2

Future implications for Australia

2.1 Increasing levels of obesity among the Australian population will have significant impacts on the health system, and on Australia as a whole. This chapter will outline the costs and future implications of obesity, focusing specifically on:

- costs of obesity:
  - ⇒ economic costs;
  - ⇒ individual costs; and
  - ⇒ social costs;
- future implications:
  - ⇒ cost of co-morbidities;
  - ⇒ hospital costs;
  - ⇒ monitoring interventions; and
- the United Kingdom's perspective.

2.2 Understanding the implications of these increasing costs is important because they underscore the need for action to reverse the rate of obesity in Australia.

Costs of obesity

Economic costs

2.3 The Committee heard that in 2008 the estimated cost of obesity to the Australian economy was $8.283 billion. If the cost of lost wellbeing is

included the figure reaches $58.2 billion.[1] These figures are only estimates for the cost of obesity, not the costs of overweight. Yet, these figures alone demonstrate the strain that obesity is having on the Australian economy and the need to put in place an effective treatment and prevention strategy.

2.4 Evidence to the Committee showed that the costs have increased over the past decade. Witnesses repeatedly referred to a report commissioned by Diabetes Australia from Access Economics in 2005 that found the estimated cost of obesity to be $3.8 billion. Including the cost of wellbeing raised the figure to $21 billion.[2] At a private briefing in Canberra, Access Economics told the Committee that they had changed their methodology between the 2005 and 2008 reports and revised their figures accordingly.

> We realised that we had been quite conservative – overly conservative – in our 2005 estimate, so we thought it worthwhile putting the less conservative if perhaps less comfortable estimates on the table [in the 2008 version].[3]

2.5 The Committee questioned the Department of Health and Ageing (DoHA) at a private briefing regarding the lack of more comprehensive economic modelling for the Australian case and were told that the Preventative Health Taskforce (the Taskforce) would decide the type of modelling required in their final report.[4] DoHA acknowledged the need for such modelling in their submission to the inquiry:

> … it is likely the Australian situation would be broadly comparable with the UK scenarios. This needs to be tested using Australian data.[5]

2.6 The Committee believes that there would be significant benefit in modelling the economic costs of obesity in Australia and strongly recommends that the Minister for Health and Ageing commission economic modelling to establish the economic costs of obesity and model the cost-benefits of various interventions.

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1 Access Economics 2008, *The growing costs of obesity in 2008: three years on*, <http://www.accesseconomics.com.au/publicationsreports/showreport.php?id=172&searchfor=2008&searchby=year> accessed 17 April 2009.

2 Diabetes Australia, Submission No. 92, npn.

3 Ms ML Pezzullo, Access Economics, Official Transcript of Evidence, 26 November 2008, p 15.

4 Mr PT Morris, Department of Health and Ageing, Official Transcript of Evidence, 4 February 2009, p 9.

5 Department of Health and Ageing, Submission No. 154, p 21.

Recommendation 1

2.7 **The Committee recommends that the Minister for Health and Ageing commission economic modelling in order to establish the cost implications of obesity to Australia and the cost-benefits of various interventions.**

Difficulties in determining costs

2.8 Throughout the inquiry the Committee took evidence time and time again about the difficulty of accurately estimating the cost of obesity to the Australian economy and Australian society. This is due to two significant factors:

- the hidden costs of obesity; and
- weaknesses in the data on the prevalence of obesity.

2.9 These factors will be addressed in detail in the following section.

Hidden costs

2.10 The complexity of obesity and its inter-relation with a range of co-morbidities[6] makes it difficult to accurately estimate the cost impact of obesity in Australia. It can be difficult to work out which costs involved in a patient's treatment are connected to obesity and which are connected to other conditions.

