POPULATION-BASED PREVENTION STRATEGIES FOR CHILDHOOD OBESITY

REPORT OF THE WHO FORUM AND TECHNICAL MEETING

World Health Organization

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Contents

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Abbreviations

The following abbreviations are used in this report:

ACE	Assessing Cost-effectiveness
BMI	body mass index
CDC	Centers for Disease Control and Prevention (USA)
COSI	Childhood Obesity Surveillance Initiative
EPODE	Ensemble, Prévenons l'Obésité Des Enfants (France)
EU	European Union
GSHS	Global School-based Student Health Survey
IASO	International Association for the Study of Obesity
IUCC	International Union Against Cancer
KKL	Kampala Kids League (Uganda)
NCD	Noncommunicable disease
OECD	Organisation for Economic Cooperation and Development
PNNS	Programme National Nutrition Santé (France)
TKL	The Kids League (Uganda)
WHO	World Health Organization

Executive summary

By the end of 2010, an estimated 43 million children under five will be overweight. Population-based prevention will be a vital part of the effort to stem this rising tide of childhood obesity, described by some as having reached epidemic proportions. Strategic investment is urgently required to implement effective and culturally appropriate population-based childhood obesity prevention programmes and initiatives, and to ensure that they include vulnerable groups, such as children with disabilities.

The World Health Organization (WHO) Forum and Technical Meeting on Population-based Prevention Strategies for Childhood Obesity was held in December 2009 to identify priorities for population-based strategies to prevent childhood obesity and to define roles and responsibilities for various stakeholders. The meeting also provided a unique opportunity for participants to share experiences and lessons learned; presentations given by meeting participants described a wide spectrum of current approaches to obesity prevention, including regionally and nationally coordinated initiatives, school- and sports-based projects, public–private partnerships, and global and national strategies for providing resources for intervention. Although this report focuses on the conclusions reached by the meeting, which include a list of guiding principles for policy and programme development and examples of areas for action, brief summaries of the presentations given have also been included.

It is generally accepted that comprehensive and coordinated interventions which support and facilitate physical activity and healthy diets in the context of a social-determinants-of-health approach represent the best way forward for obesity prevention in childhood. It is essential that such interventions occur across the whole population – in a variety of settings and through multiple strategies. Action must span policy, programmes and advocacy. Guiding principles for interventions to support behaviour change include policy support, equity, inclusivity, multisectoral engagement, transparency and environmental change. Surveillance, monitoring and evaluation are also critical to support effective action.

Primary stakeholders are WHO, whose key role is to provide technical support, tools and resources to support action, and national governments of Member States, whose responsibility it is to provide leadership, undertake monitoring and surveillance, and implement interventions appropriate to their context. Nongovernmental organizations, civil society, academia and the private sector contribute, as appropriate, by developing and implementing interventions, monitoring progress, disseminating information on best practice and by advocating for change. Future challenges include identification of appropriate and cost-effective interventions, priority setting, minimizing conflicts of interest and ensuring programme sustainability.

For all stakeholders, the critical next steps for prevention are the scaling up of monitoring and surveillance efforts, improved coordination of preventive action, and the creation of more formal platforms for information sharing and exchange, especially in terms of 'best practice' interventions.

Introduction

The World Health Organization (WHO) Forum and Technical Meeting on Population-based Prevention Strategies for Childhood Obesity was held in Geneva, Switzerland, from 15 to 17 December 2009. The meeting was opened by Dr Ala Alwan, WHO Assistant Director-General for Noncommunicable Diseases and Mental Health.

The Forum and Technical Meeting was convened as part of WHO's response to the global epidemic of noncommunicable diseases (NCDs). It builds on previous work conducted by WHO departments based at headquarters, as well as on work under way in the various WHO regional offices.

In 2005, NCDs caused an estimated 35 million deaths worldwide, of which 80% occurred in low- and middle-income countries (*1*). Just over a quarter (27%) of all deaths in that year were considered premature deaths due to preventable NCDs (*2*). The contribution of unhealthy diet and physical inactivity to these deaths – unhealthy diet and physical inactivity rank among the main risk factors for NCDs – is recognized by WHO's Global Strategy for the Prevention and Control of Noncommunicable Diseases (*3*) and is addressed more specifically by WHO's Global Strategy on Diet, Physical Activity and Health (*4*). These two strategies, and the more recent 2008–2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases (*5*), provide the platform for WHO's work on NCDs. Childhood obesity[1] prevention is an important and integral part of WHO's work in this area, and was raised as a particular concern in the Global Strategy on Diet, Physical Activity and Health (*4*).

The overall aim of the Forum and Technical Meeting was to identify priorities for population-based strategies to prevent childhood obesity and to define roles and responsibilities for various stakeholders, as the first step in a process to develop recommendations on population-based strategies to prevent childhood obesity.

The specific objectives of the meeting were:

- to review and discuss determinants for childhood obesity and the implications for policy and programme planning, and evaluation;
- to review and discuss policies and programmes for population-based prevention of childhood obesity, highlighting strengths and weaknesses, how to overcome barriers for success and how to scale up and sustain successful initiatives;
- to review and discuss roles and responsibilities for various stakeholders in population-based strategies to prevent childhood obesity.

The meeting was conducted through a mix of plenary sessions and working group discussions. The plenary sessions covered topics such as underlying social and environmental determinants of childhood obesity, the importance of surveillance and partnerships, regional and national strategies on population-based prevention of childhood obesity and obesity prevention in children with disability. Parallel facilitated working group sessions discussed the use of surveillance in programme planning, working with nongovernmental stakeholders, and obesity and inequality. Two subsequent working group sessions reviewed and discussed supportive environments and policies.

This document presents the results of the working group discussions, which include a set of guiding principles for childhood obesity policy and programme development and examples of areas for action (see section 4). It also includes summaries of presentations on country experiences in prevention interventions that were given at the meeting (see section 3).

Participants included representatives of ministries of health, nongovernmental organizations, international health and consumer organizations, public–private partnerships and academics (see Annex 1). A full listing of the meeting programme, including details of plenary and working group sessions, is attached as Annex 2.

[1] Unless specified "childhood obesity" refers to both overweight and obesity in children, i.e. having a body mass index (BMI) of over 25, as defined by the WHO Child Growth Standards (*6*), equivalent to having an adult BMI of 25 or over.

Population-based strategies for prevention of childhood obesity: theory and practice

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2.1 Prevalence of childhood obesity

Overweight and obesity now ranks as the fifth leading global risk for mortality. In addition, 44% of the diabetes burden, 23% of the ischaemic heart disease burden and between 7% and 41% of certain cancer burdens are attributable to overweight and obesity (*7*). Obesity has negative health impacts in childhood, as well as in the long term. In addition to a higher risk of obesity and NCDs later in life, affected children experience adverse outcomes such as breathing difficulties, increased risk of fractures, hypertension, early markers of cardiovascular disease, insulin resistance and psychological effects (*8–10*).

The rise in childhood obesity over the past decade has been dramatic. It is estimated that in 2010, 43 million children under the age of 5 years will be overweight (*11*). Although current estimates suggest that the rate of obesity in developed countries is double that in developing countries, in terms of absolute numbers, prevalence is much higher in developing countries. There are an estimated 35 million overweight/obese children in developing countries, compared with 8 million in developed countries.

2.2 The need for population-based strategies to tackle childhood obesity

Once children (and adults) are obese, it is often difficult for them to lose weight through physical activity and healthy diet. Preventing weight gain from an early age, i.e. in childhood, is therefore recognized as a strategy that will reap health benefits in the long term. Experience in several countries has shown that successful obesity prevention and behaviour change during childhood can be achieved through a combination of population-based measures, implemented both at the national level and as part of local 'settings-based' approaches, in particular, school- and community-based programmes (*12*, *13*).

