



3. Obesity prevention

The World Health Organization defines prevention as 'approaches and activities aimed at reducing the likelihood that a disease or disorder will affect an individual, interrupting or slowing the progress of the disorder or reducing disability'.

Primary prevention is targeted at reducing the likelihood of the development of a disease or disorder. Secondary prevention aims to interrupt, prevent or minimise the progress of a disease or disorder at an early stage, while tertiary prevention focuses on halting the progression of damage already done.(29)

The main focus of this paper is on the primary prevention of obesity in Australians. Overall, the evidence suggests that the prevention of obesity is the most realistic, efficient and cost-effective approach for dealing with childhood and adult obesity. This is due to the relative lack of success of treating obesity once it has become established, particularly long-term,(30, 31) and because the health consequences of obesity are cumulative and possibly not reversed completely with weight loss.(32)

However, while prevention may represent the most effective strategy to manage obesity, there remains a need to deal with the immediate weight and health problems of people who are currently overweight and obese. There are already significant numbers of obese people requiring treatment, and the numbers will rise regardless of any short-term measures.(33) Many of these people will have co-morbidities and will be at risk of further weight gain over time.

Given the existing magnitude of the problem in Australia (around one in five Australian adults is obese), the *prevention of unhealthy weight gain* is a more appropriate target. As this encompasses both secondary and tertiary prevention, it allows the scope of initiatives to become broader and cover a spectrum

of activity in the prevention of weight gain, including obesity prevention, weight loss and maintenance, and the management of weight-related risk factors.(34)

3.1 What could be achieved in obesity control

It is difficult to set targets for obesity prevalence, as no country has been successful in reversing the trend of rising levels of overweight and obesity, and few jurisdictions have set targets for specific reductions in the prevalence of obesity. Importantly, it is not only reductions in the prevalence and incidence of overweight and obesity that should be the target of health reforms. Population health measures such as obesity prevalence are affected by many factors, and it takes many years to have an impact on personal behaviours and health outcomes. In the short term, therefore, policy reforms should at least aim to reduce the rate of increase in obesity. Over a five-year period, for example, the best that might be seen in changes in prevalence of overweight and obesity at the population level would be a gradual slowing of the rate of increase. In the UK, for example, the comprehensive cross-government obesity strategy 'Healthy Weight, Healthy Lives' aims to reduce childhood overweight and obesity to 2000 levels by 2020.(35)

Policy reforms in the first instance should also target the disproportionate distribution of obesity in Australian society, and focus on reducing the inequity in prevalence between population sectors; for example, obesity is particularly prevalent among men and women in the most disadvantaged socio-economic group, people without post-school qualifications, those with the lowest equivalent income, Aboriginal and Torres Strait Islander peoples, and among many of those born overseas.(5, 36)



Some international studies have modelled the impact of various scenarios targeting chronic conditions on population health outcomes. For example, a Dutch study modelled a national approach to obesity control. In an attempt to develop a basis for policy targets for a potential national action plan on overweight and physical inactivity, researchers simulated the cost-effectiveness of a population-level community-based intervention to 13.3 million people over five years. The results suggested that if an intervention consisting of social marketing and mass media strategies, self-help support groups, risk factor screening and/or counselling in various settings was offered to 90% of the population, and an intensive lifestyle or multi-component weight loss program was offered to 10% of overweight adults, the prevalence rate of moderate overweight (currently 36.1%) could be reduced by 1.6 percentage points and obesity (currently 11%) by 1.2 percentage points. The prevalence rate of physical inactivity (currently 11%) could be decreased by 2 percentage points. The cost of the intervention, based on two existing Dutch projects, would be 470 million (AUD\$731.2 million) or 7 (AUD\$11) per adult per year. At this level of funding, using a conservative methodology, the study found that costs per quality adjusted life year (QALY) gained were far below those reported for intensive glycaemic control and a reduction in serum cholesterol levels in diabetics. (37)

The US Centers for Disease Control and Prevention (CDC) commissioned a dynamic simulation model of diabetes prevalence and complications, for use in designing and evaluating intervention strategies. (38) As part of the study, the impact of three scenarios on diabetes rates to 2050 were modelled. The three scenarios were:

- enhanced clinical management
- increased management of pre-diabetes
- reduced obesity prevalence (primary prevention).