2.11 A number of witnesses to the inquiry cited examples of hidden costs. Associate Professor Samaras from St Vincent's Hospital told the Committee:

> Every time a coronary artery stent is put in, and obesity is the cause of that, that costs $10,000. You will not see it as an obesity statistic; you will see it as a cardiac statistic.[7]

2.12 To try and disentangle the cost of obesity from the cost of the other conditions it is linked with, expert witnesses to the inquiry told the Committee that they use a scientific calculation to estimate how much of a condition is caused by obesity. This calculation is referred to as an 'attributable fraction'. The easiest way to understand 'attributable fractions' is by using an example, like bowel cancer:

6 A co-morbidity is a disease or illness which is caused or worsened by obesity including type 2 diabetes, hypertension, sleep apnoea, osteoarthritis, cardiovascular disease, and a number of cancers.

7 Associate Professor K Samaras, Australian Healthcare and Hospitals Association, Official Transcript of Evidence, 12 May 2008, p 35.

> What they mean is that, for example, 20.5 per cent of all bowel cancer is attributable to obesity. That is what that attributable fraction means. It means that, with conditions, you can allocate how much of them are due to particular factors, whether it is physical inactivity, overweight, obesity or high blood pressure.[8]

2.13 Ms Pezzullo from Access Economics explained to the Committee that in 2008 obesity contributed to the costs of a range of other conditions:

> The attributable fractions suggest that in the year 2008 there were 242,033 Australians who had type 2 diabetes as a result of being obese, there were 644,843 Australians who had cardiovascular disease as a result of being obese, there were 422,274 Australians who had osteoarthritis as a result of being obese and there were roughly 30,000 Australians who had the various cancers as a result of being obese.[9]

2.14 The Committee was also concerned about the intangible, but no less important costs, associated with obesity. The Committee learnt that obesity severely affects productivity and lessens an individual's life expectancy. Associate Professor Moss from the University of Adelaide noted:

> …the inability of people who have an established condition to make the level of contribution to society that they might otherwise have expected to.[10]

2.15 The Committee heard that to calculate the cost of the loss of productivity, statisticians have developed the disability adjusted life year (DALY) which works out the years of life lost due to disability and the years of life lost due to premature death. The DALY allows statisticians to quantify the overall burden on society of a particular disease. In Australia, high body weight has been estimated to contribute 7.5 per cent to the burden of disease which is nearing the 7.8 per cent contributable to tobacco use. DoHA warns:

> High body mass is likely to overtake tobacco as the leading modifiable cause of burden as smoking rates decline.[11]

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8 Ms ML Pezzullo, Access Economics, Official Transcript of Evidence, 26 November 2008, p 3.

9 Ms ML Pezzullo, Access Economics, Official Transcript of Evidence, 26 November 2008, p 3.

10 Associate Professor JR Moss, University of Adelaide, Official Transcript of Evidence, 13 June 2008, p 20.

11 Department of Health and Ageing, Submission No. 154, p iii.

Data weaknesses

2.16 Evidence to the inquiry confirmed the scale of the obesity epidemic in Australia but witnesses identified a number of weaknesses in the available data. The prevalence of obesity is not being measured in any systematic, nation wide way on a regular basis, and the data that is available is often out-of-date. Weaknesses in data collection make it difficult to determine the true cost of obesity to the Australian economy and society.

2.17 At the public hearing in Melbourne, the Committee heard evidence from the Centre for Obesity Research and Education that there are approximately 2.5 to 3 million Australians living with obesity, and that the number of morbidly obese Australians, whose BMI is 40 or more, is estimated to be 2 percent of the adult Australian population.[12]

2.18 Individual organisations and departments provided written and oral evidence to the Committee that demonstrate the extent of the problem within their own areas. For example, the Committee heard from staff from Hunter New England Health who work at Manning Base Hospital. Staff there noted that in 2001, 37 bariatric patients weighing a total of 5 tonnes and 342 kilograms with an average weight of 144 kilograms per patient had been admitted. By comparison, in 2008, 265 patients were admitted with a total weight of 39 tonnes and 220 kilograms and an average weight of 148 kilograms. The staff stated that in that seven year period there had been a total of 1,387 bariatric patients admitted to the hospital.[13]

2.19 The Committee took evidence from Queensland Health about their statistics:

> …58 percent of adults over 18 years of age were overweight or obese while 21 percent of children aged five to 17 were either overweight or obese.[14]