Population-based prevention strategies seek to change the social norm by encouraging an increase in healthy behaviours and a reduction in health risk. They involve shifting the responsibility of tackling health risks from the individual to governments and health ministries, thereby acknowledging the fact that social and economic factors contribute strongly to disease (*7*). Population-based prevention strategies for childhood obesity thus seek to support and facilitate increased physical activity and healthier diets in the context of a 'social-determinants-of-health' approach. Accordingly, it is essential that interventions for obesity prevention occur across the whole population, operating in a variety of settings and at multiple levels of government. Although local intervention allows action to be tailored to meet the specific context and nature of a problem, only national guidance (and funding) can ensure effectiveness and sustainability of action at a population level.

The key elements of a population-based approach to childhood obesity prevention are policy support, monitoring systems, knowledge translation and a strategy for integrating evidence into

the development of multi-level programmes. Although the importance of obesity prevention in childhood is now widely acknowledged, to date interventions have tended to target only small populations or population subgroups, predominantly in developed countries. Although many of these interventions have yielded promising results, there has been little coordinated action to identify these and extend their reach to prevent obesity at the population level.

2.3 An implementation framework for the WHO Global Strategy on Diet, Physical Activity and Health

The schematic model developed by WHO for monitoring the implementation of the Global Strategy on Diet, Physical Activity and Health may provide the basis for a framework for action on childhood obesity prevention (Figure 1)[2]. The implementation framework (*14*) aims to explain how supportive environments, policies and programmes can influence behaviour changes in a population and have longer-term environmental, social, health and economic benefits. The framework also sets out how monitoring and evaluation can be integrated into the process of facilitating behaviour change. As stated in the 2008–2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases (*5*), the monitoring and evaluation component provides the foundation for advocacy, policy development and action.

The model recognizes that action by multiple stakeholders, coordinated by national strategic leadership, is necessary for effective obesity prevention. Key stakeholders are governments at the national (including intergovernmental cooperation via global forums), regional and local levels, nongovernmental organizations and civil society, academia and the private sector. Ministries of health play a key role in coordinating partnerships.

In addition to coordinated action by multiple stakeholders, effective population-based prevention depends on having the right mix of upstream, midstream and downstream approaches with which to effect environmental change to support healthy behaviours (i.e. structural change that makes the healthy choices the easy choices). Upstream (or socioecological) approaches aim to shape the economic, social and physical (built and natural) environments, midstream (or lifestyle) approaches aim to directly influence behaviour (reducing energy intake and increasing physical activity), and downstream (health services) approaches support health services and clinical interventions (*15*, *16*).

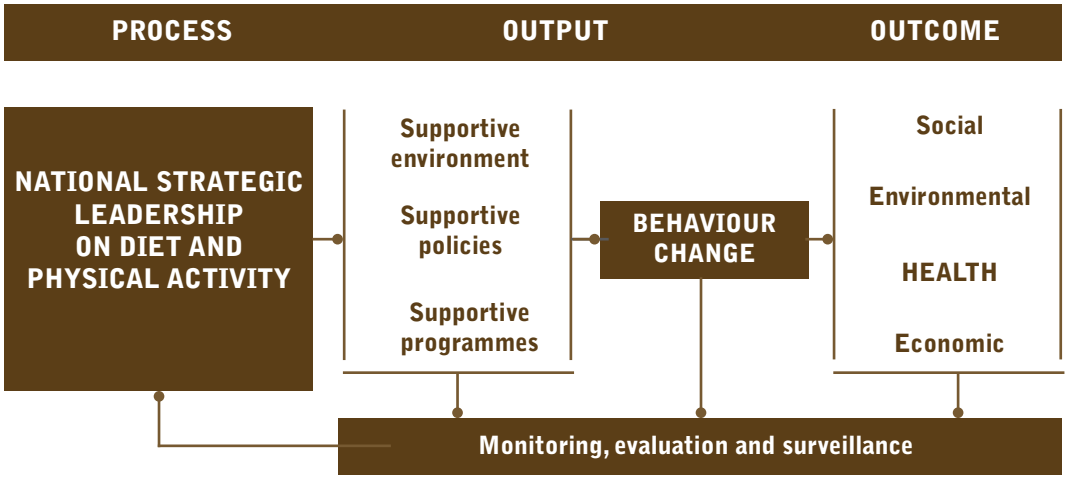

Figure 1: Implementation framework for the Global Strategy on Diet, Physical Activity and Health
Source: reference *14*.

[2] Available from: www.who.int/dietphysicalactivity/DPASindicators/en/index.html.

2.4 Using surveillance data to support policy development

Presentations summarizing recent progress in the development of a number of surveillance tools and their possible application to obesity prevention policy planning were noted with interest by meeting participants. Included in these activities are WHO's work on developing growth standards and the Global School-based Student Health Survey.

The WHO Child Growth Standards for infants aged 0–60 months were published in April 2006 (*6*). As of November 2009, these had been implemented in 106 countries and another 63 countries are in the process of discussing their adoption. The standards are based on the results of WHO's Multicentre Growth Reference Study, comprising primary growth data and related information derived from a representative sample of healthy breastfed infants and young children from widely diverse ethnic backgrounds and cultural settings in six countries from around the globe.

The standards provide not only an improved tool for growth assessment, but also better coherence with country adoption of the Global Strategy for Infant and Young Child Feeding (*17*). They also allow monitoring of the double burden of malnutrition (i.e. stunting and overweight) through measurement of height and BMI, harmonize growth assessment systems within and between countries and will play a key role in the early identification of childhood overweight and obesity. It is hoped that these standards will serve as a key foundation for advocacy, implementation and measurement of health goals and indicators.

The meeting was also informed of another surveillance tool with global application, the Global School-based Student Health Survey (GSHS). Developed by WHO in collaboration with the United States Centers for Disease Control and Prevention, this tool is designed to help countries measure and assess health behaviours and protective factors among young people aged 13–15 years. It relies on a relatively low-cost self-administered questionnaire, which can be used to obtain information in 10 key areas that are known to be related to the leading causes of morbidity and mortality.

To date, 57 countries have undertaken student health surveys. The information gathered on height and weight, dietary behaviours (fruit/vegetable consumption, soft drinks consumption, fast-food restaurant visits) and physical activity (overall physical activity, travel to school, physical education classes, sitting time) has been found to be particularly useful for developing prevention policies and programmes for the school setting.

According to the European Ministerial Conference on Counteracting Obesity, only around 25% of Member States in the WHO European Region have validated national prevalence data on overweight or obesity in children (aged <10 years). Moreover, measurement tools and calculations of anthropometry data are not standardized across the region, making it difficult to monitor time trends, make international comparisons and evaluate the effectiveness of interventions. Responding to these findings and calls for guidance from Member States, the WHO Regional Office for Europe launched its WHO European Childhood Obesity Surveillance Initiative (COSI). This new system aims to measure trends in overweight and obesity, dietary habits and physical activity among primary schoolchildren at two-year intervals, using nationally representative samples of children aged 6, 7, 8 and/or 9 years. The first data were collected in the school year 2007/2008.

The experience of the United Arab Emirates provided a useful practical demonstration of the benefits of using surveillance data to inform public health policy at the national level. Routine reporting systems which are in place in hospitals, health care centres and schools, and periodic national health and nutrition surveys as well as national registries for diabetes, cancer and cardiovascular diseases, have generated valuable data which have informed and effected changes in the provision and impact of health services. Based on surveillance data, changes have been made in the organizational structure of the Ministry of Health (including the establishment of national committees and a NCD department), and more recently available data on disease prevalence and health risks have been used to inform national campaigns on obesity, diabetes and physical activity.

