NSW Centre for Overweight and Obesity

Mid-point evaluation of *Prevention of Obesity in Children and Young People: NSW Government Action Plan 2003 -2007*

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Executive Summary

Following the 2002 NSW Obesity Summit, the NSW Government launched the *Prevention of Obesity in Children and Young People – NSW Government Action Plan 2003-2007 (GAP)*. The *GAP*[1] identified 34 actions that NSW Health, NSW Department of Education and Training, NSW Department of Community Services, and NSW Roads and Traffic Authority agreed to implement, to expand their contributions to the prevention of obesity in children and young people. Many of the 34 actions fitted these agencies' core business, while some involved an extension of existing roles. The GAP was designed to be simple and achievable, enabling it to be implemented within existing resources in the short-term, or with small increases in resources in the medium term. As a consequence, 88 per cent of the actions to which agencies committed have been completed or are on track.

The NSW Government's focus on childhood obesity in 2002 precipitated the formation of the National Obesity Taskforce and the development of plans and summits in other states/territories. Since 2002, there has also been significant policy work on obesity prevention at the international level, with major reports being produced by the International Obesity Task Force (IOTF), World Health Organisation (WHO), and comprehensive plans in the US and UK. All these reports have stressed the need for urgent action to turn around the escalating rates of childhood obesity.

In this context a mid-point evaluation of the implementation of the GAP was instigated in October 2005, to ensure that the momentum for change created by the Summit and *Action Plan* was being maintained. The evaluation was designed to contribute to the ongoing implementation of the GAP by:

- identifying the extent to which specified actions had been implemented, or were progressing 'on track';
- identifying other achievements and approaches that have emerged in association with the implementation of the GAP;
- identifying changes in the political, community and organisational contexts that might influence implementation opportunities and actions;
- making recommendations to support the ongoing implementation and final evaluation of the plan.

The NSW Centre for Overweight and Obesity was given responsibility by NSW Health for conducting the mid-point evaluation of implementation.

The mid-point evaluation involved analysis of documentation and structured interviews with key stakeholders. A total of 12 interviews, with representatives from 6 government agencies and 3 additional agencies, were conducted. As well as reporting on progress in implementing GAP, the evaluation sought to assess the significance of the actions undertaken and their potential contribution to the prevention of childhood obesity.

The evaluation used the WHO Stepwise Framework to assess the implementation of the actions according to their fit with existing policy, infrastructure and resources. Actions were classified as core, expanded and desirable:

- Core implementation actions - interventions that are feasible to implement with existing resources;
- Expanded implementation actions - interventions that are possible to implement with a realistically projected increase in, or reallocation of, resources in the medium term;
- Desirable implementation actions - evidence-based interventions which are beyond the reach of existing resources (World Health Organisation 2005).

Seventeen actions were identified as core actions, and seventeen actions as expanded actions. The GAP contained no actions that could be classified as 'desirable' under the criteria of the WHO framework. The fact that the GAP included a mix of core and expanded actions, only, is understandable in the early years of a response, when there was limited evidence of effective interventions.

[1] *The terms GAP and Action Plan are used interchangeably throughout the document to refer to the NSW Government Action Plan*

The results of the mid-term evaluation indicate that the majority of the actions to which agencies committed in the GAP are being successfully implemented. Of the seventeen core actions, four actions have been completed. The implementation of eleven actions are on track, and a further two actions have been described as 'in progress', where action has commenced but been delayed at some point. Of the seventeen expanded actions, eight actions have been completed, seven others are on track, and two actions are in progress. This analysis indicates that the implementation of 35 per cent of the GAP's actions have been completed; 53% are on track for completion; and 12 per cent have made some, albeit limited, progress.

The impact of the GAP on childhood obesity prevention was also assessed using the International Obesity Task Force (IOTF) principles and recommended actions as reference points. The application of the IOTF criteria identified both the GAP's strengths and areas where NSW effort could be expanded. The GAP's major strengths are that it has made a significant contribution to developing the necessary state government infrastructure needed to move towards a more strategic approach to obesity prevention. Four major achievements have been:

- the implementation of the NSW Healthy Schools Canteen Strategy;
- establishment of the NSW Centre for Overweight and Obesity and a program of research conducted by the Centre;
- allocation of funding for the Hunter New England child obesity prevention community demonstration program;
- conduct and publication of the Schools Physical Activity and Nutrition Survey (SPANS) 2004.

The cross sectoral collaboration that the GAP has facilitated is also a significant mid-point achievement. This engagement across government agencies is critical as many of the determinants of obesity lie outside the core business and control of the health sector. Consideration should be given to expanding this cross-agency collaboration, with more senior officer involvement and increased strategic focus. This could be achieved by incorporating childhood obesity prevention into the NSW Government's response to the COAG National Reform Agenda relating to human capital reform.

The NSW Government was the first government in Australia to respond to the childhood obesity crisis. As befits an early stage of response, the GAP was weighted predominately towards program implementation rather than strategic policy development. For the NSW Government to maintain its commitment to childhood obesity prevention, priority must now be given to developing a second stage of response to take into account the need for:

a. an on-going policy focus on preventing and reducing childhood overweight and obesity;
b. strategic investments that are of sufficient scale and intensity and conducted over sufficient time to achieve significant change at the population level;
c. whole–of-government engagement, including each of the human services agencies, as well as infrastructure portfolios such as planning, transport and housing;
d. ongoing evaluation against short and long-term indicators.

In conclusion, the Government Action Plan has succeeded in contributing to the development of government infrastructure for the prevention of overweight and obesity of children in New South Wales. The Action Plan is largely on track for completion in 2007. Nevertheless, the dimensions of the problem, complexity of causal factors and long timeframes required to achieve prevention goals, suggest that NSW has only just begun its response to the childhood obesity crisis. Given that that the public concern regarding childhood obesity has escalated over the last 2 years, along with emerging evidence about the problem, its determinants, and potential solutions, it is critical that attention is now directed to formulating the next stage of the Government's response. Planning should begin now for a more strategic second phase with greater financial and human capital investment, so that NSW children are given every opportunity to grow up in an environment that promotes healthy eating and physical activity.

Accordingly, this mid-point evaluation of implementation makes recommendations relating to program development within the term of the GAP, as well as strategic development and a further phase of action by the NSW Government. The recommendations are set out below.

Recommendations

The following recommendations aim to provide a process for ensuring the momentum for change started at the Summit in 2002 and maintained through the GAP accelerates through the next phase of the Government's efforts to prevent childhood obesity. These recommendations relate to the operational responsibilities of the NSW Government. The Commonwealth Government has significant responsibilities in this area and national leadership and action is essential. The recommendations are divided into three groups, those relating to program development within the term of the GAP, those directed at strategic development and those related to a further phase of the NSW Government's response.

Program Development within the term of the GAP

While the majority of actions are on track, the evaluation has identified specific areas where action could be strengthened within the term of the current *GAP.*

1. Develop more rigorous mechanisms to ensure that new evidence is rapidly available to government and other stakeholders to influence policy and program decisions. One mechanism may be to request the NSW Centre for Over weight and Obesity to provide annual systemic reviews of recent evidence related to effective interventions and the policy/ practice implications.

2. The responsible agencies continue to implement actions and sustain changes that have resulted from the implementation of the *GAP* to date. In some cases, this will require additional actions to sustain and support more widespread implementation of key changes. For example, while the Healthy Schools Canteen Strategy is being successfully implemented, ongoing actions are needed to sustain the approach and incorporate it within school culture, as well as to extend its implementation beyond government schools.

3. The GAP identifies parents as an important target group for action and while actions are progressing, further efforts are required to support parents. It is important to take account of the significant limitations and barriers experienced by parents wanting to adopt healthy eating and physical activity practices with their children, including time pressure, and fears about community safety. Building a high level of community support for changes in the food supply, food marketing, and in accessible, safe environments for physical activity, is essential to support parents. There is evidence that communication strategies, mass media campaigns, and other social marketing techniques are effective in mobilizing community and industry support for change. There is scope for these actions at State as well as Commonwealth levels.

4. Further efforts to build collaboration between government, business and community groups are required. This should build on existing models and mechanisms for stakeholder collaboration, where available.

5. Continue mechanisms that build cross-government collaboration and shared responsibility for preventing childhood obesity, through project management arrangements and other coordinating mechanisms.

6. Government develop clear strategies that respond to recommendations arising from reports and studies generated through the *Action Plan*, as well as other emerging evidence including:
   - the recommendations in the report *Towards a Best Practice Model for Paediatric Overweight and Obesity Treatment Services 2005.*
   - the recommendations from the report on the *School Physical Activity and Nutrition Survey (SPANS) 2004*
   - the implications of the research on the risks for overweight and obesity amongst young adults and parents in *The Weight of Time* reports.

7. Identify an appropriate set of performance indicators to monitor NSW's progress in addressing child obesity. The performance indicators should include not only health indicators, but indicators of program implementation and of intermediate outcomes across a range of government agencies. As far as possible, indicators should be based on routinely collected data collection systems (across all relevant sectors), and align with international recommendations for child obesity prevention indicators. The indicators should also reflect a mix of short and long-term effects. The set of indicators could then be used for future evaluation and accountability purposes. The agreed set of performance indicators should include child health monitoring systems that measure weight status as well as key behaviours.

Strategic development

While commending progress on this Action Plan, the evaluation has identified the need for a strategic policy approach and recommends the following actions:

8. The NSW Government maintain commitment in responding to the childhood obesity epidemic by developing its public health response to take into account the need for:

a. an on-going policy focus on preventing and reducing childhood overweight and obesity;
b. strategic investments that are of sufficient scale and intensity over sufficient time to achieve measurable change;
c. broad whole–of-government engagement including human services agencies, as well as infrastructure portfolios such as planning, transport and housing;
d. ongoing evaluation against short and long-term indicators.

9. The NSW Government identifies childhood obesity prevention as a key risk for effective development as part of its response to the COAG human capital reform agenda.

10. NSW Health to continue to advocate for and contribute to a coordinated national approach, through COAG, the National Obesity Taskforce and other avenues. There are a number of factors which lie within the constitutional responsibilities of the national government, such as regulation of food supply including trade, and regulations governing the media (including advertising regulations). Furthermore, there is scope for stronger national leadership, and coordination of efforts to increase efficiency, reach and effectiveness of interventions.

Future strategy development

Given that GAP has succeeded in initiating key infrastructure for action, that the public focus and concern regarding childhood obesity has escalated over the last 2 years, and new emerging evidence, it is critical that attention is now directed to formulating the next stage of the Government's response.

11. The NSW Government should establish a process for planning the next phase of its response to childhood obesity and place that planning within broader policy discussions, such as futures planning and investments in early intervention.

Introduction

Over the past two decades there has been a significant increase in the number and proportion of overweight and obese children in NSW and Australia. This is part of a worldwide trend. The most recent NSW estimate in 2004 found that the prevalence of overweight and obesity among boys was 26% and among girls was 24% (Booth et al. 2006). This is a significant increase from 1985 when the prevalence among boys and girls was 11-12% (Booth et al. 2006). These rates of overweight and obesity are expected to have serious health consequences, including higher rates of Type-2 diabetes, fatty liver disease, cardiovascular disease, and orthopaedic complications. There is also a higher probability that these children will become overweight and obese adults (Ebbeling et al. 2002; Reilly et al. 2003). There is no single cause, and a wide range of social, environmental, economic and behavioural factors all contribute to the problem. Consequently, there is no one solution, and a comprehensive approach to prevention that involves community, government and private industry sectors has been widely endorsed by academic, professional and government agencies around the world.

In 2002, the NSW Government convened the NSW Childhood Obesity Summit, which highlighted the need for action and made childhood obesity prevention a Government priority. This Summit brought experts and interest groups together to recommend practical solutions to the childhood obesity epidemic. Responding to the Summits' resolutions, in October 2003 the NSW Government launched the *Prevention of Obesity in Children and Young People: NSW Government Action Plan 2003-2007* (NSW Government 2003). The Action Plan outlined 34 actions across seven priority areas for government attention. The priority areas comprised:

- Healthy Schools
- An Active Community
- Supporting Parents
- Healthy Child and Out-of-School Care
- Community Understanding
- Increasing Our Knowledge
- Governments and Industry and the Community Working Together.

