new collaborations and partnerships in nutrition and help mold the program for June's discussions in Seattle. Six core themes that emerged from the London workshop, which will feed directly into the Pacific Health Summit program, include:

- ❖ A need for treasurers, presidents, and prime ministers to prioritize the global challenge of malnutrition.
- ❖ A need for policy changes in association with more research, particularly interdisciplinary research. However, policy changes should not necessarily wait for the results of these research studies.
- ❖ A need for fundamental changes to science and policy that reflect a global challenge for which biomedical sciences do not currently have solutions.
- ❖ A need for more public-private partnerships, including the sharing of R&D and marketing data, as well as educational programs and other initiatives.
- ❖ A need for a unified private-sector voice and a willingness among industry to undergo further self-regulation and to introduce a global system of nutrition profiling and labeling.
- ❖ A need for governments to incentivize the private sector to reformulate their products, introduce healthy options, and increase the marketing of these healthier products while decreasing the marketing of unhealthy products.



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