2.5 Challenges and future priorities

Significant challenges remain along the entire spectrum of planning – implementing – and evaluating childhood obesity prevention interventions, and careful consideration of each of these challenges can help to improve outcomes. The key challenges and important considerations associated with developing population-based strategies to prevent childhood obesity identified by meeting participants are summarized below.

Globalization

Globalization of food systems has created economic and social drivers of obesity through changes in the food supply and people's diets. These economic and social drivers include urbanization, free markets, cross-border media and cultural transitions, along with a greater availability of energy-dense foods. Globalization is linked to intensification and commercialization of food production, trade, retailing and marketing, which has created a safer and more reliable food supply in many parts of the world but, at the same time, has resulted in increased availability and affordability of high-calorie/nutrient-poor foods. It has also reduced control over food supplies and food prices within countries, which increases the vulnerability of low-income populations, especially the urban poor. As a result, children's food choices are often made in an environment in which high-calorie/nutrient-poor foods are readily available, relatively inexpensive and heavily marketed. Increased trade in food and less control over food supplies and food prices may also affect local markets, rendering rural populations more vulnerable to food insecurity.

A clear challenge in designing strategies to prevent childhood obesity lies in redefining a healthful food supply to emphasize both quantity and quality in order to simultaneously address undernutrition and obesity in children, which in many countries constitutes a double burden.

An important consideration when designing strategies is to emphasize links between public health nutrition goals and environmental sustainability. Any new strategy should try to achieve a win-win situation for both public health and environmental sustainability.

Urbanization

Urbanization is often seen as a challenge to healthy lifestyles. However, both urban and rural living have been associated with higher prevalence of obesity and also with other risk factors for NCDs. Thus, it is the nature of the urbanization and/or city itself rather than urbanization per se that influences the development of obesity and disease. Urbanization may very well be part of the solution if local governance is geared towards promoting active and nutritious cities.

Socioeconomics and demographics

Studies in high-income countries have shown that obesity prevalence is higher in children from lower socioeconomic groups. The same inverse relationship between socioeconomic status and obesity is seen in most populations. Across countries, income inequalities and the proportion of children living in relative poverty are associated with higher prevalence of overweight, irrespective of absolute income level.

There is some evidence to suggest that programmes to prevent childhood obesity may benefit children from higher socioeconomic groups more than those from poorer families and backgrounds. The lower engagement of parents from lower socioeconomic backgrounds in school-based programmes and events may contribute to this disparity in effect. In order to avoid deepening socioeconomic inequalities, targeted interventions may be required. However, such programmes are likely to be more resource intensive.

The age at which inequities emerge also deserves consideration in future programme planning. As more women go into pregnancy with obesity, the prevalence of gestational diabetes increases. In some countries, especially countries in transition, a stagnation in breastfeeding rates has been seen, which also has negative consequences for the growing child and associated implications for childhood obesity. A lifecycle approach to obesity prevention is therefore paramount.

It is reported that obesity prevalence varies between ethnic groups within countries. National averages can often hide major high risk scenarios and diverging patterns affecting immigrant or minority populations. Gender differentials in obesity prevalence are also frequently observed and need to be considered in programme planning.

Obesity in children with disability

The risk of obesity is generally much higher in children with disability[3] than in the general population. One reason for this increased vulnerability to obesity is the fact that children with disabilities face significant structural barriers to physical activity. These barriers include environments that restrict access to facilities and a lack of understanding among children, their carers and teachers regarding their physical activity capabilities, as well as family factors such as financial and time constraints. Also, people with disability often experience decreased physical activity levels, motor skill deficiencies, lack of motivation, withdrawal, physical disabilities (e.g. amputee, spina bifida, cerebral paresis) and various other health issues (e.g. children with Down syndrome are prone to heart problems; children with diabetes may become blind), and some need to take medication which can cause weight gain.

The Convention on the Rights of Persons with Disabilities, adopted in December 2006, establishes disability as a human rights issue with cross-cutting implications for social development and calls on governments to enable persons with disabilities to participate on an equal basis with others in recreational, leisure and sporting activities. An important consideration when developing strategies to prevent childhood obesity is therefore to ensure that participation of persons with disabilities is encouraged and promoted in mainstream sporting activities at all levels. This will in some instances require adapted physical activity in areas such as physical education, sport, recreation, dance and creative arts, nutrition, medicine and rehabilitation, which again requires proper training of health-care professionals caring for children with disabilities. A shift in thinking from institutional to community-based care is needed.

Cost-effectiveness

The limited evidence base for the effectiveness of interventions in changing lifestyles and reducing the prevalence of obesity remains a major challenge to evidence-based policy-making. A model-based analysis of possible interventions to prevent chronic disease by improving diet and increasing physical activity, jointly undertaken by the Organisation for Economic Cooperation and Development (OECD) and WHO, suggests that effects are small if interventions target individual determinants or are narrowly targeted at groups of individuals, whereas combined approaches which address multiple determinants can improve effectiveness and efficiency. The same analysis also showed that although some of the most cost-effective interventions operate outside the health sector, health-care systems can have the largest impact on obesity and related chronic disease by targeting individuals at highest risk. Most interventions have favourable cost-effectiveness ratios and also a favourable distributional impact in reducing inequalities between socioeconomic groups, but their impact may take a long time to be realized. This is especially true of interventions aimed at children (*18*).

The Assessing Cost-effectiveness (ACE) in Obesity Project, conducted in Victoria, Australia (*19*), compared 13 specific interventions for preventing unhealthy weight gain in children and adolescents in terms of their potential impact (measured as expected reduction in BMI units per person), the size of the population reached by the intervention, the resultant health benefit to the population overall (measured as disability-adjusted life-years saved) and the cost of the intervention. The ACE analysis found that the greatest health benefit for prevention of childhood obesity is likely to be achieved through reduction in TV advertising of high fat and/or high sugar foods and drinks to children, laparoscopic adjustable gastric banding and multi-faceted school-based programmes with an active physical education component.

In designing intervention, the requirement for resources up front may favour the adoption of multiple stakeholder approaches to shift some costs away from government budgets. Using existing structures for programme implementation may be another way to limit costs.

[3] According to the United Nations Convention on the Rights of Persons with Disabilities, adopted in December 2006, people with disabilities are defined as "those who have long-term physical, mental, intellectual, or sensory impairments that in interaction with various barriers might hinder their full and effective participation in society or an equal basis with other."

2.6 Responding to the challenges: selecting and implementing interventions

Appropriate settings for childhood obesity prevention interventions include schools (including after-school programmes), homes and communities, as well as clinical settings (*13*). Strategic investment is required to implement effective and culturally appropriate population-based childhood obesity prevention programmes, and in particular to ensure that they include vulnerable groups, such as children with disabilities. As outlined above, consideration of potential differential outcomes and the ability of such groups to participate needs to be an integral part of policy and programme development and planning, ideally at an early stage.

Given the wide range of potential options, finding the right approach, or rather the right combination of approaches, to childhood obesity prevention for a given context remains the key challenge. Consideration of country- and community-specific factors, such as availability of resources and/or socioeconomic differentials in obesity prevalence, will likely form a significant part of the decision-making process. Experience has shown that the use of transparent, tried-and-tested priority-setting processes and tools can be of considerable benefit in this regard.

Ensuring transparent and effective engagement with stakeholders outside of government has also been identified as an important factor that can influence the success or otherwise of programme implementation. Approaches which help minimize conflicts of interest include public availability of information on partnerships and mandatory disclosure of potential conflicts of interest.