To monitor implementation of the *Action Plan*, the NSW Human Services CEOs established a working group which oversaw implementation and provided progress reports.

A mid-point evaluation of implementation was instigated to check on progress, review any changes in context and to ensure that the momentum for change created by the Summit and The Action Plan was continued. The NSW Centre for Overweight and Obesity was given responsibility for conducting the mid-point evaluation. While recognising that both state and commonwealth governments have responsibilities for preventing childhood obesity, the Action Plan and this evaluation focus on the NSW government's efforts.

The midpoint evaluation of implementation was designed to contribute to the ongoing implementation of the GAP through:

- identifying the extent to which specified actions have been implemented, or are progressing 'on track';
- identifying other achievements and approaches that have emerged in association with the implementation of the GAP;
- identifying changes in the political, community and organisational contexts that might influence implementation opportunities and actions;
- making recommendations to support ongoing implementation and final evaluation of the plan.

Given that GAP has succeeded in stimulating action and that new evidence is emerging, it is now appropriate to focus attention on the next stage of the Government's response.

Background

The public health threat of childhood overweight and obesity started to receive serious attention in September 2002, when the NSW Government placed childhood obesity on the political agenda by convening the NSW Childhood Obesity Summit. The Summit marked the beginning of a more concerted response to obesity prevention in Australia and coincided with significant international developments.

Previously, the National Health and Medical Research Council (NHMRC) had produced the report *Acting on Australia's weight: a strategic plan for the prevention of overweight and obesity* (National Health & Medical Research Council 1997). It focused on promoting physical activity and healthy diet in key settings, acknowledged that increased prevalence of overweight and obesity in the population was due to lifestyle and environmental factors and singled out children and adolescents as a target group. While this report marked the beginning of a response, the report's recommendations were largely ignored and no significant advances were made over the next five years (Nathan et al. 2005).

Recent policy development in Australia

In recognition of the Commonwealth Government's responsibilities in this area and the need for co-ordination between Commonwealth and State/Territory governments, the National Obesity TaskForce (NOTF) was established in 2003. The Taskforce's work resulted in the Commonwealth Government releasing in 2003 the policy document *Healthy Weight 2008*: *The National Action Agenda for Children and Young People and their Families* (Commonwealth of Australia 2003). This document catalogues the initiatives needed to start a national prevention process. In this context, specific initiatives have been launched.

In 2004, the Commonwealth Government announced the *Building a Healthy Active Australia* initiative. This included resources for an *Active After School Communities* program, small grants for communities to link with schools and promote healthy eating and an information campaign (*Get Moving*), to encourage children to be more active. In 2005 the Commonwealth Government made at least two hours of physical activity per week in primary and junior high school curriculum a funding condition for schools (Commonwealth of Australia 2004).

In 2003, the National Health and Medical Research Council (NHMRC) released clinical practice guidelines for the management of overweight and obesity in adults, adolescents and children. These guidelines outline evidence-based practices for managing overweight and obesity (National Health & Medical Research Council 2003). In early 2006 the Commonwealth Government announced new arrangements for people with chronic diseases to access Medicare services through an Enhanced Primary Care (EPC) Medicare item. However, despite significant demand for obesity services through primary health care, obesity was not classified as a chronic disease, which means that obese people are excluded from primary health care services to treat their obesity until they develop secondary chronic diseases such as diabetes (Commonwealth of Australia 2004).

In the last few years all Australian Governments have increased their efforts to promote healthy eating and physical activity activities. In October 2002, the Victorian Government held a two-day forum to address the issue of obesity with a specific focus on childhood obesity. Subsequently it has embarked on a range of programs to promote healthy eating and physical activity including *Go for Life* and *Filling the Gaps* which support parents to promote healthy eating and physical activity in children. The Victorian Government has also funded an Assessing Cost-Effectiveness (ACE) – Obesity study, to determine the most cost-effective options for preventing healthy weight gain particularly amongst children and adolescents (Victorian Department Government Human Services, 2006).

In May 2004 the South Australian Parliament released the report from its inquiry into obesity which called for actions that

> *include public education, accessibility of healthy food and physical activities, physical infrastructure to support physical activity, television food advertising to children, physical education and the availability of 'junk' foods in schools. (Parliament of South Australia, 2004)*

The South Australian Government established a state-wide Healthy Weight Taskforce which has produced a plan *Eat Well be Active Healthy Weight Strategy for SA 2006-2010* (SA Department of Health 2006).

In 2005, the Queensland Government announced its *Eat Well, Be Active – Healthy Kids for Life* plan which includes information campaigns on physical activity and nutrition, healthy school canteens program, and targeted programs for communities at risk. In May 2006 the Queensland Government held a two day Obesity Summit (Queensland Government 2005).

The Western Australian Government approach is *Eat Well Be Active Western Australia – a Strategic Framework for Public Health Nutrition and Physical Activity 2004 – 2010.*

In 2004, the Tasmanian Government updated its Food and Nutrition Policy which has an emphasis on the reducing the prevalence of overweight and obesity. The Tasmania Government has also initiated the *Move Well, Eat Well and Active Kids* projects in Tasmanian schools (National Obesity Taskforce 2005).

The Northern Territory's Food and Nutrition Policy and Strategic Plan was updated in 2001, with healthy lifestyles (including the promotion of physical activity) as one of its three priority areas (Northern Territory Government 2001).

In June 2004, the Australian Capital Territory released *Eat Well ACT – A Public Health Nutrition Plan 2004 -2010* which lists the prevention of overweight and obesity in children and prevention of further weight gain in adults as its first priority area.

The 2005 report prepared by the NOTF Secretariat provides an overview of actions across states, territories and national governments (National Obesity Taskforce 2005). This document indicates that there are consistent actions across jurisdictions, although coordination mechanisms are limited.

COAG National Reform Agenda and Human Capital

The particular threat that obesity represents to future productivity and participation was recognised at the most recent Council of Australian Government (COAG) meeting which met in February 2006. The COAG National Reform Initiative Working Group report for that meeting states:

> *The impact of obesity is a case in point. Obesity can place undue strain on the heart, joints, and spine, increase the risk of high blood pressure, Type-2 diabetes, contributes to mental health problems and other conditions. Obese employees are 17 per cent more likely than non-obese employees to be absent from work due to personal illness or injury, and for a longer time when they are. If children and adults are encouraged to adopt healthy eating habits and lead healthy, active lives, there would be less obesity, and these losses could be reduced over time.*
> (COAG National Reform Initiative Working Group 2006)

At its February 2006 meeting COAG:

- accepted the principle that health promotion, prevention and early intervention strategies are required to reduce the incidence of chronic disease, and improve overall health outcomes;
- agreed to give priority to improving early childhood development outcomes as part of a collaborative national approach (COAG 2006).

COAG's focus on human capital may offer a strategic mechanism to advance obesity prevention in the future. By addressing obesity within this new reform framework, a more strategic, high level and better resourced approach may be possible.

International Policy Responses

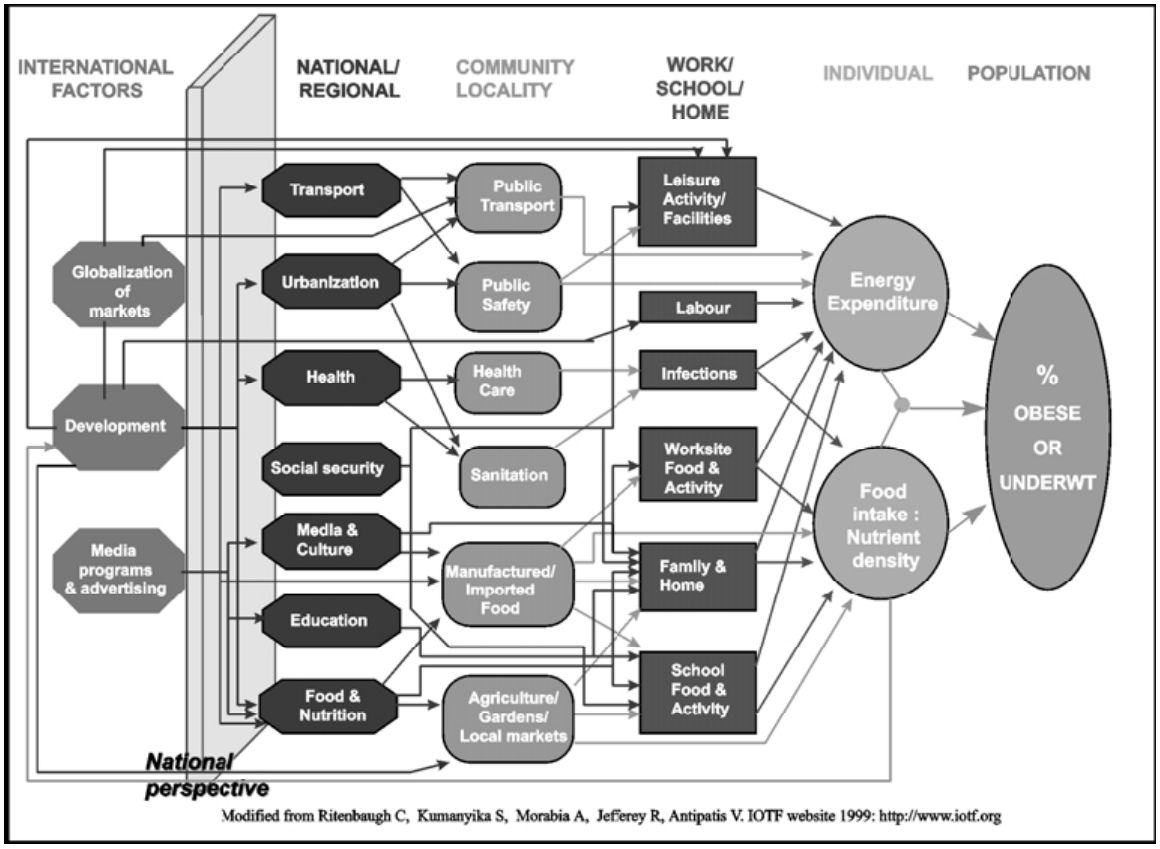
There have also been significant policy developments on obesity prevention at the international level over the last four years.

International Obesity Task Force (IOTF)

The work and role of the International Obesity Taskforce (IOTF) has developed substantially over the last 4 years. The IOTF is the research and advocacy arm of the leading international scientific body concerned with obesity, the International Association for the Study of Obesity (IASO). Through its global network of obesity experts, the IOTF works with the World Health Organisation, governments, and non-government organisations to highlight the magnitude of the international obesity epidemic and to recommend practical prevention measures. In May 2004 the IOTF produced a report on childhood obesity entitled *Obesity in Children and Young people: a public health crisis* (Lobstein et al. 2004). In response, WHO held an expert consultation on childhood obesity in Kobe, Japan in June 2005 (a report of the meeting is currently being written).

The work of the IOTF emphasises the complex set of factors that interact with one another to heighten the risk of obesity, referred to as the IOTF's causal web of obesity and illustrated in Figure 1. The IOTF have outlined the key features of a public health approach to obesity prevention, including guidelines and principles for action. These have been reproduced in Table 1 and provide a benchmark for assessing policies and programs, including the *NSW Government's Obesity Action Plan for Child Obesity Prevention.*

Figure 1. The IOTF Causal Web of Obesity.
(Kumanyika et al. 2002)



World Health Organisation

The IOTF worked closely with the World Health Organisation to produce the *Global Strategy on Diet, Physical Activity and Health* in May 2004. This report outlined a range of policy options to address unhealthy diets and physical inactivity, providing a strong blueprint for obesity prevention (World Health Organisation 2004).

The United Kingdom

In May 2004 a Parliamentary Inquiry into Obesity by the British House of Common published a comprehensive report into the causes of and solutions for obesity. This report emphasised the complexity of the determinants of obesity, but cautioned against using this uncertainty as an excuse for inaction. It recommended adopting a public health approach and highlighted that solutions would need to be long term and sustainable, recognising that behaviour change is complex, difficult and takes time (House of Commons 2004).