As illustrated in Figure 6 below, the first scenario was shown to lead to slightly higher prevalence than baseline due to a reduction in deaths. Under the second scenario, diabetes prevalence rises by 17% (compared with 23.5% under the baseline scenario), while under the third scenario, prevalence rises to only 5.5%. This is because the pre-diabetes scenario does nothing to reduce the onset of pre-diabetes in the first place. This leads to a 'backing up' of people in the pre-diabetes category, and a proportion of cases of diabetes are merely delayed rather than prevented. It is only the obesity reduction scenario that 'turns off the tap'.

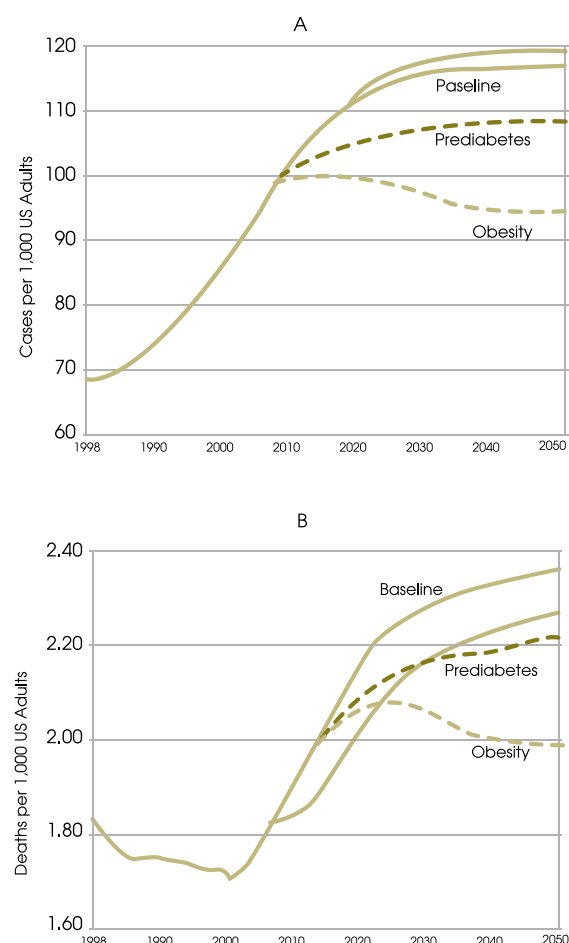


Figure 6: Model output for 3 intervention scenarios compared with the baseline scenario for diabetes prevalence (a) and complication-related deaths (b)

Source: Jones et al. 2006(39)



3.2 What is required to address the problem

The magnitude of the obesity problem (in Australia and internationally), the number of decades over which it has emerged, and the complexity and multitude of its health, social, economic, cultural and environmental determinants and consequences demand a long-term, comprehensive and well-funded response. Addressing obesity requires much greater change than has been attempted or achieved to date, and at multiple levels. Significant individual, family, community, organisational and environmental changes are required in order for Australians to achieve and maintain a healthy weight and to prevent obesity. It is not something that governments can do alone. This is recognised in the UK cross-government strategy, for instance, which involves working in partnership with communities, businesses, third sector organisations and individuals in a national 'Coalition for Better Health'.(40)

3.2.1 Prompt action

Given the size of the current and projected obese and overweight population, there is a need to act promptly. While Australia's mortality rates for coronary heart disease, stroke, lung cancer and transport accidents have improved significantly in terms of our ranking with other Organisation for Economic Co-operation and Development (OECD) member countries, this is not the case for our ranking for obesity.(4) Australia's adult obesity rate is the fifth highest among OECD countries, behind the US, Mexico, the UK and Greece.(41)

3.2.2 Multifaceted, multi-sectoral response

Multiple social, economic, technological, environmental and political factors interact to influence trends in population obesity and overweight. The majority of these are outside the control of individuals and families. Effective action must therefore address obesity at a structural level, as an environmental, political and cultural problem. This requires strong

political leadership and the coordination, cooperation and partnership of the public and private sector over the long term, including national, state and local governments, the non-government sector, the media, industry, private interests and local communities.(42)

3.2.3 Leadership and coordination

Obesity arguably poses a greater challenge to national public health management than either tobacco or alcohol. Effective action on overweight and obesity at a population level demands strong leadership and intelligent coordination of a staged approach that will sustain action in the long term. Partnerships and cooperation across the public and private policy spheres are required, and must involve all aspects of national, state and local governments, the non-government sector, industry, business, private interests and local communities, and occur across all levels of government and within and across sectors. The health system, despite the need for wider engagement, has a key leadership role in mediating among different interests, ensuring citizen engagement and advocating for policy directions that support better health.