Effective programme implementation and sustainability are two further critical elements of successful obesity prevention, but can be hampered by limited availability of resources and/or short-term planning. Planning and budgeting for the longer term, as well as identification of cost-effective interventions can improve both implementation effectiveness and programme sustainability. Creativity in funding is required to ensure long-term sustainability; this might include the development of strategies to uncouple funding by the private sector from direction setting and intervention selection.

Finally, attention was drawn to the important role of monitoring and evaluation of policies and programmes; these functions are essential for identifying whether or not interventions are achieving their desired goals. The matter of the selection of relevant and appropriate indicators that measure both short-term and long-term progress towards programme goals remains an area of concern, but the hope was expressed that WHO's implementation framework for the Global Strategy on Diet, Physical Activity and Health (see section 2.3) would provide a useful basis for the development of indicators in the future.

Targeting childhood obesity: country experiences and lessons learned

3

The meeting allowed participants to share their experiences in obesity prevention. Presentations reflected the wide range of different approaches that have been used, including interventions in different settings and by different stakeholder groups. The national examples show that governments can support and coordinate action in a number of areas – from policy change and public awareness/advocacy campaigns through to individual programme implementation. The regional programmes described suggest benefits from collaboration on policy development and resourcing. The examples from the Small Island Developing States in the Pacific and the Caribbean in particular demonstrate the advantages of such collaboration in low-resource settings. The potential roles of stakeholders external to government are indicated by the innovative example of France's public¬–private partnership, EPODE (Ensemble, Prévenons l'Obésité des Enfants) and by the projects conducted by nongovernmental organizations and WHO collaborating centres, which have been able to support targeted projects. Finally, the International Union Against Cancer's programme demonstrates the advantages of global resource sharing.

3.1 National strategies

Benin

The healthy schools programme in Benin seeks to reduce NCD prevalence by modifying risk factors. The programme, which is currently in its pilot phase, is funded through the national budget and nutrition department, and receives technical support from the university and WHO. Participation in the initiative is voluntary, but teachers and staff of participating schools must attend training (at the school or district level) to increase their awareness and understanding of what constitutes a healthy school, how best to plan for health and the benefits of health. Participating schools are required to draft an action plan, outlining their intentions in key areas: supportive policies, a curriculum for health, health services, a safe school environment and community participation. Schools compete against one another and for medals (bronze, silver, gold), which are awarded to schools in recognition of their achievements. Schools are also subject to an external evaluation, which monitors individual schools' performance against their own action plans.

Chile

In Chile, the burden of childhood obesity is being addressed through the existing Global Strategy against Obesity (EGO), a national effort to reduce obesity across the country. Various intersectoral policies and measures have been introduced in order to maximize the impact of the strategy on children. These include new controls on food content, safety and marketing, school programmes, primary care interventions, community education programmes and information campaigns. Preliminary results suggest that childhood obesity has started to decrease and that the interventions employed are viable for the country.

England

Since publication of the Foresight report, England has invested £372 million in a 'whole-of-environment' approach to combating obesity. In a bid to engender individual behavioural change,

the strategy "Healthy Weight, Healthy Lives: A Cross-Government Strategy for England" is focusing effort on:

- children: healthy growth and healthy weight;
- promoting healthier food choices;
- building physical activity into everyday life;
- creating incentives for better health;
- personalized advice and support.

Measures introduced to achieve these strategic objectives include national policy changes (e.g. increased support for surveillance, introduction of bans on unhealthy food advertisements, social marketing campaigns); changes to the food supply (e.g. development of a healthy food code, introduction of front-of-pack labelling, limits on fast-food restaurants near schools and parks, increased supply of fresh fruit and vegetables to stores in deprived areas); development of a national physical activity plan (tied to the 2012 Olympics and realized through investment in healthy towns which will lead the way in improving built environments); and improved nutrition-related health service provision (e.g. review of National Health Service staff well-being, promotion of boardroom reporting of staff health and well-being, advice on weight loss, national register of child weight management providers, assessment of cardiovascular disease risk in adults). The project is led by an intergovernmental team, and has provided resources (e.g. a toolkit) for commissioners of local services, and established knowledge-sharing points. Partnerships within government have been strengthened in order to leverage funds and to integrate projects into existing strategies and programmes.

France

The objective of France's national nutrition and health programme, Programme National Nutrition Santé (PNNS), is to improve the health status of the population by acting on one of its major determinants, namely nutrition. The programme is coordinated by the Ministry of Health and Sports, but is governed by a multi-stakeholder group which meets regularly (usually monthly). Individual freedom combined with social responsibility form the strategic basis of the programme – it aims to stimulate freedom of choice (through information, education and communication) within a framework of supportive physical and food environments which are designed to make the healthy choices the easiest choices.

A number of guidance tools have been developed for use by various target groups, including health professionals, and the programme is supported by a series of social marketing campaigns. Within the school setting, a number of measures to improve the food supply have been introduced, including improvements in school canteens, ceasing the morning food break, improving the quality of foods sold within secondary schools, banning all food vending machines, increasing the availability of water fountains and the free distribution of fruits. These measures are supported by pedagogical tools and strengthening of the school health service.

The national programme provides a framework for implementation at regional level. A charter of commitment has been developed for "active PNNS cities" which undertake to implement projects consistent with PNNS objectives. Evaluation of one regional initiative, the Programme for Nutrition, Prevention and Health for Children and Teenagers in Aquitaine, in operation since November 2004, has shown promising results.

The Aquitaine programme's aims are to improve fruit and vegetable intake, to increase physical activity and to stabilize the prevalence of childhood obesity through a combination of synergistic and complementary strategies. It is co-funded by the Ministry of Health and health-care insurance funds and is managed by a regional intersectoral steering committee comprised of representatives of local authorities, health-care insurance funds and ministries of health, education and sport, as well as local intersectoral steering committees which themselves involve partners drawn from "active PNNS cities", local government bodies and recreational sports associations. The three focal points for intervention are:

- improvement of the food environment in schools and recreation centres;

- nutrition education and promotion of physical activity;
- early screening, prevention and care of overweight and obese children.

Strategies include working with town councils (towns being the main place for decisions regarding supportive physical environments and schools), creating a supportive school environment (e.g. by banning vending machines, increasing the number of water fountains, and providing free fruit and teaching materials), sensitizing parents and families, disseminating information via a dedicated web site, and training local professionals. Encouraging early outcomes in 8–9-year-old children include a decreased frequency (and improved composition) of morning snacking and a stabilization in overweight prevalence.

Oman

Oman has recently implemented its "Health Promoting Schools" initiative, which incorporates health education and promotion (targeting staff and the wider local community), health services, healthy environments, nutrition, physical education and mental health. The Government has developed life-skills and physical education curricula, both with strong health messages, which are designed to be integrated into the existing school curriculum. Evaluation of this initiative has shown that students in health promoting schools have more favourable outcomes than those in control schools in terms of dietary practice, knowledge and beliefs regarding healthy lifestyle. The staff of such schools also has more favourable dietary practice outcomes.

Thailand

The "Healthy People Healthy Thailand" strategy is focused on improving diets and physical activity through a combination of policy changes, social marketing campaigns, collaborative partnerships and knowledge development. The strategy is coordinated and monitored at the national level by the Ministry of Health, which encourages development of supportive policies at the local level. Individual projects are implemented by community leaders. Specific measures relate both to food policy (e.g. offering healthier menus in child centres, ensuring that local government events promote fruit and vegetable consumption) and to exercise policy (e.g. advocacy campaigns, promoting physical activity in schools). These have been supported by a comprehensive social marketing campaign which has been conducted in schools and workplaces using the media and other communication tools, such as posters. Healthy public policy at national level is based on four simple messages: soft drink free schools, healthy meetings, exercise in business establishments, and exercise equipment in public parks.