In response the British Government has made reducing child obesity a joint Public Service Agreement (PSA) target for three Government Departments: the Department of Health, the Department of Education and Skills and the Department of Culture, Media and Sport. This means that Government funding is linked with the Departments' performance to *"halt, by 2010, the year-on-year increase in obesity among children under 11 in the population as a whole"* (Controller and Auditor General 2006).

The seriousness with which the British Government is responding to the threat of obesity is reflected in the establishment of this target and the priority and urgency with which it is implementing it. The processes being implemented are outlined in the most recent February 2006 report into its implementation which states:

> *A draft delivery plan has been developed and a jointly-funded cross-departmental Obesity PSA Programme Manager has been appointed to support a Programme Board, which as been set up to give strategic direction and to oversee the various initiatives. Progress towards the targets is being monitored at Cabinet level by the Public Health Sub-Committee chaired by the Deputy Prime Minister* (Controller and Auditor General 2006).

The United States

In 2001, The United States Surgeon General issued the report *Call to Action to Prevent and Decrease Overweight and Obesity,* highlighting the need for the country to respond to the increasing prevalence of overweight and obesity in the population (U. S. Department of Health and Human Services 2001). This was followed in 2005, by an Institute of Medicine report *Preventing Childhood Obesity: Health in the Balance* (Koplan et al. 2005). This report highlighted the social and environmental changes over recent decades that had increased the risk of obesity and the multifactoral nature of the problem.

It stressed the importance of an evidence based approach and recognised that change would take time but called for urgent action and the development of intermediate goals to assess progress. The report's first recommendation was to make childhood obesity prevention a national priority. It also made recommendations relating to industry, nutrition labelling, advertising and marketing, a multi-media and public relations campaign, community programs, the built environment, health care, schools, and home life.

Table 1: IOTF guidelines for obesity prevention – actions and principles

IOTF recommendations for a comprehensive approach to obesity prevention:

1. address both dietary habits and physical activity patterns in the population;
2. address both societal and individual level factors;
3. address both immediate and distant causes;
4. have multiple focal points and levels of intervention (i.e. national, regional, community and individual levels);
5. include both policies and programmes;
6. build links between sectors that may be otherwise viewed as independent

The IOTF's ten principles upon which efforts to prevent obesity at population level should be based:

1. Education alone is not sufficient to change weight-related behaviours. Environmental and societal intervention is also required to promote and support behaviour change.
2. Action must be taken to integrate physical activity into daily life, not just to increase leisure time exercise.
3. Sustainability of programmes is crucial to enable positive change in diet, activity, and obesity levels over time.
4. Political support, intersectoral collaboration and community participation are essential for success.
5. Acting locally, even in national initiatives, allows programmes to be tailored to meet real needs, expectations and opportunities.
6. All parts of the community must be reached – not just the motivated healthy.
7. Programmes must be adequately resourced.
8. Where appropriate, programmes should be integrated into existing initiatives.
9. Programmes should build on existing theory and evidence.
10. Programmes should be properly monitored, evaluated and documented. This is important for dissemination and transfer of experiences.

(Kumanyika et al. 2002)

The evidence to date

There is a considerable volume of descriptive evidence about the problem of childhood obesity. For example, the *NSW Schools Physical Activity and Nutrition Survey (SPANS)* found that 24% of girls and 26% of boys in NSW were overweight or obese (Booth et al 2006). There is also convincing evidence that the determinants of childhood obesity are complex and inter-related. For example, Lobstein and colleagues identified the following problematic social trends:

- Increase in the use of motorized transport e.g. to school;
- Increase in traffic hazards for walkers and cyclists;
- Fewer opportunities for recreational physical activity;
- Increased playing of sedentary games;
- Multiple TV channels around the clock;
- Greater quantities and variety of food available;
- More frequent and widespread food purchasing opportunities;
- Larger portions of food;
- Rising use of soft drinks to replace water;
- More use of restaurants and fast food stores (Lobstein et al. 2004).

The complexity of the determinants of childhood obesity makes it difficult to design studies and measures to identify effective preventive interventions. To date, the failure of many systematic reviews (e.g. Summerbell et al 2005) to identify a range of effective interventions should be interpreted in this light. The limitation of relying only on randomised controlled trials and controlled clinical trials for evidence of effective intervention has been highlighted by Swinburn, Gill, and Kumanyika, labelling the approach:

> *"Inappropriate, unachievable, or irrelevant because RCT requirements to manipulate a single or limited set of variables may be too artificial or unrealistic for the complex systems affecting population health."* (Swinburn et al. 2005)

They argued that a wider evidence base should be considered to identify effective interventions including evidence and information arising from previous successful public health strategies such as tobacco control, injury prevention and skin cancer prevention.

This approach to evidence is explored in detail in the United States Institute of Medicine report *Preventing Childhood Obesity: Health in the Balance* (Koplan et al 2005). In that report Michael Eriksen draws specific lessons from previous public health efforts and assesses their relevance to childhood obesity. He reviews six issues for their relevance to childhood obesity prevention:

- Information Environment. There is good evidence to suggest that restrictions on advertising of unhealthy foods, the promotion of healthy choices, and possibly paid counter-advertising campaigns will improve the information environment relative to the prevention of childhood obesity.

- Access and Opportunity. Further research is needed to determine if restricting commercial access and availability would be effective in reducing consumption of calorie-dense and low nutritional quality foods.

- Economic Factors. Excise taxes on calorie dense and low nutritional quality foods and incentives or subsidies to make fruit and vegetables more available and affordable could be considered.

- Legal and Regulatory Environment. Minimum standards for nutrient content, portion size, and marketing of products to children could be considered.

- Prevention and Treatment Programs. The public health evidence supports school-based interventions, media campaigns and individual and clinical efforts.

- The Social Environment. Actions that increase the public concern about the magnitude of the problem and highlight the need for collective action including the social costs of obesity assist in creating the social and normative change are needed (Eriksen 2005).

In summary, the evidence base and its interpretation for policy has become increasingly sophisticated over the last 4 years. The balance of evidence at this point indicates that, to be effective, obesity prevention programmes should be comprehensive and aim to influence individual behaviour and lifestyle as well as the broader social and environmental factors that affect health.

Policy implementation

Overall, public health responses to the overweight and obesity epidemic internationally and in Australia are in their infancy. The *WHO Stepwise Framework* (World Health Organisation 2005) explicitly acknowledges that it is not always feasible to immediately implement all the actions that are likely to be required to address complex public health problems such as childhood obesity, and provides a useful guide for policy implementation at this stage. It supports an incremental approach where a broader range of interventions become possible as more evidence accumulates and organisational capacity expands. In particular, the Stepwise Framework describes three implementations phases. As shown in Table 2, they comprise:

- Step 1 or core implementation actions - interventions that are feasible to implement with existing resources;
- Step 2 or expanded implementation actions - interventions that are possible to implement with a realistically projected increase in, or reallocation of, resources in the medium term; and
- Step 3 or desirable implementation actions - evidence-based interventions which are beyond the reach of existing resources (World Health Organisation 2005).

The NSW Childhood Obesity Summit was an example of a sound process for policy development and planning. The NSW Government moved closer to policy implementation when it responded to each resolution and identified 34 actions related to obesity prevention to be implemented between 2003 and 2007.

This mid-term evaluation uses the Stepwise framework to assess progress through the *Action Plan's* activities and to highlight the path forward.

Table 2 – WHO Stepwise Framework for Chronic Disease prevention – policy implementation steps

Policy Implementation Steps	Population-wide interventions		Interventions for individuals
	National level	State level	
Implementation Step 1 **CORE**	**Interventions that are feasible to implement with existing resources in the short term**		
Implementation Step 2 **EXPANDED**	**Interventions that are possible to implement with a realistically projected increase in, or reallocation of, resources in the medium term.**		
Implementation Step 3 **DESIRABLE**	**Evidence-based interventions which are beyond the reach of existing resources.**		

(World Health Organisation 2005)

Methods

The mid-point evaluation was conducted by the NSW Centre for Overweight and Obesity (COO), with reference to the working group responsible for monitoring the implementation of the *Action Plan*. The members of the monitoring working group comprised of officers from the 5 government departments with specific responsibilities identified in the Action Plan.

The mid-point evaluation draws on the WHO Stepwise Planning Framework for preventing chronic disease (Table 2) and International Obesity Task Force's recommended public health approaches for the prevention of obesity (Table 1) to:

- identify the extent to which specified actions have been implemented, or are progressing 'on track';
- identify other achievements and approaches that have emerged in association with the implementation of the GAP;
- identify changes in the political, community and organisational contexts that might influence implementation opportunities and actions;
- make recommendations to support ongoing implementation and final evaluation of the *Plan*.

The mid-point evaluation assessed the progress of the implementation of *GAP* by reviewing available documentation, and by interviewing government officers with responsibility for the specified actions.

Interviewees were identified by members of the monitoring working group, who were invited to identify key stakeholders in addition to themselves, who should be interviewed part of the evaluation process.

Documentation

The first stage in the evaluation involved a review of available documents reporting on various aspects of the *Action Plan.* Progress reports tabled at the meetings of the monitoring working group, as well as reports or resources published by the relevant government agencies provided an important source of information on implementation stages and processes.

Interviews

Structured interviews were conducted with key officers from each of the government departments specified in the *Action Plan.* Additional interviews were conducted with other stakeholders who were recommended by government officers, and included representatives from agencies who were more recently engaged in specified or related actions. A list of the interviewees is included in Appendix A.

Interviewees were provided with information and a structured guide to questions in advance of the interviews. The structured guide listed the specific actions/responsibilities that would form the subject of the interview, and provided a set of questions about these actions. In addition, a set of more general discussion questions was provided, to allow key informants to comment on relevant changes in organisational and policy contexts, and the significance of the specified actions to the business of their agency and to child obesity prevention generally. A summary of the interview protocol is shown in Appendix B.

All interviews were conducted by two researchers from COO, and tape recorded with the permission of the interviewee. Most interviews were from 1 to 2 hours duration. Interviews were conducted in February and March 2006.

A total of 12 interviews, with representatives from 6 government agencies and 3 additional groups, were conducted. The three additional agencies comprised COO, formed as a result of the NSW Government Action Plan; Premier's Council on Active Living, established in 2004; and the Chair of the NSW Health Population Health Priority Taskforce, established in 2005 with a role in providing advice to NSW health on specific aspects of child obesity prevention.

Analysis

Specific information on the implementation of the Action *Plan*, and interpretation and commentary from key informants was collated by the evaluation team.

As well as collating basic information, the evaluation sought to assess the significance of the actions undertaken and their potential contribution to the prevention of childhood obesity overall. As noted in the Background section above, one way of considering implementation is to consider how actions fit with existing policy, infrastructure and resources and to identify whether actions are core, expanded and desirable. This analysis used the WHO Stepwise Framework to classify the 34 actions as core, expanded or desirable.

Recent national and international policies, as well as new research evidence, also provide a rich background and context for analysing obesity prevention efforts within NSW. In particular, the principles and action steps disseminated by IOTF are directly relevant to the task of reviewing the NSW approach and provide appropriate criteria for analysis and commentary. These IOTF recommendations and principles presented in Table 1 have been used as reference points for assessing the significance of the contribution of core and expanded actions to the prevention of childhood obesity in NSW.

Results

Overview of implementation of the 34 actions listed in the GAP

The Action Plan included 34 actions for implementation, with responsibilities allocated across 5 government departments. The WHO Stepwise Framework was used to describe the actions as core, expanded or desirable. Seventeen actions were identified as core actions, and seventeen as expanded implementation actions. The GAP contained no actions that met the WHO criteria for 'desirable'. The mix of core actions and expanded actions is understandable in the early years of a public health response, when there is limited evidence to attract the resources needed to implement desirable interventions.

The implementation stage of each action was assessed, and noted in Table 3 (core actions) and Table 4 (expanded actions). Of the seventeen core actions, four have been completed. The implementation of eleven actions is on track and a further two actions have been described as 'in progress', where action has commenced but been delayed at some point. Of the fifteen expanded actions, eight actions have been completed, seven others are on track, and two 'in progress' (one with limited progress).