2.20 When the Committee visited South Australia for a public hearing, evidence was presented that the latest South Australian data showed that nearly 13 percent of four year old boys in that state were overweight, and almost five percent were obese.[15]

2.21 While this evidence highlights the scale of the obesity epidemic in specific areas of the Australian population, the lack of national, up-to-date

12 Dr A Peeters, Centre for Obesity Research and Education, Official Transcript of Evidence, 20 June 2008, p 32.

13 Mr E Wood, Hunter New England Health, Official Transcript of Evidence, 12 September 2008, p 5.

14 Dr LA Selvey, Queensland Health, Official Transcript of Evidence, 1 October 2008, p 2.

15 Professor C Gericke, University of Adelaide, Official Transcript of Evidence, 13 June 2008, p 16.

prevalence data on obesity was repeatedly brought to the attention of the Committee. Among others, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) raised this point in its submission to the inquiry:

> It must be noted that there are significant limitations to Australian national data available on food intake, weight and health status. The last comprehensive survey of adult dietary intakes was conducted in 1995. Unlike the US National Health and Examination Survey which is conducted every 5 years, Australia does not have objective diet and health monitoring and surveillance. As such, it is not possible to track reliably over time the relationships between food intake, body weight and health status.[16]

2.22 The Australian and New Zealand Obesity Society (ANZOS) reiterated the concern about inadequate data collection in their submission:

> It is perplexing that in a country as well resourced as Australia that has such well developed data collection systems and agencies that we do not collect regular data on dietary intake, physical activity and measured weight status on a regular basis.[17]

2.23 The Committee notes the release of the *2007 Australian National Children's Nutrition and Physical Activity Survey* which was completed and published during the course of the inquiry, but several witnesses emphasised that it had been 13 years since similar data had been collected. Professor Swinburn, from the World Health Organisation(WHO) Collaborating Centre for Obesity Prevention expressed the frustration of many witnesses:

> It is unbelievable that the latest nationally representative data on childhood obesity in this country is 13 years old. If you want to act, you have to measure it…[18]

2.24 It is not merely the age of the data that is of concern but the methodology used to collect the information. Obesity data is collected by the Australian Bureau of Statistics (ABS) on a triennial basis, however this data is self-reported.[19] The Taskforce discussion paper on obesity notes that self-

16 Commonwealth Scientific and Industrial Research Organisation (CSIRO), Submission No. 113, p 11.

17 Australian and New Zealand Obesity Society (ANZOS), Submission No. 11, p 5.

18 Professor BA Swinburn, World Health Organisation Collaborating Centre for Obesity Prevention, Official Transcript of Evidence, 20 June 2008, p 22.

19 Commonwealth Scientific and Industrial Research Organisation (CSIRO), Submission No. 113, p 9.

reported data is likely to be an underestimation because people tend to overestimate their height and underestimate their weight.[20]

2.25 The Committee was advised that to rectify this lack of data, regular surveillance of obesity prevalence within the Australian population needs to be implemented.

2.26 In their submission to the inquiry, the CSIRO calls for 3-5 yearly surveillance of diet, physical activity, and height and weight to be undertaken, and states that there are many innovative ways in which this can be done. One of their suggestions is to get General Practitioners (GPs) to check the height and weight of each patient at each visit. CSIRO add that this would provide an opportunity for data collection and tracking as the information could be collated at state/national level.[21]

2.27 In their submission, the Australian Institute of Health and Welfare (AIHW) similarly draws attention to the need to improve Australian population surveillance and data collection. Their submission recommends that:

- Efforts to harmonise and standardise jurisdictional surveillance systems continue—and be expanded to jurisdictions without ongoing surveillance programs—so that annual national estimates can be obtained;
- A comprehensive population survey (as outlined above, and including physical and biomedical measures) be established and repeated at regular intervals;
- Better measures of physical activity and sedentary behaviours be developed and implemented in population surveys; and
- The AIHW's monitoring role be enhanced to actively monitor the prevalence and trends in overweight and obesity in the Australian population, and integrate this with broader disease monitoring.[22]

2.28 The Committee strongly believes that there needs to be regular monitoring and surveillance of height and weight, nutritional intake and physical activity levels in Australia. The Committee was pleased to note the release of the recent and comprehensive *2007 Australian National Children's Nutrition and Physical Activity Survey* and acknowledges that the Department of Health and Ageing will commence an ongoing National Nutrition and Physical Activity Survey Program in late 2009. The Committee is of the opinion that both of these surveys are long overdue.