3.2 Regional strategies

The Caribbean

In response to requests from countries in the region for assistance in improving children's nutrition, the Caribbean Food and Nutrition Institute launched a school health programme. Although initially focused on delivering health and family life education, the programme has since expanded and now supports a much wider range of health promoting activities, including revision of school feeding programmes based on nutrient reference values and local foods. The seven key programme elements currently are:

- policies to promote healthy eating,
- development of appropriate nutrition education curricula,
- behaviour-focused instruction,
- integration of food service and nutrition education,
- training for school staff,
- family and community involvement,
- regular programme evaluation.

In most countries, the programme is delivered through a partnership between the ministry of health and the ministry of education; the partnership supports school management teams (focal points), which in turn support parents, teachers and food service providers to improve the nutritional health of pupils.

The European Union

In recent years, the European Union (EU) Commission on Agriculture and Rural Development has taken steps to address obesity by promoting the consumption of fruit and vegetables. As part of this effort, health, education and agriculture authorities across the EU are collaborating in schemes to purchase and distribute fruit to schools. Such schemes are supported by various educational activities (e.g. providing information on the health benefits of increased fruit and vegetable consumption), as well as regular monitoring and evaluation exercises. Currently 23 countries participate in the programme. Fruits and vegetables for distribution are proposed by those authorities responsible for growing them; these are then approved by health authorities. The purchase of fruit is cosponsored by the EU and national governments. Monitoring and evaluation of the schemes is the responsibility of the EU, which is in the process of setting up an expert stakeholder group comprised of members drawn from academia and civil society to fulfil this role. There are also plans to hold a conference at the end of 2010 to discuss programme achievements to date and to decide on future directions.

The Pacific Islands

The Food Secure Pacific Initiative was established following the identification of food security as a pressing issue by the 2008 meeting of the Pacific Forum Leaders. Food security in much of the Pacific island region is related to obesity, chronic disease and vitamin and mineral deficiencies rather than hunger, and thus the focus of the region-wide initiative is on improving the nutritional quality of foods eaten, and in particular, on improving the availability of foods through changes to the food supply. Recognizing that many determinants for food and nutrition sit outside the health arena, and in order to stimulate action and provide leadership, it was proposed to hold a multi-sectoral food summit. In preparation for the regional food summit (planned for April 2010), a number of countries – including the Cook Islands and Vanuatu – convened national food summits during 2009 which will inform the process of the regional summit. Key issues to be addressed include the high consumption of imported foods that are high in salt, fat and sugar, declining interest in local foods, low levels of investment in agriculture, and the implications of climate change for the region.

3.3 Public–private partnerships

France

EPODE (Ensemble, Prévenons l'Obésité Des Enfants) is a multi-stakeholder, capacity-building approach which allows communities to implement effective and sustainable strategies to prevent childhood obesity. The approach was developed in France but similar programmes have been developed in other countries based on the French experience. In France, the approach aims to implement national government recommendations regarding diet and obesity, especially in school-aged children. This multi-sectoral project is guided by an expert committee, but responsibility for implementing the preventive measures recommended by the Ministry of Health falls to local government officers (e.g. city mayors), local project managers and local steering committees. EPODE's role is to mobilize resources, to train project managers and to develop tools for training, communication (e.g. leaflets) and monitoring and evaluation purposes. In France, the project is funded at the national level by the private sector and at the local level by public funds; however, local authorities are free to set up their own private–public partnerships to secure additional funding, as long as the prescribed rules are followed.

3.4 Projects managed by nongovernmental organizations and WHO collaborating centres

Australia

The WHO Collaborating Centre for Obesity Prevention based at Deakin University in Australia coordinates two pilot projects designed to tackle obesity through community-based interventions. The "Be Active Eat Well" initiative relies on a capacity building approach to help local communities set their own priorities and develop their own projects. Over 3 years, children in the intervention community gained less weight and, as a group, had a smaller waist circumference for age than children in the comparison community. The intervention has been shown to be equitable, with no socioeconomic status differential in effect, and also safe, in terms of not inducing psychological or emotional harm. The "Romp and Chomp" project has targeted the under-fives, through a policy and training approach. The project, despite a small budget and a reliance on routine data collection to serve its monitoring needs, has resulted in a 2.5% decrease in the prevalence of overweight/obesity in its target population, compared with a control community. These successes are encouraging, and highlight the potential benefits of early intervention (i.e. in younger children) and policy-centred approaches for obesity prevention. The WHO Collaborating Centre has also recently set up an online network, COOPS, in order to identify 'best practice' principles, develop mechanisms and systems for sharing 'lessons learned' experiences, improve evidence quality and analysis systems, and facilitate knowledge exchange.

India

In India, the WHO Collaborating Centre for Research, Education and Training in Diabetes based at the M.V. Hospital for Diabetes & Diabetes Research Centre in Chennai, is conducting a project to prevent childhood obesity, utilizing teachers, doctors and parents to create supportive school environments. In order to encourage behaviour modification, various awareness-raising activities for teachers and schoolchildren have been introduced into the school curriculum, including diet recommendations, physical activity counselling, advice regarding lifestyle modification and yoga demonstrations. These are delivered with the help of nongovernmental organizations and trained volunteers. Analysis of monitoring data collected as part of the project has shown that, in comparison with control schools, pupils in intervention schools are already seeing a decrease in their waist circumference and waist–hip ratios, alongside changes in attitudes and family habits, and levels of physical activity.

Uganda

The Kampala Kids League (KKL) is a grassroots child-centred sporting organization that aims to provide incentives for education and a forum for health messages through sports. The organization was founded in 1998 as a response to the lack of sporting opportunities for children in Uganda's capital and is supported by 190 commercial sponsors and 3000 adult volunteers. Since 1998, over 16 000 boys and girls aged 4–15 years from over 170 different schools, orphanages and street children's organizations have taken part in various sporting activities. In 2000, KKL started to take part in international sporting competitions, successes in which have given Uganda vital national peer role models.

In 2003 and based on the KKL model, The Kids League (TKL) was formed. This national organization now operates in seven districts where there are high numbers of children who have experienced trauma, either as victims of violence or as child soldiers, and who carry severe social, psychological and physical scars. For these deprived children, lack of self-esteem can be acute and the need to bolster and recognize success is an essential part of their rehabilitation. The experiences of involving these children in play and recreation activities have demonstrated the power of sport in mobilizing the masses and how sports can be an important development tool through supporting the re-establishing of these children's identity and social cohesion. TKL is also currently developing programmes for children with disabilities and is training coaches to run these more specialized programmes. So far, over 200 children with physical and/or intellectual disabilities in Kampala have been involved in these programmes.

United States of America

The WHO Collaborating Centre for Physical Activity and Health Promotion at the United States Centers for Disease Control and Prevention (CDC) has initiated a capacity building programme which aims to maximize use of limited resources to disseminate skills and knowledge in a sustainable manner. The programme is based on the notion of 'seed money'; for example, the CDC's Physical Activity Policy Network supports the development of research projects and partnerships which identify, disseminate and implement what needs to be done. So far, the network had produced a policy research framework, compiled case studies of physical activity policies related to active transport to schools and development of community trails, and has successfully leveraged funding for ongoing work. As the capacity of network participants increases, they become increasingly able to access additional sources of funding, and further expand their activities. The overall aim of the programme is to develop strong partnerships which extend research and promote knowledge sharing.