As illustrated in Figure 2, this analysis indicates that the implementations of 35 per cent of the GAP's actions are completed; 53% are on track for completion; 9 per cent are progressing and 3 per cent have made limited progress.

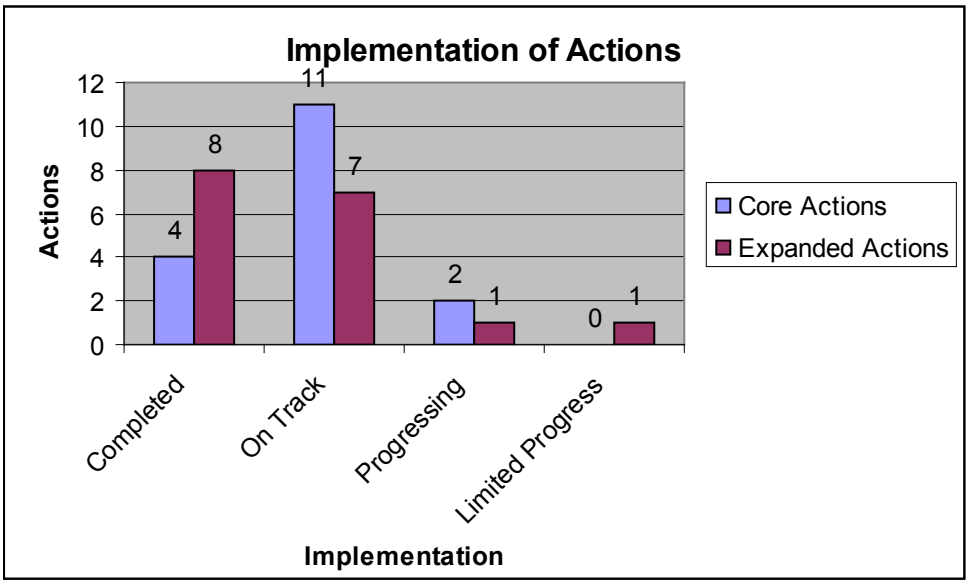
Table 3. Implementation Summary of Core Implementation Actions

Core implementation actions (Interventions that are feasible to implement with existing resources in the short term)	Implementation
School Sport Foundation (Action 1.4)	On Track
Revitalization of secondary school sports program (Action 1.5)	On Track
Support materials for teachers to implement and supervise sport programs (Action 1.6)	On Track
Professional support for teachers to implement new Years 7-10 Personal Development, Health and Physical Education syllabus (Action 1.7)	On Track
Distribute resources about school based strategies for getting students active (Action 1.8)	On Track
Rock Eisteddford Challenge and Croc Rock Festivals (Action 1.9)	On Track
Modify the Active Communities Grants Scheme to increase the focus on preventing childhood obesity (Action 2.1)	Completed
Work with members of the Active Communities Network to strengthen the understanding of childhood obesity issues (Action 2.2)	Completed
The promotion of walking and cycling through community based initiatives like Bike Week. (Action 2.3)	On Track
Building off-road cycleways (Action 2.4)	On Track
Support local government to develop and construct local cycleway networks. (Action 2.5)	On Track
Provide financial assistance and expertise for Local Government to develop Pedestrian and Access Mobility Plans. (Action 2.6)	On Track
The Early Intervention Program and Flexible Child Care and Family Service projects (Action 3.3)	On Track
Support and information to parents about Overweight & Obesity through Family First (Action 3.4)	Progressing
Nutrition information and advice on good practice in physical activity for children services and out-of-school hours programs (Action 4.1)	Completed
Nutrition and physical education training programs for child care professionals (Action 4.2)	Progressing
NSW Health will develop and maintain the overweight and obesity website www.health.nsw.gov.au/obesity (Action 5.2)	Completed

Table 4. Implementation Summary of Expanded Implementation Actions

Expanded Implementation Actions	Implementation
(Interventions that are possible to implement with a realistically projected increase in, or reallocation of, resources in the medium term)	
Healthy School Canteens Strategy - policy (Action 1.1)	On Track
Healthy School Canteens Strategy – information resources (Action 1.2)	On Track
NSW Health will increase funding for NSW School Canteen Association (Action 1.3)	Completed
Funding for Public Health Policy Officer position in Local Government Association (Action 2.7)	Completed
Additional funding to NSW Branch of the Australian Breastfeeding Association (Action 3.1)	Completed
Development and dissemination of NSW Breastfeeding policies (Action 3.2)	On Track
Expert Taskforce on O&O support and treatment services (Action 3.5)	Completed
Active Out-of-School Hours Care pilot programs (DSR), with the following stages: • Trialling of various ways of providing physical activity • Development and trialling of a training program for OSHC staff • Development and trialling of a start-up package for Centres • Trialling of physical activity policy guidelines for OSHC centres Evaluation of the key elements of success. (Action 4.3)	Completed
Develop and trial a physical activity training package for staff working in out-of-school hours care (OSHC) centres; based on the competencies identified in the Certificate IV 'Train the Trainer' Physical Activity for Children and Youth. (Action 4.4)	Completed
Publish an easy to use compendium of nutrition and physical activity related information and resources on NSW Health's Childhood Obesity Website. (Action 5.3)	Completed
Develop a user-friendly, online training program providing information on physical fitness, nutrition and healthy lifestyle options for children (Action 5.4)	On Track
State-wide community education campaign (Action 5.1)	Progressing
Establishment of COO and linkages with Australian Child and Adolescent Obesity Research Network (ACAORN) and conduct research on effective initiatives to overcome overweight and obesity (Action 6.1) (Action 6.2) (Action 6.4)	On Track On Track On Track
Schools, Physical Activity and Nutrition Survey (SPANS) (Action 6.3)	Completed
Government, Industry and Community Working Together (Action 7.1)	Limited progress

Figure 2. Graph of Implementation of Actions



Detailed results and commentary

As noted above, the IOTF recommendations and principles have been used as reference points or criteria, for assessing the significance of each of the core and expanded actions to the prevention of childhood obesity. The assessment of each of the actions is based on interviewee comments and document analysis, in the light of the IOTF criteria. The comments also include an assessment of potential risks, in terms of barriers that might influence whether the potential benefits can be achieved.

Tables 5 to Tables 16 are organised according to priority areas, with core and expanded actions listed separately.

TABLE 5. Priority 1: Healthy Schools - Core Interventions

CORE ACTIONS	COMMENTS ON CAPACITY FOR ADVANCING CHILDHOOD OBESITY PREVENTION
School Sport Foundation (Action 1.4) ***ON TRACK***	Funding from NSW Health has enabled the School Sport Foundation to offer grants of between $500 and $2,500 to on average 100 schools each year to promote healthy lifestyles and active living (NSW Department of Education 2006b). The involvement of NSW Health in the program has promoted collaboration between the Health and Education Departments which is consistent with IOTF principle 4. The action also adheres to IOTF principles 5 by enabling school communities to tailor programs to meet local needs, expectations and opportunities. Risk: that sustainable gains may be limited to funded schools.
Revitalization of secondary school sports program (Action 1.5) ***ON TRACK*** **Support materials for teachers to implement and supervise sport programs (Action 1.6)** ***ON TRACK***	The actions have meant new and different sports delivery mechanisms are being promoted in secondary schools with an emphasis on the needs of different schools (NSW Department of Education 2006b). A compendium of sport education resources for use by schools has also been developed. It is expected that by providing information and support to teachers these resources will facilitate the expansion of new sporting activities in schools. The resources will be disseminated through the Department of Education's Sport Unit Website (Obesity Action Plan Monitoring Sub-Group 2005). These actions contribute to making the school environment more conducive to physical activity amongst students which is consistent with IOTF principle 2. The actions also adhere to IOTF principles 5, 6, and 8 as they promote initiatives that are appropriate to local needs, are designed to reach all parts of the community and are integrated into existing initiatives. Risk: no risk identified.
Professional support for teachers to implement new Years 7-10 Personal Development, Health and Physical Education syllabus (Action 1.7) ***ON TRACK***	In 2004 and 2005, 39 workshops were run and articles relating to overweight, obesity and physical activity produced as part of professional development for Personal Development, Health and Physical Education teachers prior to the new syllabus becoming mandatory in schools (Obesity Action Plan Monitoring Sub-Group 2005). The action raises Personal Development, Health and Physical Education teachers' knowledge and awareness of overweight, obesity and physical activity. According to the Education representatives, the increased focus on overweight and obesity associated with the Government Action Plan underscored the importance of the new syllabus. In particular it was noted this action complemented the Healthy Schools Canteen initiative by reinforcing the importance of a healthy diet (NSW Department of Education 2006a).

	The action adheres to IOTF principles 2, 3 and 8. Through the professional development of teachers the action aims to integrate physical activity into children's daily life and works through an existing program. It is sustainable as professional development associated with new syllabuses is a core responsibility of Department of Education. Risk: no risk identified.
Distribute resources about school based strategies for getting students active (Action 1.8) ***ON TRACK***	Four agencies (DET, Health, DSR, Heart Foundation) have come together to support the development of A Kids Healthy Lifestyle Portal which will enable resources related to healthy eating, physical activity and obesity prevention to be efficiently disseminated. Nine regional workshops throughout NSW were conducted in early 2006 as part of the dissemination process. Over 570 participants attended these workshops. It included a cross section of participants from government and non-government agencies, all interested in the issues of children's overweight and obesity. The Department of Education has also published the resources and provided professional development for teachers on fundamental movement skills, as part of the workshops (Obesity Action Plan Monitoring Sub-Group 2005). This action assists in raising community awareness about childhood obesity and complements the GAP's social and environmental interventions by disseminating information that encourages community participation which is consistent with IOTF principle 4. Risk: That the portal may be under-utilised unless information about its availability is regularly disseminated and reinforced.
Rock Eisteddford Challenge and Croc Rock Festivals (Action 1.9) ***ON TRACK***	Implementation of this action is on track. The 2006 events will be supported by the NSW Cancer Institute (Obesity Action Plan Monitoring Sub-Group 2005; NSW Health 2006a). In this case, GAP links an existing activity to the child obesity prevention agenda. Risks: The link between the events and heating eating / physical activity messages may not be strongly recognised.

TABLE 6. Priority 1: Healthy Schools: Expanded interventions

EXPANDED ACTIONS	COMMENTS ON CAPACITY FOR ADVANCING CHILDHOOD OBESITY PREVENTION
Healthy School Canteens Strategy **The Department of Education and Training and NSW Health will develop a mandatory healthy school canteen framework that ensures all Government schools (and encourages other schools) provide a canteen service that provides healthy and nutritious food consistent with the national dietary guidelines. (Action 1.1)** ***ON TRACK*** **The Department of Education and Training, NSW Health and the NSW School Canteen Association will develop and distribute information to assist schools to implement the healthy school canteen framework. (Action 1.2)** ***ON TRACK***	This action is being successfully implemented. The NSW Healthy School Canteen Strategy's Evaluation Report 2005 found that almost all (98%) of the Canteen Managers surveyed had made all or some of the changes required by the strategy. Only 2 per cent of Canteen Managers surveyed had not implemented the strategy or were still planning its implementation (Nutrition and Physical Activity Branch 2006). The success of the strategy's implementation has been attributed to the fact that it was mandatory for NSW Government school well resourced and encouraged. The support materials produced were of a high quality and relevant to School Canteen Managers (NSW Department of Education 2006a; NSW Health 2006a). Survey results indicate that a cultural change is underway amongst Canteen Managers with 83 per cent of those surveyed in 2005 believing that school canteens had a role in supporting classroom nutrition education. This is a 47% increase from the 2004 survey which reported 57% of School Canteen Managers surveyed believed they it should play such a role (Nutrition and Physical Activity Branch 2006). In addition school practices are changing to reflect the underlying principles of the strategy for example some schools are introducing fruit and water breaks, healthier fundraising and non-food rewards. These actions are consistent with IOTF principles 1, 4, 5, 6 and 7. The action is consistent with Principle 1 because it goes further than education and seeks to change the school environment to support healthy eating. The political support and community participation arising out of the Childhood Obesity Summit made it possible to make its implementation mandatory which is consistent with IOTF Principle 4 and Principle 6. The resource materials supporting the implementation of the action enabled Canteen Managers to tailor the program to local needs consistent with Principle 5. The program is being supported by additional resources consistent with Principle 7. Risk: Ongoing capacity building initiatives may be required to ensure the strategy is fully implemented by all schools in all 3 education sectors in NSW, to the point where the approach is embedded in the school culture.
NSW Health will increase funding for NSW School Canteen Association (Action 1.3) ***COMPLETED***	This action has been implemented. Funding for the Association has increased and contractual agreements for 2003/04, 2004/05 and 2005/06 are in place (Obesity Action Plan Monitoring Sub-Group 2005). The NSW School Canteen Association objectives are consistent with and support the implementation and sustainability of the Healthy School Canteen Strategy. The funding of this organisation is consistent with IOTF principle 8 by integrating the policy into an existing structure. Risks: no risk identified.