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20 Preventative Health Taskforce, Technical Report No. 1, Obesity in Australia, p 5.

21 Commonwealth Scientific and Industrial Research Organisation (CSIRO), Submission No. 113, p 23.

22 Australian Institute of Health and Welfare (AIHW), Submission No. 10, p 8.

2.29 The Committee notes that DoHA is currently developing a proposal for a National Health Risk Survey Program (HRS) which will expand the National Nutrition and Physical Activity Survey Program. The HRS will continue to collect self-reported data on nutrition and physical activity but will broaden the scope of the survey to include such things as:

- overweight and obesity status;
- blood pressure status;
- socioeconomic status;
- stress status;
- depression status;
- blood lipid status;
- cardiovascular health status;
- kidney function status;
- diabetes status; and
- blood nutrient status.[23]

2.30 The survey will initially focus on adults but will expand to include children in the future. It is proposed to commence the first survey in mid-2010 and it is hoped that funding will allow a sample from the HRS to form the basis for a continuing longitudinal study.[24] Data collected will be made available through a permanent, centralised, national data base for health research.[25] The Committee strongly endorses this proposal as well as the proposed National Nutrition and Physical Activity Survey and believes that these surveys will fill some of the gaps identified by witnesses to the inquiry.

2.31 The Committee is supportive of the proposal for GPs to collate data on the height and weight of their patients, and that this data be utilised to generate statistics on the level of obesity in Australia.

23 Department of Health and Ageing, *National Health Risk Survey: Consultation Paper*, March 2009, p 5.

24 Department of Health and Ageing, *National Health Risk Survey: Consultation Paper,* March 2009, p 4.

25 Department of Health and Ageing, *National Health Risk Survey: Consultation Paper,* March 2009, p 6.

Recommendation 2

2.32 **The Committee recommends that the Minister for Health and Ageing commit to regular and ongoing surveillance and monitoring of Australians' weight, diet and physical activity levels, and that the data gathered is used to formulate, develop and evaluate long-term policy responses to obesity in Australia. This data collection should build on the foundation established by the *2007 Australian National Children's Nutrition and Physical Activity Survey*, and proposed National Nutrition and Physical Activity Survey and National Health Risk Survey, providing up-to-date information about the prevalence of obesity in Australia.**

Individual costs

2.33 The Committee was concerned by the extensive personal costs that individuals affected by obesity incur. Witnesses to the inquiry identified a number of areas, in addition to financial ones, where people bear a personal burden for obesity including:

- discrimination;
- stereotyping;
- abuse and bullying; and
- premature death.

2.34 At their first public hearing in Canberra, the Committee heard that obesity 'is one of the last bastions of discrimination in our community'[26] and this message was reinforced throughout the inquiry. Professional and personal evidence identified the pain, frustration and inconvenience caused by discrimination as a major cost to individuals. One submission mentioned an inability to obtain income protection insurance or life insurance because of being overweight.[27] A number of surgeons drew the Committee's attention to the lack of access to bariatric surgery through the public health system as a form of discrimination[28] (see Chapter 3 for more on bariatric surgery). Professionals working with children and young

26 Associate Professor K Samaras, Australian Healthcare and Hospitals Association, Official Transcript of Evidence, 12 May 2008, p 36.