3.5 International organizations

The International Union Against Cancer

The International Union Against Cancer (IUCC) has instigated a major public awareness campaign to improve children's health to prevent cancer. The aim of the campaign is to support the development of healthy habits early in life. The IUCC is assisting its members with implementation of national campaigns, through online provision of resources such as guidelines, posters, news releases and fact sheets (all in multiple languages), as well as with campaign monitoring and evaluation. Seed grants are available to members for setting up and running educational/social marketing events, and in low- and middle-income countries for running capacity building workshops. The focus of these initiatives is to raise awareness about the need for culturally-sensitive cancer risk reduction campaigns, along with public and professional education about cancer warning signs, and to encourage governments to implement policies that will support risk-reducing strategies at a community level and enable individuals to make informed choices and adopt healthier lifestyles. Key lessons learned include that taking a whole-of-population perspective works well with youth, that hard-hitting media messages are more effective than ones that feel comfortable, and that media campaigns are more successful when employed as part of a comprehensive set of strategies and approaches, rather than as a one-off, stand alone activity.

The International Association for the Study of Obesity

The International Association for the Study of Obesity (IASO) critically analysed the role of commercial partnerships in programmes designed to promote children's health. Two key points emerged from this analysis: firstly, that joint programmes with the commercial sector do not necessarily mean shared long-term objectives and secondly, that there is a risk that key policy objectives will not be realized if commercial interests are allowed to participate in the process of agenda setting. Whereas commercial operators may be partners in delivery of objectives, it is important that they are not directly involved in setting objectives or the criteria for assessing the delivery of the objectives.

Preventing childhood obesity: guiding principles and areas for action

4

4.1 Guiding principles for policy development

Based on group discussions, and drawing on background papers (*12*, *13*) and the shared experiences of Member States, meeting participants identified the following as guiding principles for the development of population-based policies to prevent childhood obesity.

Policy support	Obesity prevention interventions should be supported by policies at all levels of government – national, regional and local. National policies can create a supportive environment, regional policies can facilitate pooling of resources, whereas local tailoring of interventions results in more effective targeted interventions. Global (intergovernmental) support for obesity prevention can help to address transnational environmental factors, such as creating a healthier food supply.
Equity	Some studies suggest that children of higher socioeconomic backgrounds benefit more from interventions than the more disadvantaged. Policy-makers and practitioners must therefore consider the potential impact of interventions to ensure that obesity prevention does not deepen existing inequalities. The focus of obesity prevention interventions should be on protecting the right of all children to a healthy start to life.
Inclusivity and participation	Strategies and programmes must prioritize the inclusion of vulnerable groups, particularly children with disabilities, and ensure that children are not disadvantaged on the basis of gender. It is also important to address needs of children with special learning needs, for instance, by providing recommendations and guidance for the modification of population-based strategies for specific groups.
Environmental support	The creation of environments that support healthy diets and physical activity is an essential component of childhood obesity prevention strategies. Supportive environments reinforce individual-focused educational and behavioural interventions, and can improve outcomes across the socioeconomic spectrum. Creating supportive environments requires policy changes, in particular, in the areas of food marketing and labelling, fiscal policy, urban planning, transport and agriculture. In many cases, the basis of policy change will be the correction of market failures that have created incentives for overconsumption of food and reductions in physical activity participation. Environment change in specific settings, such as schools, should also be encouraged. The onus here is on improving access to physical activity facilities and healthy eating environments, and on creating a positive atmosphere that is focused on health rather than weight.

Monitoring and surveillance	Ongoing monitoring and surveillance at global, national and local levels is essential for understanding the nature of the problem and the context for ongoing intervention. This information can be used not only to inform policy, evaluate progress and enable advocacy, but also to build political will through diplomacy, bring research closer to policy, improve exchange of information, ensure proper distribution of funding, show early and quick wins, and identify the interests of other sectors. Surveillance should use standard methodologies and tools, and wherever possible, be integrated into existing surveillance systems. Development of a common reporting framework and platforms for the collation and sharing of evidence, coupled with investment in the adaptation of standard tools for use in different contexts, are key priorities. There is also a need for continued investment in research into contextual and cultural factors, including socioeconomic factors, which influence the population distribution of obesity.
Multi-sectoral engagement	Effective obesity prevention depends on action by multiple sectors to create a healthier environment. The development of an environment supportive of physical activity will require policy support from sectors such as urban planning (built environment), education (school-based physical activity), sport (recreational activity and inclusivity) and transport (active transport and public transport). Improving the healthfulness of the food supply will require the involvement of those responsible for food standards (reformulation), communications (marketing), commerce (food retail), agriculture (investment in primary production) and education (school food environments). Other sectors, such as trade and finance, can also play a role, for example, by implementing changes to food taxation systems. Relevant sectors can be identified as part of priority setting processes at the national and local levels, and should be engaged in a coordinated way to address shared goals regarding diet and physical activity. Clear definition of roles and responsibilities are critical for effective multi-sectoral engagement.
Integration	Integration of interventions for childhood obesity prevention with existing plans and programmes that also aim to improve diets and physical activity will help to improve uptake and sustainability. In particular, existing activities linked to the Global Strategy on Diet, Physical Activity and Health can be strengthened by additional actions relating to children. To ensure a holistic approach, it is important to integrate action on obesity with other initiatives to improve food security more broadly, in order to combat the growing double burden of undernutrition and obesity. Similarly, interventions that utilize specific settings should also strive for integration; for example, in many cases, schools have been able to integrate behaviour-modification education into the existing curriculum.
Transparency	Ensuring transparency and public access to information about stakeholders working in childhood obesity prevention will help to reduce conflicts of interest and minimize concerns regarding influences on the selection of strategies. Transparency is particularly important when engaging with the private sector. While public–private partnerships can improve resourcing and help to ensure sustainability, concerns have been raised regarding the influence of for-profit companies – particularly from the food industry – on the priorities of obesity prevention interventions and the selection of strategies.
Contextualization	Contextualization of interventions – taking into account both the nature of the problem (e.g. the specific populations affected) and the cultural and social factors influencing health behaviours when choosing interventions – is essential for effective childhood obesity prevention. France's recent experience is a case in point; social marketing was far more effective when the importance of maintaining a healthy weight was framed positively, using messages focused not just on health but also on the pleasure to be

	derived from being active and eating well. Contextualization can be supported at global level through development of a framework for action that highlights strategies for local adaptation.
Sustainability	As long-term interventions have been shown to be more effective in preventing childhood obesity, it is important that interventions are sustainable. Strategies which improve programme sustainability include building on existing frameworks, recommendations, policies and datasets; developing community ownership and influencing norms (e.g. through local government support); and exploring innovative ways to make funding sustainable in the longer term (e.g. earmarked budgets).
Coordination	It is important that ministries of health coordinate action through leadership and diplomacy, both across sectors and levels of government and between public and private actors. Clear goals – and particularly the common goal of protection of children – will help to foster political will and increase public support. Involving implementers in planning will be a critical aspect of coordination.
Explicit priority setting	Given existing resource limitations, it is important that governments are explicit about priority setting. This needs to feed into work on coordination, such that partnerships contribute to overarching priorities and objectives. At global level, the development of a priority setting tool will enable governments to identify priorities for action, based on existing data and capabilities.
Capacity building	A key aspect of capacity building for childhood obesity prevention is training of teachers, health professionals and others working with children to enable them to identify childhood overweight and obesity, and their proximal causes. Capacity and political will at the national level can be built through advocacy at the grassroots level, and through global support and resourcing for obesity prevention interventions. Global instruments to facilitate capacity building could include frameworks for action and monitoring tools. Raising the profile of NCDs and their risk factors in development work at global and national levels (e.g. through the Millennium Development Goals) would also translate into enhanced capacity for obesity prevention.