It is clear that all members of society have a crucial role to play in tackling Australia's obesity crisis. This is reflected in data from a national survey commissioned by the Heart Foundation in 2006, which asked a large representative sample of Australians who should play a major role in addressing Australia's weight problem. Australian adults believe that there are many parties who should be involved: the greatest proportions felt that parents of overweight children (94%) and adults who are themselves overweight (80%) should play a major role. Health professionals (74%), media (65%), companies that make/market food products (65%) and governments (52%) were also perceived to play a major role. The vast majority of Australians felt that all these groups should play either a major or minor role in addressing the nation's weight problem (87% or higher for each sector).(43)



3.2.4 Role of individuals

All Australians share responsibility for individual and population health, and the success of the health system.(44)

- As individuals, each Australian makes choices about personal lifestyle and behaviours. These are shaped by physical and social circumstances, life opportunities and environment.
- The health system is funded by the community, and, as patients, community members make decisions about how to use the health system.
- The health system has an important role to play in helping people to become more self-reliant and better able to make the best choices to manage their own healthcare needs. This includes helping people, both as individuals and as a community, to make informed decisions on issues such as smoking, alcohol consumption, a healthy diet and adequate physical activity.

With the increasing prevalence of overweight and obesity nationwide, it appears that Australians may perceive being overweight as 'normal' and hence many overweight people may not consider that they have a problem. For example, only around one-third of Australian adults in the 2004–2005 National Health Survey considered themselves to be overweight (32% of males and 37% of females). (45) This was substantially lower than the actual rates based on BMI calculated from self-reported height and weight: 62% of males and 45% of females in the survey were classified as overweight or obese. In addition, trends suggest that overweight or obese adults are increasingly likely to see themselves as having an acceptable weight. The proportion of overweight or obese Australians who perceived themselves as having an acceptable weight increased from 37% in 1995 to 41% in 2001 and 44% in 2004–2005.(5)

3.2.5 Role of governments

Governments have a responsibility to coordinate preventative health reform, to deliver preventative programs and to make sure adequate supports are put in place to enable individuals, families and communities and the health system to make useful contributions. It is the role of government to enable and support individuals, families and communities to take responsibility for health (*'making healthy choices easier for everyone, everywhere and every day'*).

3.2.6 Role of healthcare systems

Healthcare systems need greater emphasis on helping people to stay healthy through stronger investment in prevention, early detection and appropriate interventions to keep people in the best possible health. There is a need to ensure that, as well as diagnosis and treatment, actions and incentives are available to keep people well, create supportive environments and policies, protect the health of all Australians, and prevent disease and injury (adapted from NHHRC 2008).(44)

The direction of prevention within the health system and the provision of health services should be shaped around the health needs of individuals, their families and communities. Responsiveness to individual differences, stage of life, cultural diversity and preferences through choice in health care is important (adapted from NHHRC 2008).(44)



3.2.7 Social determinants of health

Healthcare systems should be designed to ensure equitable, universal coverage and access, with adequate human resources. Health systems need to combine locally organised action on the social determinants of health with strengthened primary care. It is important that there is adequate funding for prevention and health promotion as well as treatment. Progress towards health equity requires addressing economic inequality. Policy coherence and inter-sectoral action for health – ‘health in all policies’ – are essential, and renewed government leadership is urgently needed to balance public and private sector interests. (46)

3.2.8 The environment

The environment plays an important role in our health and in helping to make sensible decisions about health. The environment is taken to include the global climate, the physical and built environment (for example, the workplace, air quality, planning decisions that affect our health), the socio-economic environment (including the working environment) and external influences such as the promotion of healthy or unhealthy behaviours.

The health system needs to work at all these levels to promote health in many and varied partnerships and across agencies. Partnerships outside the health system should include those with all levels of government, planning, infrastructure and transport departments, police and the courts, local councils, employers, businesses, early-learning centres, schools and universities (adapted from NHHRC 2008). (44)

3.2.9 Working with industry

The contribution of Australian industry is a crucial component of the multi-sectoral response that is needed to tackle the obesity problem. The development of a comprehensive national obesity prevention strategy represents a unique opportunity to engage with the diverse areas of industry that need to be part of the solution.

Industry sectors have already demonstrated their willingness and ability to work in partnership with others to develop strategies and products that enhance the health of Australians. Industry can make an important contribution to population health through:

- The provision of information (for example, product and menu labelling and responsible marketing; the placement of healthy products in more prominent positions in supermarkets).
- Improving the food supply (for example, making healthier and affordable food products available).
- Developing a more environmentally sustainable food chain. The following examples demonstrate some of the ways industry can play an influential role in shaping the population’s health.