TABLE 7. Priority 2: An Active Community - Core Interventions

CORE ACTIONS	COMMENTS ON CAPACITY FOR ADVANCING CHILDHOOD OBESITY PREVENTION
Modify the Active Communities Grants Scheme to increase the focus on preventing childhood obesity (Action 2.1) ***COMPLETED***	The Active Communities Grants program conducted by NSW Sport and Recreation now includes a focus on childhood obesity. Ten projects across NSW will receive funding for three years, from 2004/05-2006/07, and each project is required to submit annual performance reports. The increased commitment arising out of the GAP has also enabled the Grant scheme to move from an annual grants program to a three year grants program. This has enabled the projects to be more substantial and sustainable. Through this action the system is more oriented to community capacity building and developing projects that are sustainable (NSW Department of Sport and Recreation 2006). The action adheres to IOTF principle 5 by providing funding that will enable communities to develop initiatives to meet their specific needs. Risk: That gains may be limited to the funded communities, unless there are planned dissemination strategies.
Work with members of the Active Communities Network to strengthen the understanding of childhood obesity issues(Action 2.2) ***COMPLETED***	This was a one-off action which has been completed. NSW Sport and Recreation organised a conference on addressing childhood obesity issues through physical activity. The conference raised awareness across local government, Areas Health Services and the sport and fitness industry of issues associated with obesity and explored ways to work together to engage young people in healthy active living. The conference was attended by 100 delegates representing 40 councils, 9 Area Health Services as well as the sport and fitness industry (Obesity Action Plan Monitoring Sub-Group 2005). This action adhered to IOTF principle 4, by promoting inter-sectoral collaboration and community participation. Risk: The gains in links may be depleted through staff turnover and organisational changes, unless they are reinforced through other mechanisms.

The promotion of walking and cycling through community based initiatives like Bike Week. (Action 2.3) ***ON TRACK***	The RTA sponsors community events throughout the year, including Bike Week and Walk Safely to School Day. It also publishes cycleway maps and provides resources for children to learn road rules and safety issues (Obesity Action Plan Monitoring Sub-Group 2005). These initiatives raise awareness of the importance of active living and provide the community with opportunities to be active which is consistent with IOTF principle 2. GAP highlights and reinforces the value of these actions in relation to a broader array of actions. Risk: That the promotional work is conducted on a small scale and may not reach, or be relevant to all sections of the community.
Building off-road cycleways (Action 2.4) ***ON TRACK***	Progress has been made towards implementing this action. The NSW Government's 10 year plan, Action for Bikes – BikePlan 2010 released in 1999 commits the government to building off-road cycleways wherever practicable during the expansion of the network and when new roads are being built. New Motorways approved by the Government and privately funded are also providing cycling and walking facilities. Examples of these are the Westlink M7 and Lane Cove Tunnel (Roads and Traffic Authority 2006). Total funding for bicycle facilities including funding provided from private roads consortia in NSW for 2005-2006 is a record $65.7 million compared with $39.1 million in 2001/2002 and $22.7 million in 2000/01. There has been a 25% expansion in off-road cycleways since 2002. In 2002-03 there was 1,030 km of Off-road cycleways in NSW and this is expected to increase to 1,290 km of Off-road cycleways in 2005-06 (NSW Treasury 2005). This action adheres to IOTF principle 2 by creating environments more conducive to physical activity by making cycling easier and safer. Risk: The capacity to continue funding cycleway infrastructure requires ongoing funding commitments.
Support local government to develop and construct local cycleway networks. (Action 2.5) ***ON TRACK***	Local cycleway networks are being supported through a RTA dollar for dollar grant program to local councils. In 2004/05 89 bicycle network projects were funded at a combined cost of $10.8 million and 72 projects are being funded in 2005/06 at a combined costs of $6.million (Roads and Traffic Authority 2005; Roads and Traffic Authority 2006) The RTA also offers training courses for professionals to ensure that the planning and design of new roads promotes bicycle and pedestrian activity. This action is creating environments more conducive to physical activity by making cycling easier and safer through improved local infrastructure. The action is also improving the capacity of planners and designers to incorporate cycling and pedestrian activity into future developments. These outcomes are consistent with IOTF principle 2 by promoting physical activity into everyday life. Risk: Gains may be limited to those areas which receive funding.

Provide financial assistance and expertise for local government to develop Pedestrian and Access Mobility Plans. (Action 2.6) ***ON TRACK***	The RTA provides assistance to councils to develop integrated pedestrian networks through the development of Pedestrian and Access Mobility Plans (PAMPs). Nine additional PAMPS were completed in 2002/03; six in 2003/04 and a further eleven in 2004/05 (Roads and Traffic Authority 2002) (Roads and Traffic Authority 2003) (Roads and Traffic Authority 2004) (Roads and Traffic Authority 2005). This action is creating environments more conducive to physical activity by improving pedestrian access and better local infrastructure which is consistent with IOTF principle 2 - the integration of physical activity into everyday life. Risk: Gains may be limited to those areas which receive funding.

TABLE 8. Priority 2: An Active Community - Expanded interventions

EXPANDED ACTIONS	COMMENTS ON CAPACITY FOR ADVANCING CHILDHOOD OBESITY PREVENTION
Funding for Public Health Policy Officer position in Local Government Association (Action 2.7) ***COMPLETED***	This action has been implemented and as a result: • The Local Government Public Health Survey has been completed and disseminated within the health and local government sectors. • A Healthy Local Government Grants Program is underway and provides Councils and Shires financial assistance to undertake health promotion activities. This Grant program includes funding for Active Communities projects which have as their aim the prevention of childhood obesity. 152 applications have been received and are being assessed of these 67 related to the Active communities category ; and • Public Health E-bulletin are being regularly disseminated to interested parties in local councils. This action is having a positive impact in strengthening the capacity of local governments to lead and participate in health promotion including on issues related to the prevention of childhood obesity (NSW Health 2006b). The action is consistent with IOTF principle 4 because it promotes inter-sectoral collaboration and community participation. Risk: That the gains may be limited to the funded councils.

TABLE 9. Priority 3: Supporting Parents - Core Interventions

CORE ACTIONS	COMMENTS ON CAPACITY FOR ADVANCING CHILDHOOD OBESITY PREVENTION
The Early Intervention Program and Flexible Child Care and Family Service projects (Action 3.3) ***ON TRACK***	The Department of Community Services is finalising contracts with 301 short-listed organisations to deliver a range of services aimed at children's development and family functioning as part of its new Early Intervention program. These services will be established between June 2006 and December 2006 (NSW Department of Community Services 2006). Risk: No risk identified.
Support and information to parents about overweight & obesity through Family First (Action 3.4) ***PROGRESSING***	Implementation is progressing. Information has been developed by NSW Health and is planned to be disseminated through the Family First network (NSW Health. 2006a). This action adheres to IOTF principle 8 by using an existing program to disseminate information to parents. Risk: While many families may potentially benefit from this information, the actual reach of the program is likely to be limited.

TABLE 10. Priority 3: Supporting Parents - Expanded interventions

EXPANDED ACTIONS	CAPACITY FOR COMMENTS ON ADVANCING CHILDHOOD OBESITY PREVENTION
Additional funding to NSW Branch of the Australian Breastfeeding Association (Action 3.1) ***COMPLETED***	Increased funding was provided in 2004/05 financial year. These additional funds enable the Association's Helpline to support mothers to continue breastfeeding (Obesity Action Plan Monitoring Sub-Group 2005). Project funds have been committed over 3 years (2006-08) for assistance by the ABA (NSW) in implementation of the NSW Health Breastfeeding Policy through peer support and advice on provision of breastfeeding-friendly workplaces for NSW Health employees. This action adheres to IOTF principle 9. The evidence indicates that breastfeeding reduces the risk of children becoming obese later in life. Risk: no risk identified.
Development of NSW Breastfeeding policies (Action 3.2) ***PROGRESSING***	The first comprehensive breastfeeding policy for NSW Health has been developed and released. This Policy supports implementation of the revised national NHMRC Infant Feeding Guidelines for Health Workers (2003) through increased organisational support, workforce development, breastfeeding- friendly workplaces, evidenced-based services, collaboration and monitoring of population breastfeeding practices (National Health and Medical Research Council 2003). An evaluation framework has been developed. Baseline data on current breastfeeding service provision has been established prior to policy release to assist future evaluation of the policy impact. Policy support materials and a program of policy implementation planning workshops for Area Health Services are in progress. By promoting breastfeeding and delivering more breastfeeding services this action has the potential to reduce the risk of children being overweight or obese later in life (Obesity Action Plan Monitoring Sub-Group 2005). This action is evidence based supporting IOTF principle 9. Risk: The extent to which the policy is implemented as core business of clinical services, and specifically influences support for breastfeeding by more disadvantaged mothers.

Expert Taskforce on overweight & obesity support and treatment services (Action 3.5) ***COMPLETED***	The NSW Paediatric Overweight and Obesity Services Advisory Group met on three occasions and produced the Report - Towards a Best Practice Model for Paediatric Overweight and Obesity Treatment Services 2005. The report identifies a number of issues and gaps in service delivery for overweight and obese children, adolescents and their families in NSW and outlines a best practice model to improve the current system. The report also recommends further research be undertaken into the feasibility of implementing this model including implementation of this model on a smaller scale so that its outcomes can be properly evaluated (NSW Paediatric Overweight & Obesity Services Advisory Group 2005). By outlining a process for providing children who are overweight and obese with appropriate treatment services this action is consistent with the IOTF recommendation that a comprehensive strategy should contain interventions for individuals. Risk: That the recommendations of the Report are not adopted or fully implemented by clinical services due to lack of infrastructure or other constraints.

TABLE 11. Priority 4: Healthy Child and Out-of-School Care - Core Interventions

CORE ACTIONS	COMMENTS ON CAPACITY FOR ADVANCING CHILDHOOD OBESITY PREVENTION
Nutrition information and advice on good practice in physical activity for children services and out-of-school hours programs (Action 4.1) ***COMPLETED***	This action has been implemented through the new Children's Services Regulation 2004 and the development and dissemination of a Manual of model health and safety policies and practices for children's services (Firth et al. 2003). The Department of Community Services has also funded community events based around the theme of sport and recreation as part of its 2005 Children's Week grant program (Obesity Action Plan Monitoring Sub-Group 2005).
Nutrition and physical education training programs for child care professionals (Action 4.2) ***PROGRESSING***	NSW Health has published the revised 4th edition of the child care nutrition manual for child care centres in partnership with the Lady Gowrie Child Centre, Sydney. This manual called Caring for Children: Food, Nutrition and Fun Activities, focuses on food provided/brought from home for 3-5 year olds in child care centres (Bunney and Williams 2006). It provides the basis NSW Department of Community Services regulations for nutrition in child care centres. NSW Health has funded the revision of the Caring for Infants resource which provides practical guidance to child care centres on the provision of food and policies concerning 0-2 year olds in line with the revised NHMRC Dietary Guidelines for Children and Adolescents. It is expected to be re-developed as a companion to Caring for Children The implementation of this action continues the long-standing requirement that all licensed childcare services maintain a policy on nutrition and all aspect of children's development which includes physical development. Recent research by COO highlights the value of further support for this sector and provides practical ideas for intervention strategies (Pagnini et al. 2006). A Stakeholder forum was conducted by COO in May 2006 and may lead to a working group which will develop further actions in this area. There is potential for expanded actions to be built upon the specified core actions. IOTF principles 2, 6, and 8 are represented in this action. The action aims to integrate physical activity into daily life, reach all parts of the community and is being integrated through existing programs. Risk: That the potential for expanded actions may not be developed.