4.2 Areas for action to prevent childhood obesity

From the preceding discussion, it is clear that in order to prevent childhood obesity effectively, action must be taken in multiple settings through a variety of approaches and involving all stakeholders. Based on this premise, and drawing on the framework for implementing the Global Strategy on Diet, Physical Activity and Health (see section 2.3) and the deliberations of meeting participants, a list of potential actions for different stakeholders in three key areas, namely, policy development, programme implementation and advocacy, was formulated (Table 1). In addition, attention was drawn to the need for high-level policy action to mitigate vulnerability and the negative effects of globalization and urbanization, and in the case of low-and middle-income countries, the need for integrated action that also addresses the related issues of food insecurity and undernutrition.

The complementary nature of the roles of the wide range of stakeholders is clearly evident in this list of proposed actions. National governments themselves (and through their participation in global forums), have an important role in strategy and policy development, leadership and resourcing, while governments at the sub-national and local levels contribute more through

the tailoring and implementation of policies and programmes. Nongovernmental organizations have a critical advocacy role, particularly in advocating for good practice. Other key actions for nongovernmental organizations include promoting transparency and resourcing programmes. Academia is largely responsible for building the evidence base and for advocating for the translation of evidence into practice. The private sector's role is to support and promote healthy environments; in this respect, the food industry has a specific role to play in enabling a healthy food supply.

Table 1: Examples of areas for action to prevent childhood obesity

Stakeholder	Level of action	Examples
Government		
National	Policy	National guidelines for action Coordination of multi-sectoral action by health ministries
	Programmes	National strategies for obesity prevention that include children with disability and other vulnerable groups who are more susceptible to obesity
	Advocacy	Resources and tools for advocacy Platforms for sharing of evidence and best practice
Global forums: WHO Other UN agencies	Policy	Global guidelines for action Further development of priority setting tool, based on previous work by OECD (*18*) and the ACE Obesity project (*15*, *19*)
	Programmes	Technical support and tools for monitoring and surveillance
	Advocacy	Platforms for sharing of evidence and best practice
Sub-national	Policy	Strategies for contextualization of national guidelines Coordination and knowledge sharing
	Programmes	School-based strategies for obesity prevention that include children with disability and vulnerable groups who are more susceptible to obesity
	Advocacy	Knowledge and evidence-sharing based on experiences
Local	Policy	Guidelines for healthy settings Healthy built environments
	Programmes	Tailored programmes for local context, that include children with disability and other vulnerable groups who are more susceptible to obesity Localized social marketing for healthy diets and activity
	Advocacy	Knowledge and evidence sharing based on experiences
NGOs and civil society		
	Policy	Development of technical guidance tools
	Programmes	Documenting of stakeholder interactions to improve transparency
	Advocacy	Dissemination of 'good practice models' for multi-stakeholder interactions

Academia		
	Policy	Evaluation and outcomes research
	Programmes	Development of evidence base and tools for evaluation
	Advocacy	Strategies for integrating evidence into practice
Private sector		
	Policy	Responsible marketing
	Programmes	Reformulation of foods
	Advocacy	Raise awareness of healthy lifestyles through culturally acceptable programmes

Conclusions and next steps

5

Childhood obesity is a cross-cutting issue with multiple and complex underlying causes. Out of necessity therefore, population-based prevention action must be multi-faceted, intersectoral and implemented in multiple settings.

Childhood obesity is being increasingly recognized as an issue that needs to be addressed by international agencies, governments, civil society and other stakeholders. The proposed actions for combating the problem of obesity in childhood outlined below were identified by the meeting participants for the following four major stakeholder groups: the WHO; Member States; nongovernmental organizations, civil society and academia; and the private sector. It is recommended that actions build upon existing WHO strategies and plans, including but not limited to, the Global Strategy for the Prevention and Control of Noncommunicable Diseases (*3*), the Global Strategy on Infant and Young Child Feeding (*17*), the Global Strategy on Diet, Physical Activity and Health (*4*), the 2008–2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases (*5*), and the report of the Commission on Social Determinants of Health (*20*).

World Health Organization

- Develop a guide for population-based approaches to prevent childhood obesity.
- Develop a 'tool' for Member States to determine and identify priority areas for action (in collaboration with WHO Collaborating Centres, academics, nongovernmental organizations). The tool should take into account socioeconomic, cultural, ethnic and religious diversities.
- Continue to progress work on the development of a set of recommendations on marketing of foods and non-alcoholic beverages to children.
- Continue to support Member States in the identification and improvement of school-based policies and programmes.
- Continue to progress the development of global recommendations on physical activity for children.
- Continue to take the lifecycle approach to developing strategies and recommendations for behaviour change.
- Provide technical support to Member States seeking to promote intersectoral action as part of national strategies for promoting physical activity and healthy diets.
- Strengthen action to address the double burden of undernutrition and obesity.
- Provide technical support to Member States interested in developing collaborative actions or partnerships, as appropriate, with relevant sectors and stakeholders to benefit health, and in particular to avoid potential conflicts of interest.

- Continue to guide and support Member States in the development and implementation of global surveys (such as the Global School-based Student Health Survey and Country Capacity Survey) and national surveillance systems, and in the collation and use of these data to provide trend information, to inform policy and for programme evaluation.

- Develop a set of guiding principles to enable Member States/ intergovernmental agencies to create appropriate mechanisms for profiling foods.

- In work to promote physical activity, ensure that this includes access for children with disabilities, and resources to make this possible (e.g. adapted physical activity and physical therapy specialists).

- Continue to support nongovernmental organizations and relevant networks for the implementation of programmes at national, sub-national and local levels.

- Continue to lead this area of work within the United Nations system (including the World Trade Organization and Codex Alimentarius) while collaborating with other sister agencies working in the area of child and adolescent rights.

- Facilitate the sharing of information about policies and programmes being developed and implemented.

Member States

- Include population-based prevention of childhood obesity in the national health agenda.

- Ensure that policy, plans and programmes include children with disability and vulnerable groups who are more susceptible to obesity, based on a social determinants approach to health.

- Establish cross-sectoral platforms and a multi-sectoral approach to developing an 'all of government' strategy and promoting 'health in all policies' to prevent childhood obesity and reduce inequalities, while maintaining the leadership role of the ministry of health.

- Integrate implementation of policies for childhood obesity prevention into existing structures as a measure to ensure sustainability of action.

- Utilize a mix of 'top-down' and community-based actions in plans and programmes.

- Encourage the use of legislative and financial tools to ensure availability and affordability of healthy foods and physical activity opportunities.

- Utilize WHO policy development instruments to identify priorities and to facilitate national policy planning.

- Ensure that prevention of childhood obesity is integrated into a comprehensive and coherent food and nutrition policy.

- Implement recommendations on marketing of foods and non-alcoholic beverages to children as well as other actions recommended in the Global Strategy on Diet, Physical Activity and Health.

- Work in a healthy setting approach which should include homes, nurseries and schools, playgrounds, sports facilities, health care and community organizations.

- Develop, implement or strengthen school policies to ensure that the school environment supports physical activity and healthy diets, including if appropriate a curriculum for regular physical education and/or sports classes.

- Develop comprehensive surveillance systems (using existing systems, and global tools and references, where possible), and identify relevant indicators to inform, monitor and evaluate policy, plans and programmes.

- Work, as appropriate, with relevant nongovernmental organizations, academia, United Nations agencies, donor agencies and the private sector to support policy development, adherence and implementation while ensuring consistent messages and transparency in collaboration, and minimizing conflicts of interest.

Nongovernmental organizations, civil society and academia

- Provide support for and participate in the development and implementation of technical guidance tools to reduce and prevent childhood obesity.

- Advocate for the development and implementation of obesity prevention policies and encourage the mobilization of resources, both human and financial, for programmes aimed at population-based prevention strategies for childhood obesity.