FOOD INDUSTRY

Some members of the food industry are willing to cooperate with strategies aimed at achieving a healthier, affordable food supply, and have indicated this through, for example, new product development and reformulation of existing recipes (such as reductions in salt or using healthier oils for cooking). Other areas have been more contentious. The food industry has opposed regulation in the past, for example, in relation to food marketing to children. A set of seven principles (the ‘Sydney Principles’) was developed by an International Obesity Taskforce (IOTF) Working Group in 2006 to guide action on changing food and beverage marketing practices that target children. Each of the principles was supported by a wide group of stakeholders, including the food and advertising industries, but there was industry opposition to the third principle which called for a statutory approach.



This principle is based on the premise that industry self-regulation is not designed to ensure a high level of protection for children from targeted marketing and the negative impact that this has on their diets, and that only legally enforceable regulations have sufficient authority to achieve this goal.(47)

RESTAURANT AND CATERING INDUSTRY

Restaurant associations are often opposed to regulatory measures that introduce point of sale menu labelling (i.e. where menu boards contain nutritional and energy content information). Reasons include the cost burden associated with nutritional analysis and updating menu boards, as well as concerns about loss of revenue if menu labelling curbs ordering. While it has been suggested that revenue shifting within and between restaurants is more likely to occur if menu labelling works as intended, there is currently a lack of evidence on this point.(48)

WEIGHT LOSS INDUSTRY

The weight loss industry in Australia is worth millions each year (for example, in 2002 young women aged 18–32 years were estimated to have spent almost \$414 million per annum to manage their weight).(49) There are a wide range of weight loss programs available, including commercial weight loss programs (such as pharmacy-based programs), internet-based programs, weight loss products (such as meal replacements) and community-based weight management or exercise groups. While these programs are popular, there is limited data on their effectiveness. To ensure that industry practices are safe and effective, there is a need to review weight loss industry programs and to develop a common code of practice for the industry, covering issues such as costs, counsellor training, and the marketing and promotion of services.

3.2.10 Population-wide focus

There is a clear need to balance policy directions that focus on individual and personal responsibility with a population-wide focus on policies that support and facilitate healthy eating and physical activity. Evidence indicates there is a wide range of forces, most of which are outside the control of individuals and families, that interact to shape patterns of overweight and obesity, and the high rates of overweight and obesity in the community warrant a population-level response. According to the World Health Organization.

‘A life-course perspective is essential for the prevention and control of non-communicable diseases. This approach starts with maternal health and prenatal nutrition, pregnancy outcomes, exclusive breastfeeding for six months, and child and adolescent health; reaches children at schools, adults at worksites and other settings, and the elderly; and encourages a healthy diet and regular physical activity from youth into old age.’(50)

3.2.11 High-risk groups

A focus on the population as a whole will need to be complemented by targeted approaches for groups with disproportionately high rates of overweight and obesity, including Aboriginal and Torres Strait Islander people; people of different cultural backgrounds, particularly from Asia (India and China), Pacific Islands and the Middle East; and people of lower socio-economic status. In addition, interventions aimed at children and pregnant women may have a significantly higher impact.



3.2.12 Costs

Given the magnitude of the obesity problem in Australia, the cost of a comprehensive strategy to address it could be substantial. For example, costs for a comprehensive population-level strategy targeting obesity may be considered in the context of the UK Government's strategy 'Healthy Weight, Healthy Lives', aimed at reversing the rise in obesity prevalence in the UK. This strategy comprises funding of £372 million for the period 2008–2011, on top of additional investment of £1.3 billion in school food, sport and play initiatives, and £140 million pounds for Cycling England for the same time period.⁽³⁵⁾ However, costs for prevention and management need to be considered in light of the estimated economic cost to the nation, and balanced with the gains to be made for effective strategies that will also ultimately address the comorbidities associated with excess weight. For example, evidence suggests that as BMI increases, so do length of hospital stay, medical consultations and use of medication.⁽³²⁾

3.2.13 Research, monitoring and evaluation

It will be important to continue developing the evidence base through research, evaluation, monitoring and surveillance, but this should not be a cause for delayed action. Australia can build a strong evidence base through research, evaluation, monitoring and surveillance. This should include a much higher investment in research and evaluation of weight reduction interventions, as well as improving our understanding of its causes. In terms of research, a specific research agenda needs to be developed with appropriate levels of public and private funding. This will need to be supported by improved monitoring and harmonisation of surveillance systems across Australia.