TABLE 12. Priority 4: Healthy Child and Out-of-School Care - Expanded interventions

EXPANDED ACTIONS	COMMENTS ON CAPACITY FOR ADVANCING CHILDHOOD OBESITY PREVENTION
NSW Sport and Recreation will implement three active Out-of-School Hours Care pilot programs, with the following stages: **• Trialling of various ways of providing physical activity** **• Development and trialling of a training program for OSHC staff** **• Development and trialling of a start-up package for Centres** **• Trialling of physical activity policy guidelines for OSHC centres** **Evaluation of the key elements of success. (Action 4.3)** ***COMPLETED***	The implementation of this action is complete. Only two of the three pilot programs were implemented because the National Active After Schools Communities program superseded this action when it was introduced in June 2004. The first project examined the effectiveness of staff training through a 10 week exercise intervention program in all after school care centres in the Central Coast region. The action resulted in the development of a Physical Activity Resource Manual for OSHC centres and a OSHC Physical Activity Training Program. The report on the project is currently being finalised. All partners of this project will disseminate the final report to relevant agencies, for example, NSW Sport and Recreation will forward the report to Australian Sports Commission and NSW Manager, Active development and service delivery. CHISM will forward the report to relevant agencies to drive the future training agenda. The second project is underway in the four OSHC servicing the Arabic Community in Canterbury/Bankstown and involves training community coaches and identifying activities that are engaging for this community. The knowledge obtained from these projects has informed NSW Sport and Recreation contribution to how the Active After Schools Community Program initiatives operate in NSW. Through Active After Schools projects 7,000 community coaches have received training which is a significant expansion of the community's capacity to deliver these programs in the future (Obesity Action Plan Monitoring Sub-Group 2005; NSW Department of Sport and Recreation 2006). This action advances IOTF principles 2 and 4 by integrating physical activity into everyday life and encouraging community participation. It also advances IOTF Principle 9 by building on existing theory and evidence in this area.
NSW Sport and Recreation will develop and trial a physical activity training package for staff working in out-of-school hours care (OSHC) centres. It will be based on the competencies identified in the Certificate IV 'Train the Trainer' Physical Activity for Children and Youth. (Action 4.4) **COMPLETED**	The Be Active After School Training Program for staff in Out of School Hours Care centres has been developed and evaluated. The materials are in use in 23 OSHC in the Central Coast area (Obesity Action Plan Monitoring Sub-Group 2005; NSW Department of Sport and Recreation 2006). The action is consistent with principle 2 integrating physical activity into everyday life. Risk: That the Be Active After School Training Program may not be disseminated to other areas and sustained.

TABLE 13. Priority 5: Community Understanding - Core Interventions

CORE ACTIONS	COMMENTS ON CAPACITY FOR ADVANCING CHILDHOOD OBESITY PREVENTION
NSW Health will develop and maintain the overweight and obesity website www.health.nsw.gov.au/obesity (Action 5.2) ***COMPLETED***	The Website has been developed and is operating. This action assists in raising community awareness about childhood obesity and complements the GAP's social and environmental interventions, which is consistent with IOTF's first principle, that education alone is not sufficient to change weight-related behaviours. Risk: That the website/portal may be under-utilised unless information about its availability is regularly disseminated and reinforced.

TABLE 14. Priority 5: Community Understanding - Expanded interventions

EXPANDED ACTIONS	COMMENTS ON CAPACITY FOR ADVANCING CHILDHOOD OBESITY PREVENTION
NSW Health will publish an easy to use compendium of nutrition and physical activity related information and resources on NSW Health's Childhood Obesity Website. (Action 5.3) ***ON TRACK*** **NSW Sport and Recreation and NSW Health will develop a user-friendly, online training program providing information on physical fitness, nutrition and healthy lifestyle options for children. (Action 5.4)** ***ON TRACK***	The Healthy Kids website (www.healthykids.nsw.gov.au) has been developed and launched in May 2006. The process of implementing this project is an example of the advantages of the increased collaboration between Government agencies arising out of the GAP. The collaboration between NSW Department of Education, National Heart Foundation (NSW Division), NSW Health and NSW Sport and Recreation is producing a new service that the different agencies wouldn't have had the capacity to produce had the GAP not enabled their knowledge and resources to be pooled. The agencies have also collaborated in the conduct of 10 regional workshops in early 2006. There was very good feedback on the expected benefits of the Healthy Kids website with NSW Sport and Recreation expecting both coaches and parents to benefit (NSW Department of Sport and Recreation 2006). The Department of Education commented that it is expected to be an excellent means of communicating with classroom teachers (NSW Department of Education 2006a). A series of regional professional development workshops were conducted to support the Healthy Kids website. The workshops highlighted the latest research and information regarding obesity, kids, health eating and physical activity. Teachers, parents, coaches and professionals working in the field or nutrition, physical activity and overweight and obesity participated in these workshops. It could also provide a mechanism for communicating with early childhood workers who have expressed a desire for more information on how to support overweight and obesity prevention initiatives in their centres (Pagnini et al. 2006). The action advances IOTF principle 4 by promoting collaboration. Risk: That the portal may be under-utilised unless information about its availability is regularly disseminated and reinforced.

TABLE 15. Priority 6: Increasing Knowledge - Expanded interventions

EXPANDED ACTIONS	COMMENTS ON CAPACITY FOR ADVANCING CHILDHOOD OBESITY PREVENTION
Establishment of COO and linkages with Australian Child and Adolescent Obesity Research Network (ACAORN) and conduct research on effective initiatives to overcome overweight and obesity. (Action 6.1) (Action 6.2) (Action 6.4) ***ON TRACK***	The Centre for Overweight and Obesity has been established within the University of Sydney's School of Public Health and it has linkages with ACAORN . COO's activities include: • Consultation and publication of a Strategic Plan (2005) • NSW Schools Physical Activity and Nutrition Survey (SPANS) 2004; • Contributing to the evaluation of the Hunter New England ASSIST interventions; • The Weight of Opinion qualitative research; • Creating Healthy Environments: Review of Environmental Interventions which Influence Physical Activity and Obesity; • The Weight of Time: a study of age and birth cohort as a determinants of overweight and obesity in Australia; • An analysis of TV news of overweight and obesity. This work raises awareness of the need for multiple responses to childhood obesity and provides the evidence upon which effective interventions can be developed (NSW Centre for Overweight and Obesity 2005). By building an existing theory and practice it is consistent with IOTF principle 9. Risk: That the research is not translated into policy and practice in a timely way.
Schools, Physical Activity and Nutrition Survey (SPANS). (Action 6.3) ***COMPLETED***	This action is completed. The SPANS is of scientific importance because it gives trend data over a twenty year period. Its findings also inform further research and policy development. It is consistent with IOTF principle 9 by building on existing theory and evidence as well as principle 10 by providing a baseline for monitoring childhood physical activity, nutrition and obesity levels in NSW. Risk: That the issues identified are not acted upon in a timely way; and further monitoring surveys are not conducted.

TABLE 16. Priority 7: Governments, Industry and the Community Working Together - Expanded interventions

EXPANDED ACTION	COMMENTS ON CAPACITY FOR ADVANCING CHILDHOOD OBESITY PREVENTION
The NSW Government will convene forums involving key stakeholder groups, to explore ways of working together to prevent childhood obesity. (Action 7.1) ***LIMITED PROGRESS***	A proposal to advance collaboration with industry was developed by the NSW Health, the Population Health Priority Taskforce (PHPT). There has been no action in implementing this proposal or alternative action to date. Risk: That there is not an agreed process or identified outcome in relation to this action.

Discussion

The NSW Government Childhood Obesity Action Plan represents the first phase of the State Government's response to childhood obesity. It was not intended as a comprehensive strategy that addresses all the social and economic forces driving the obesity epidemic, as it focussed solely on actions that are the direct responsibility of the NSW Government and that were considered to be immediately feasible at the time the Plan was developed.

As noted above, each of the IOTF principles and recommendations for actions are addressed through one or more of the GAP actions. However, the IOTF principles and recommendations for action are intended to provide an integrated set of reference points, and thus it is appropriate to consider the overall set of actions in the GAP in relation to these benchmarks.

IOTF Recommended Action 1: Address both dietary habits and physical activity patterns of the population.

The *Action Plan* addresses factors related to both dietary habits and physical activity patterns, with actions specifically related to physical activity dominant and accounting for 17 actions or fifty percent of the *Action Plan*. The childcare, school or after-school care settings are the focus for 10 of these physical activity actions. The *GAP* includes seven actions aimed at creating local environments that are more conducive to physical activity. The majority of these physical activity initiatives represent core interventions and were implemented with existing resources.

There are seven actions related to improved dietary habits; and the implementation of the Healthy Schools Canteen Strategy, as a flagship intervention, accounts for three of these. This intervention did receive additional resources. All interviewees noted the importance and strength of this strategy, and saw it as a positive force and highly meaningful, in supporting healthy eating patterns for children and reinforcing classroom lessons. While this is undoubtedly the case in terms of policy change and community awareness, the School Canteen Strategy is not itself a strong way of influencing children's energy consumption, as it is estimated that children age 5 to 15 years consume less than 3 per cent of their total energy intake from school canteens (Bell and Swinburn 2004).

The GAP also contains two actions aimed at promoting breastfeeding in NSW and two actions providing nutrition information and advice to childcare and out-of-school care professionals.

Overall, actions addressing physical activity and nutrition tend to be distinct from each other, in terms of target group and setting. Information dissemination actions were the only actions that addressed physical activity and food consumption in an integrated way.

IOTF Recommended Action 2: Address both societal and individual level factors.

The GAP contains five actions which are aimed at improving health services and advice for children and their families. Two of these are aimed at promoting breastfeeding; one outlines a process for improving treatment services for obese children and two are aimed at providing parents with support and information. Further progress is needed to advance the implementation of these actions directed to individual factors.

The majority and remaining actions are directed at societal level factors. This should be commended as it is consistent with a public health approach which recognises that individual behaviour is influenced by the wider environment.

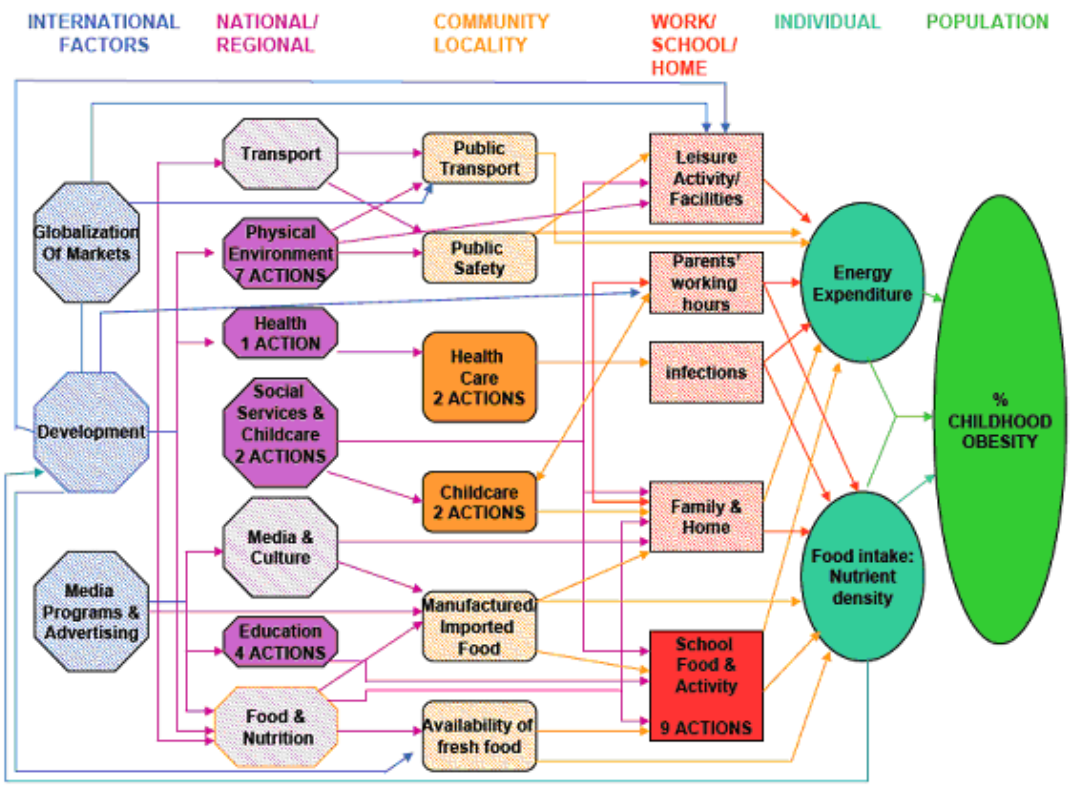
IOTF Recommended Action 3, 4 and 6: Address both immediate and distant causes and have multiple focal points and levels of intervention (i.e. national, regional, community and individual levels) and build links between sectors that may be otherwise viewed as independent.