- Advocate for and ensure that programmes for population-based prevention strategies for childhood obesity are inclusive of children with disability and other vulnerable groups.

- Disseminate 'good practice' models, particularly for multi-stakeholder interactions.

- Document practices of interactions between governments, nongovernmental organizations, academia and food industry (transparency on funding sources/ accountability).

- Monitor the influence of private sector in food and health policies ('name and shame').

Private sector[4]

- Continue to develop and reformulate products and make available, in all markets, foods that are low in fat, salt, sugar and energy, and which are affordable, culturally appropriate and presented in appropriate portion sizes.

- Support policies which aim to improve the food and physical activity environments for children and their parents.

- Practise responsible marketing in accordance with WHO and/or national recommendations on marketing of foods and non-alcoholic beverages to children.

- Provide consumers (children and their parents) with adequate and understandable product and nutrition information.

- Raise awareness of healthy lifestyles through culturally acceptable programmes that promote healthy diets and physical activity in accordance with national guidelines and international standards.

[4] Private sector includes, but is not limited to, the food and beverage industries, retailers, catering companies, sporting-goods manufacturers, advertising and recreation businesses, insurance and banking groups, pharmaceutical companies and the media.

For all stakeholders, the critical next steps in obesity prevention are:

- the scaling up of monitoring and surveillance efforts to better understand the nature of the problem,
- improved coordination of preventive action,
- the creation of platforms to facilitate sharing of experiences and identification of 'best practice' interventions.

There also needs to be ongoing investment in research into the drivers of obesity (macro factors) and effective interventions for preventing obesity, especially policy-level strategies.

Ministries of health will need to play a key role in overseeing, coordinating and implementing many of these next steps. However, stakeholder collaboration will be crucial for success, with different actors taking leadership roles in the various actions listed above.

At the global level, there are some key actions that need to be taken to support and facilitate the implementation of the steps described above. The formulation and dissemination of global guidance for childhood obesity prevention is essential to support ongoing development of childhood obesity prevention strategies, particularly the development of policy for prevention across all levels of government. The process of drafting these guidelines should be integrated with the development of a priority setting tool that can be adapted for use in different cultural and demographic contexts. As a follow-up action to the meeting, WHO will undertake to develop the required tools.

In addition, while the schematic model for the implementation of the Global Strategy on Diet, Physical Activity and Health provides the basis for action on childhood obesity prevention, as described above, there is still a further need for a framework for action to support health ministries in their role in coordination. Such a framework would assist Member States in identifying stakeholders and areas for action, and also in the coordination of different approaches to tackle the growing burden of childhood obesity.

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Annex 1

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Annex 2

WHO Forum and Technical Meeting on Population-based Prevention Strategies for Childhood Obesity, 15–17 December 2009: Programme

Tuesday, 15 December 2009	
08:45–09:00	**Registration**
09:00–09:30	**Opening** • Opening address Dr Ala Alwan • Election of Chairpersons and Rapporteurs • Adoption of the Agenda and Programme • Objectives and rationale • Introduction of participants • Administrative arrangements Chair: Dr Hélène Thibault and Hon Sir Terepai Maoate
09:30–10:15	**Plenary 1** • Childhood obesity prevention: A key underlying theme of the WHO Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases Dr Fiona Adshead • Strategy of prevention of childhood obesity in France, encouraging trends from the Aquitaine programme Dr Hélène Thibault Chair: Dr Hélène Thibault and Hon Sir Terepai Maoate
10:15–11:00	**Plenary 2** **Social and environmental determinants of childhood obesity: Implications for population-based prevention** • Does today's global environment drive social inequalities? Professor Shiriki Kumanyika • How does urbanization affect access to food and physical activity? Dr Francisco Armada Chair: Ms Susan Russell
11:00–11:30	**Coffee Break**

11:30–12:30	**Plenary 3** **Importance of surveillance in development of population-based prevention strategies: What is WHO doing?** • The Global School Health Survey Ms Regina Guthold • The Global Anthropometric Standards Dr Mercedes de Onis • The European Childhood Obesity Surveillance Initiative Ms Trudy Wijnhoven • The use of national surveillance data for policy planning Dr Salah El Badawi Chair: Mr Bernard Maire
12:30–13:30	**Lunch**
13:30–15:30	**Plenary 4** **Importance of partnerships in population-based prevention** **A public–private partnership perspective** • The EPODE Programme Mr Christophe Roy **A collaborating centre perspective** • Deakin University (Australia) Professor Boyd Swinburn • Centres for Disease Control and Prevention (USA) Dr Deborah A Galuska **A civil society perspective** • International Union Against Cancer Ms Maria Stella de Sabata • International Association for the Study of Obesity Dr Tim Lobstein Chair: Dr Pascal Bovet
15:30–16:00	**Coffee Break**
	Working Group Discussion • Using surveillance for programme planning Moderator: Dr Jaffar Hussain • Working with nongovernmental stakeholders Moderator: Dr Michel Chauliac • Obesity, the environment and social inequality Moderator: Dr Ayoub Al Jawaldeh
18.00	**Reception**

Wednesday, 16 December 2009	
13:30–15:30	**Plenary 5** **Regional strategies on population-based prevention of childhood obesity** • Schools project in the Caribbean Ms Laura D Richards • Pacific Health Summit Mrs Genevieve Timothy • School fruits project Mr Tomas Garcia Azcarate • Community projects in South-East Asia Ms Natthira Thongbuasirilai • The cost-effectiveness of prevention Dr Michele Cecchini Chair: Dr Hélène Thibault
11:00–11:30	**Coffee Break**
11:30–13:00	**Plenary 6** **Obesity prevention in disability** • Young people with disability in physical education Dr Claudine Sherrill • The Western Pacific Region experience Professor Albert Lee • The Kampala Kids League Uganda Mr Trevor Dudley Chair: Professor Nick Watson
13:00–14:00	**Lunch**
14:00–17:30	**Working Group Discussion** • Supportive school environments Moderator: Dr Chandralall Sookram • Supportive local environments Moderator: Ms Michelle Holdsworth • Supportive policies Moderator: Dr Colin Bell All working groups to consider the following cross-cutting issues: Disability, Social Inequality and Gender
Thursday, 17 December 2009	
	Plenary 7 **National strategies on population-based prevention of childhood obesity** • A comprehensive national programme: The French programme Dr Michel Chauliac • Healthy Weight, Healthy Lives: A cross-government strategy for England

	• A comprehensive national programme: The French programme Dr Michel Chauliac • Healthy Weight, Healthy Lives: A cross-government strategy for England Dr Susan Jebb • Community intervention programme in Oman Ms Siham Al-Maskari • Population-based project in India Dr Vijay Viswanathan • School intervention programme in Benin Dr Dismand S. Houinato • National project in Chile Dr Tito Pizarro Chair: Hon Sir Terepai Maoate
11:00–11:30	**Coffee Break**
11:30–13:00	**Working Group Discussion** • Supportive school environments Moderator: Ms Lideke Middelbeek • Supportive local environments Moderator: Dr Marie-Laure Frelut • Supportive policies Moderator: Dr Luca Tommaso Cavalli-Sforza All working groups to consider the following cross-cutting issues: Disability, Social Inequality and Gender
13:00–14:30	**Lunch**
14:30–17:00	**Plenary 8** **Presentation of priorities for population-based strategies for prevention of childhood obesity** Co-chaired by Dr Hélène Thibault and Hon Sir Terepai Maoate
17:00–17:30	**Closing Remarks** Dr Ala Alwan

POPULATION-BASED PREVENTION STRATEGIES FOR CHILDHOOD OBESITY

REPORT OF THE WHO
FORUM AND TECHNICAL MEETING

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