The *Action Plan* brings together programs across key portfolios that can contribute to obesity prevention and creates a significant cross-sectoral agenda and basis for collaboration. It functions as an important foundation for collaboration between government agencies. In the evaluation interviews, departmental officers emphasised that the *GAP* had been instrumental in developing a network across agencies on actions to prevent childhood obesity. There was also a strong consensus among those interviewed that the meetings of the Obesity Action Plan Monitoring Sub-group promoted this inter-agency collaboration (NSW Department of Sport and Recreation 2006; Roads and Traffic Authority 2006; NSW Department of Education 2006a; NSW Health 2006a).

The building of links between sectors that may be otherwise viewed as independent is an important IOTF action recommendation which the *Action Plan* addresses.

Through the 34 actions, the GAP aims to address some of the determinants of obesity identified by the IOTF's causal web of obesity, as illustrated in highlighted boxes in Figure 3.

Figure 3 IOTF Causal Web of Obesity adapted for NSW childhood obesity



KEY: Shaded boxes – not covered by GAP
Solid boxes – covered by GAP.

Figure 3 also illustrates factors that are not addressed through the actions of the *Action Plan*, including transport, safety, media and food supply. It is noted that Premier's Council on Active Living (PCAL) has been established to bring together transport and planning sectors, to identify their contributions to health and active living. Nevertheless, there may be value in including additional government agencies such as Agriculture and Transport in further obesity prevention initiatives and networks, as these agencies have a potentially important contribution in addressing the determinants of obesity which stem from the physical environment.

The *Action Plan* does incorporate a mix of local and state level action. However, in many cases the local community projects are limited to a small number of sites and are unlikely to achieve widespread reach or population effect, unless they are implemented on a major scale across the state, or there is a clear process for staged dissemination and statewide implementation.

Looking nationally, it is apparent that a more coordinated approach between state and national levels would be desirable and increase potential effectiveness.

IOTF Recommended Action 5: Include both policies and programmes.

The *GAP* is weighted more towards program implementation, rather than policy development. Only three actions relate to changing policy. Two of these - the Healthy School Canteen Strategy and the NSW Breastfeeding Policy – are on track, and combine policy and programme components. The third, the report of the Taskforce on Overweight and Obesity Support and Treatment Services recommends further policy and infrastructure development.

Though the remaining 31 actions are program specific, they do give credibility and authority to previous policy decisions, such as the 1999 policy decision committing the NSW government to building off-road cycleways, and the Childcare Regulations 2004, which include an emphasis on healthy diet and physical activity.

IOTF Principle 1: Education alone is not sufficient to change weight-related behaviours. Environmental and social interventions are also required to promote and support behavioural change.

Education initiatives account for four actions, with the majority of the *GAP* focusing on environmental and societal interventions. While this balance appears to be appropriate, many of the social, environmental interventions are on a local level and small scale.

Additional education and communication initiatives are likely to be essential in order to build community support for further social and environmental interventions (Wallack 1998).

IOTF Principle 2: Action must be taken to integrate physical activity into daily life, not just to increase leisure time exercise.

Seven actions within the *Plan* are aimed at IOTF principle 2. In particular the GAP contains actions such as 'walk to school day' and the expansion of cycle paths. There is, however, room for significant expansion in this area through more strategic and structural actions, including actions related to public transport and urban planning agencies.

IOTF Principle 3: Sustainability of programmes is crucial to enable positive change in diet, activity and obesity levels over time.

The *GAP* is primarily concerned with initiating discrete actions, and does not emphasise structural changes or sustainability. The importance of ensuring that the actions were maintained and incorporated into the relevant agency's core business was stressed during several interviews (NSW Department of Education 2006a; NSW Health 2006a). In many cases continued professional and financial assistance is likely to be needed to ensure sustainability of the actions contained in the GAP.

IOTF Principle 4: Political support, intersectoral collaboration and community participation are essential for success.

The development of the *GAP* benefited from the significant political support and community participation associated with the 2002 Childhood Obesity Summit. While childhood obesity commands a high profile with Government and the human services sector, personnel changes and the passage of time suggest that new processes are needed to ensure political support and inter-sectoral collaboration continue.
The new COAG National Reform Agenda with its emphasis on Human Capital provides a political mechanism which could be used to advance obesity prevention.

While community participation is a component of some of active community actions, increased community participation and a stronger community voice will be essential ingredients for a successful public health effort (Wallack 1998). There is scope to strengthen this component through further actions.

IOTF Principle 5: Acting locally, even in national initiatives, allows programmes to be tailored to meet real needs, expectations and opportunities.

Many of the *GAP*'s actions support local initiatives such as NSW Sport and Recreation's grants program. Other actions, also aimed at community skill development or building infrastructure, ensure that initiatives can be delivered in ways that are appropriate for each community.

While this approach can support appropriate and tailored approaches, it is important to note that many areas and communities will not be recipients of local initiatives, as they have only been implemented in selected locations and not universally across the state. Such actions are insufficient to achieve population effects, unless they are implemented on a major scale across the state.

IOTF Principle 6: All parts of the community must be reached – not just the motivated healthy.

Components of the *GAP* adhere to this principle. Mandatory actions such as the Healthy Schools Canteen and the rollout of professional development materials, and childcare regulations are designed to reach all communities. However, the scale, intensity and duration of implementation may be insufficient to ensure all parts of the target groups, particularly more socio-economically disadvantaged groups, are reached.

Pilot programs such as NSW Sport and Recreation's after-school-care programs designed specifically for the Arabic community in Sydney are evidence of the *GAP*'s desire to use tailored approaches to ensure all parts of the community are reached.

Similar to the point noted above, while this targeted approach is appropriate in many circumstances, it needs to be implemented widely across many communities if it is to reach to all parts of the community and not just small numbers.

Further efforts and enhanced investments for disadvantaged groups and communities will be required, to reach a wide range of more disadvantaged community groups, to ensure that they can achieve equitable outcomes, on par with those who are more advantaged (Mooney & Jan, 1997).

IOTF Principle 7: Programmes must be adequately resourced.

While NSW Treasury did not directly allocate additional resources for child obesity prevention following the Summit, NSW Health allocated additional funding totalling $12 million over three years (2004/5 to 2006/7) to assist with the implementation of the *GAP*. These funds have been concentrated on two new initiatives, the Healthy Schools Canteen Strategy and the establishment of the Centre for Overweight and Obesity. It was noted in interviews that the *GAP*'s existence has also enabled obesity prevention resources to be ring-fenced. This was considered a significant achievement in the current tight fiscal climate.

Nevertheless, the level of investment required to halt the increases in childhood obesity and make an impact in reducing its prevalence are likely to be much more substantial than the amounts invested so far. Given that the current GAP focussed on core and expanded actions, it is expected that future efforts will need to incorporate 'desirable actions', which will require additional investment.

For example, recent research from the Victorian Department of Human Services (Victorian Government Department of Human Services 2006) provides evidence of specific, highly cost-effective approaches, but also indicate the levels of investment required to achieve effective outcomes. The recent investment of $7.5 million over 5 years by NSW Health and Hunter New England Area Health Service for in a large Area-wide, intensive demonstration project (Hunter New England Child Obesity Prevention Program), represents a major investment by NSW Government.

This is a good example of making substantial investment in a priority program, in order to achieve sufficient scale and intensity of effort to achieve substantive outcomes.

IOTF Principle 8: Where appropriate, programmes should be integrated into existing initiatives.

This principle is central to the *GAP*'s design and implementation. Many of the actions listed have been included in the *GAP* because their successful implementation will have a positive contribution to reducing obesity in the community, even though their primary aim may not be obesity reduction.

For example, the RTA work in building off-road cycleways represents its commitment to expanding access and equity, and the health benefits of encouraging more people to cycle may be considered as a secondary outcome.

IOTF Principle 9: Programmes should build on existing theory and evidence.

The limited extent of evidence regarding effective interventions in the area of obesity prevention has meant that the *GAP*'s 34 actions are primarily based on existing health promotion theory and practice.

The establishment of the Centre for Overweight and Obesity by *GAP* is a key step towards the development of further locally-relevant evidence about effective interventions.

There was strong interest among departmental officers in gaining more program specific evidence and for the dissemination of the evidence once it has been collected. However, the *Action Plan* does not include any mechanisms to introduce new initiatives that may be indicated on the basis of newly-emerging evidence.

IOTF Principle 10: Programmes should be properly monitored, evaluated and documented. This is important for dissemination and transfer of experiences.

The implementation of the *GAP* is monitored by the Obesity Action Plan Monitoring Sub-Group, which has met three times and by report once. Progress reports have been produced for the Human Services CEO Forum which is responsible the *GAP*'s implementation. There is now a mechanism in place for updating progress on the report and the identification of any emerging risks and recommendations for remedial actions. These reports are tabled by NSW Health on a bi-monthly basis, and this mid-term evaluation also is part of this reporting process.

The *GAP* did not specify any impact (e.g. children's eating and physical activity behaviours) or outcome (e.g. population weight status) indicators for reporting and monitoring purposes. The complexity of multiple determinants influencing children's weight status makes it difficult to measure and attribute the direct impact of the actions listed in the *Plan*. This is particularly true for analysing the contribution of actions that have obesity as a

secondary objective.

Nevertheless, the *Schools, Physical Activity and Nutrition Survey (SPANS)* 2004 has been conducted as part of the *GAP* and provides benchmark data on a variety of indicators amongst NSW school students. This information can now be used to inform the development of future obesity prevention policies and interventions, and provide a baseline for later measures.

Many of the core interventions have their own monitoring and evaluation processes. These reports could contribute to future evaluation efforts. For example, NSW Sport and Recreation surveys on participation in exercise, recreation and sport are a possible source for future indicators (NSW Department of Sport and Recreation 2006). In addition, specific evaluation processes are in place for some of the expanded interventions, such as the Healthy School Canteen Strategy, the Out of Schools Hours Care pilot programs and the Hunter New England child obesity prevention program.

Overall, a process of identifying and cataloguing an appropriate set of indicators to assess ongoing progress on child obesity prevention against policy, organisational and health outcomes could be worthwhile. The set of indicators should include both routinely collected indicators that can provide a proxy measure of society's levels of commitment and action, as well as specific data collections on children's health, including dietary habits and physical activity. Incremental changes in the factors that are contributing to childhood obesity are required before it will be possible to achieve significant reductions in the incidence and prevalence of obesity. For this reason, the performance indicators should include not only health indicators, but indicators of program implementation and of intermediate outcomes. As far as possible, indicators should be based on routinely collected data collection systems (across all relevant sectors), and align with international recommendations for child obesity prevention indicators. The indicators should also reflect a mix of short and long-term effects. The set of indicators could then be used for future evaluation and accountability purposes.

The lack of identified systems for incremental development, and identified impact and outcome indicators for monitoring, are potential weaknesses unless they are addressed in the remaining term of the *GAP*. Enriching the *Action Plan* through ongoing program/policy development and setting identifiable indicators are both important actions within the term of the Plan. Without them there are substantial risks:

- the government's actions will not reflect new evidence

- lack of sensitive and proximal indicators of changes will exclude early signs about whether the problem is abating or escalating, and the extent to which government action is occurring as planned

- the government's efforts will fail to have an impact on children's risk of overweight and obesity, through being insufficient in terms of intensity, reach and/or duration.

In summation, the IOTF principles and recommendations provide a useful way of assessing strengths and weaknesses of the NSW Action Plan. While the GAP's array of 7 priority topic areas, 5 responsible agencies and 34 actions is impressive, the Plan is a mix of discrete actions, and could be strengthened through more connections between actions, both within and across priorities.

Conclusion

This mid-point evaluation has assessed the implementation of the GAP in relation to IOTF principles and recommended actions and WHO Stepwise Framework and identified significant strengths and weakness of the *Action Plan*.

The *GAP*'s major strengths are that it has made a significant contribution to developing the state government infrastructure needed to move towards a more strategic approach to obesity prevention. For example, the establishment of the Centre for Overweight and Obesity is an important step towards developing the evidence-base needed for the NSW Government to move from core and expanded actions to more evidence based and resource intensive 'desirable' actions as categorised by the WHO Stepwise Framework.

Similarly, the *SPANS* 2004 survey of schools and the investment in a major area-wide community intervention program in Hunter New England Area Health Service each represent examples of major infrastructure development.

In addition, the process of implementing the *GAP* has lead to significant cross sector collaboration. This collaboration has resulted in the development of knowledge and commitment to obesity prevention amongst a network of government officers across sectors. This engagement with other government agencies is critical as many of the causal determinants of

obesity lie outside the health sector. Consideration should be given to possibly expanding the cross agency collaboration to senior officers' level and ensuring a strategic agenda. This could be achieved in part by incorporating childhood obesity prevention into the NSW Government's response to the COAG National Reform Agenda relating to human capital reform.

As a flagship action, the Healthy Schools Canteen Strategy may provide a valuable catalyst for the cultural and behavioural changes needed to start to turn around the current trends in childhood obesity.

Nevertheless, it is important not to under-estimate the range and extent of changes that will be required to reverse increasing rates of childhood obesity. While the *GAP*'s mix of priority topic areas, responsible agencies and actions is impressive, the mix is relatively fragmented. A highly integrated and comprehensive approach will be required to build a fully effective effort.

At this early stage in the government response, when the resources and evidence-base for interventions are limited, it is understandable that the *GAP* focuses on core and expanded interventions. Through its simple and achievable design, predominately weighted towards program implementation rather than strategic policy development, the *GAP* set out a set of feasible actions; and 88 per cent of these actions are now complete or on track.

However, in the past five years significant policy developments have occurred internationally and across Australia. For NSW Government to maintain its position as a leader in responding to the childhood obesity crisis, attention must now be given to developing a more strategic public health response. This strategic response must take into account the need for:

- an on-going policy focus;
- incorporate all parts of the health sector;
- broad cross-sector engagement, possibly including the planning, transport and housing portfolios;
- strategic investments that are of sufficient scale and intensity over sufficient time to achieve measurable change;
- mechanisms to ensure sustainability of actions and effects;
- integrated approaches that link policy and program actions.

As well as the potential for further strategic policy focus, the evaluation has identified the absence of indicators for monitoring progress on child obesity prevention.

Given that *GAP* has succeeded in stimulating action and that new evidence is emerging, it is now appropriate to focus attention on the next stage of the Government's response. This current 5 year *GAP* can be seen as the first stage in a longer-term strategy, in a similar fashion to the series of Tobacco Control plans and strategies that have been operating for 10-20 years. Tobacco control and other successful public health efforts demonstrate that long-term, large-scale, intense and sustained efforts are required to achieve substantive outcomes at population level. This provides important lessons for redressing the increasing rates of childhood overweight and obesity.

In conclusion, while the implementation of the *GAP* is largely on track for completion in 2007, NSW has only just begun its response to the childhood obesity epidemic. Planning should begin now for a more strategic and intensive second phase, so that NSW children are given every opportunity to grow up in an environment that promotes healthy eating and physical activity. Recommendations have been designed to address actions within the terms of the *GAP* as well as future strategic approaches.

APPENDIX A: List of interviewees

- Manager, Nutrition and Physical Activity Unit
Centre for Chronic Disease Prevention and Health Advancement
NSW Department of Health

- Director,
Centre for Chronic Disease Prevention and Health Advancement
NSW Health

- Manager, Bicycle Policy
NSW Roads Traffic and Authority

- NSW Commission for Children and Young People

- Chief Education Officer
Personal Development, Health and Physical Education
NSW Department of Education and Training

- Student Welfare Directorate
NSW Department of Education and Training

- Manager, Programs and Projects
Office of Child Care
NSW Department of Community Services

- Manager, Community Sport and Recreation
NSW Sport and Recreation

- Director, Programs and Partnerships
NSW Sport and Recreation

- Chair,
Premier's Council on Active Living

- Executive Officer
Human Services CEOs Network
Department of Community Services

- Executive Officer
Centre for Overweight and Obesity
University of Sydney

- Co-chair
NSW Population Health Priority Taskforce
NSW Health

APPENDIX B: Sample interview procedure and questions

Dear

As part of the mid-term evaluation of the Government Action Plan for the Prevention of Obesity in Children and Young People (GAP) we would like to interview you in the first or second week of February 2006.

This interview is expected to take up to two hours as NSW Health has sole or joint responsibility for over twenty actions listed in the Plan. The attached brief outlines the key issues we wish to discuss with you during the interview. To assist the discussion you may wish to invite the project officers with responsibility for specific actions to be present when their area of responsibility is discussed.

With your consent we would like to record the interview so that the discussion is accurately reported in the final report. These recordings will be confidential and used only for the purpose of writing the mid-term evaluation report. The interview will be conducted by at least two members of the evaluation team which includes, Ms Marilyn Wise, Ms Caroline Turnour and myself.

We will be in contact in January to schedule a date and time for the interview.

Yours sincerely

Lesley King

Sample of Interview Questions

Brief for interview with NSW Health

The interview will be broken into three sections: a) the implementation of specific actions; b) the priority areas; and c) supporting documents or information.

a) Specific Actions

The actions contained in the plan fall into three categories, those that have been incorporated into existing programs, those that are new one-off initiatives, and new on-going initiatives.

1. Existing Programs

Table 1 lists the actions that are part of existing programs that NSW Health has a role in implementing. Discussion on each action will be guided by the following broad questions and also the specific questions listed in the table.

1. Is the implementation of this action on track?
2. Is the action suitable for implementation through this program?
3. Has the program received additional resources because of its inclusion in GAP?
4. Is there sufficient capacity within the agency to advance the action?
5. Is the action strengthening the program's capacity?
6. Has the action enabled the environment to be more conducive to physical activity or improved nutrition?
7. Has the action contributed to community mobilization or enabled better advocacy?
8. What have been the major impediments to implementing the action?
9. Is the action sustainable, if not what, should it be and what needs to happen to make it sustainable?
10. What is the contribution of this action to long-term change?
11. Has the action enabled greater collaboration between different agencies?

Table 1: Existing Programs – NSW Health

Action	Specific Issues for discussion (in addition to the above)	Comments/documents
Support and information to parents about O&O through Family First (3.4) (Priority 3 – Supporting Parents)	Are parents able to get information and support about O&O prevention through family first networks and if not is family first the appropriate vehicle to disseminate this material? Is there sufficient capacity within family first to implement this action?	The progress report indicates that further action is required for this initiative
Additional funding to NSW Branch of the Australian Breastfeeding Association (3.1) Development of NSW Breastfeeding policies (3.2) (Priority 3 – Supporting Parents)	Are there indicators to measure the impact of the actions on the prevalence of breastfeeding? Have these actions enabled new groups to be targeted? Is the provision of additional health funding to the Australian Breastfeeding Association the appropriate mechanism for achieving these goals?	(The progress report refers to the development of an evaluation framework and policy action plans)
Nutrition Information and advice on good practice in physical activity for children services and out-of-school hours programs (4.1) (Priority 4 – Healthy Child and Out-of-School Care)		This is being implemented in conjunction with DOCS and Sport and Recreation. It is mainly DOCS, NSW Health is working with Sport and Recreation to purchase a license for QLD resources
Walk Safely to School Day Sponsorship (2.3) (Priority 2 – An Active Community)		
School Sport Foundation (1.4) (Priority 1 – Healthier Schools)		
Rock Eisteddford Challenge and Croc Rock Festivals (1.9) (Priority 1 – Healthier Schools)		

2. New on-going programs

Table 2 lists the actions that are new on-going programs that NSW Health has a role in implementing. Discussion on each action will be guided by the following broad questions, as well as the specific questions listed in the table.

- Is the new program on target for meeting its objectives?
- What is the workforce/infrastructure capacity available to implement this initiative? Or is the initiative directed at improving the organization's capacity?
- Is a specific evaluation planned for this initiative and, if not what strategy/process is needed to prepare for the final evaluation? Data collection – do steps need to be taken now to establish a process for the final evaluation.

Table 2: New on-going programs – NSW Health

Action	Specific questions for discussion (in addition to the 3 above)	Comments/documents
Healthy School Canteens (1.1, 1.2,1.3) (Priority 1: Healthier Schools)	Are there issues with its implementation that need to be addressed as part of this mid-term evaluation?	This action is being implemented and is the subject of separate evaluations.
Establishment of COO and linkages with Australian Child and Adolescent Obesity Research Network (ACAORN) (6.1) (6.2) (6.4) **Schools, Physical Activity and Nutrition Survey (SPANS) (6.3)** **ACAORN and SPANS might be new one-off programs** **Area Based Services Strategic Implementation Trials (ASSIST)** **(Priority 4 – Increasing our Knowledge)**	Are there emerging research issues that need to be addressed or is the current research agenda appropriate? Are there issues emerging from the research that need to be addressed through policy or programs, or that indicate existing policy or programs should be altered in any way?	
Funding for Public Health Policy Officer position in Local Government Association (2.7) (Priority 2 – An Active Community)		This position has been filled. Its aims include: increasing the profile of public health issues such as O&O in local government; identifying areas of collaboration b/w local government and NSW health, and increase capacity of local government to lead and participate in health promotion? Has this action enabled greater collaboration between different agencies? Is it strengthening capacity in this area?

2. New One-off programs

Table 3 lists the actions that are new one-off programs that NSW Health has a role in implementing. Discussion on each action will be guided by the following broad questions, as well as the specific questions listed in the table.

- If completed, how is/has it contributed to the overall advancement of the O&O agenda?
- Has the action lead to further policy development, improved capacity or further research?

Table 3: New one-off programs – NSW Health

Action	Specific Issues for discussion	Comments/documents
Expert Taskforce on O&O support and treatment services (3.5) (Priority 3 – Supporting Parents)		The action aims to develop O&O support and treatment services including education, training, clinical services and evaluation and research.
State-wide community education campaign (5.1) (Priority 5 – Community Understanding)	The process of developing the campaign and whether the GAP has assisted cross-agency collaboration and whether this has been beneficial.	
O&O Website development (5.2) Kids Healthy Lifestyle Portal (5.3, 5.4) (Priority 5 – Community Understanding)		
Government, Industry and Community Working Together (7.1) (Priority 7)	How can this action be progressed further or are some of the objectives being taken up through other initiatives?	

b) Broader discussion on the seven priority areas listed in the *GAP*

In addition to discussing the implementation of the specific actions, we would like to discuss the appropriateness of the range of actions listed under each priority and the overall effect of the actions. Issues that may arise during the discussion would include:

- Are the actions outlined for each priority area appropriate and relevant to that area?
- What other initiatives are underway/or planned which address this priority area?
- Consider the range of health policy levers: health financing, legislation and regulation, improving the built environment, advocacy initiatives, community mobilization, health services organization and delivery, to what extent do the actions utilize the different policy options?
- Do the actions fit the evidence – what evidence base are we working from?
- What is the overall impact of all the strategy working together?

For example, are the actions listed under the Priority 3 what parents need and are their other actions that could be supported?

c) Documents

Finally, are there documents or indicators on specific programs that have already been prepared that would assist the mid-term evaluation or planning for the final evaluation?
For example, which actions/programs listed in the plan are being evaluated separately and can these evaluation frameworks be made available to the mid-term evaluation?

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