27 Name withheld, Submission No 136, p 3.

28 See, for example, Dr WA Brown, Monash University, Official Transcript of Evidence, 20 June 2008, p 33.

people spoke of the hurt that children suffer when they are not chosen for games and sports teams because they are overweight.[29]

2.35 The Committee learnt that discrimination is linked to stereotypes that have developed around obesity. Witnesses told the inquiry that overweight and obese people can be perceived as lazy, bad, weak, stupid and lacking in self-discipline.[30] The Committee was particularly concerned to hear from Queensland Health that these misperceptions had been perpetrated by some health professionals:

> These negative attitudes not only exist within the general public but also among many health professionals, which can seriously affect the treatment of overweight and obese individuals.[31]

2.36 The Committee was told that a consequence of such typecasting is the personal abuse and bullying that obese people suffer. Unfair treatment contributes to the lack of confidence and low self-esteem that often characterises individuals who are overweight or obese. One witness told the Committee of her 'overwhelming sense of shame and hurt' at the remarks passed by strangers, friends and work colleagues about her weight.[32] An academic working with overweight children told the Committee that children are well aware of their weight problem and provided an example of one boy:

> … who had not been to school for two days prior to coming to the program because he just could not cope with the bullying.[33]

2.37 There are high treatment costs associated with obesity-related conditions. In a written submission to the Committee, one witness detailed the cost of their bariatric surgery and associated care for one financial year as $16,500 (of which only $2,445 had been refunded through private health insurance).[34] In another submission, a witness stated that, although she wished to be proactive and take control of her weight, the cost of gym membership and a weight loss program were beyond her family's budget.[35]

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29 See, for example, Associate Professor PJ Morgan, Official Transcript of Evidence, 12 September 2008, p 27; University of Sydney, Submission No. 68, Attachment 2, p 4.

30 Name withheld Submission No. 136, p 1; University of Sydney, Submission No. 68, Attachment 2, p 3.

31 Queensland Health, Submission No. 56, p 8.

32 Name withheld, Submission No. 136, p 2.

33 Associate Professor CE Collins, Official Transcript of Evidence, 12 September 2008, p 31.

34 Name withheld, Submission No. 136, p 11.

35 Name withheld, Submission No. 18.

2.38 The ultimate cost for many people who are overweight or obese is premature death. Associate Professor Moss from the University of Adelaide told the Committee that people with excess body weight:

> … may lose anything up to 10 years of their life span.[36]

Social costs

2.39 The Committee was told that the costs of obesity to the individual collectively create social and economic costs at the community level. The issues that impact on social costs are:

- wellbeing;
- employment; and
- productivity.

2.40 At a private briefing in Canberra, Access Economics informed the Committee that it had estimated the cost of lost wellbeing to the Australian economy in 2008 at $49.9 billion. [37] Lost wellbeing refers to the likelihood of obese people being unable to contribute their full potential to society because of ill health, the development of disability and premature death. This is a significant cost, and the Committee is concerned about the overall affect on Australian society and the Australian economy.

2.41 The Committee heard that the stigma and discrimination suffered by obese individuals leads to social isolation and this can have an impact on employment prospects and increases welfare dependency. Diabetes Australia identified the social costs facing obese people:

> …obese people attain lower levels of occupational prestige and lower incomes than non-obese people. In addition, other studies have found that obese persons as a group receive more sickness and unemployment benefits than people within a normal healthy weight range.[38]

2.42 Lower workforce participation and increasing levels of absenteeism have a direct impact on productivity, which has a wider social impact. [39] Access Economics calculated that the cost of this lost productivity was $3.6 billion

36 Associate Professor JR Moss, University of Adelaide, Official Transcript of Evidence, 13 June 2008, p 20.

37 Access Economics 2008, *The growing costs of obesity in 2008: three years on*, <http://www.accesseconomics.com.au/publicationsreports/showreport.php?id=172&searchfor=2008&searchby=year> accessed 17 April 2009.

38 Dr G Deed, Diabetes Australia, Official Transcript of Evidence, 12 May 2008, p 4.

39 Mr A Phillips, National Rural Health Alliance, Official Transcript of Evidence, 10 September 2008, p 16.

to the Australian economy in 2008.[40] The importance of this, as the CSIRO submission states, is that:

> Productivity is, in the long-term, the key to building a more internationally competitive economy.[41]

2.43 The Committee argues that understanding these social costs is important because they indicate a reduction in the community's potential and its economic output. The potential long-term impact of these social costs was recognised by Associate Professor Samaras at a public hearing when she commented that:

> If we are looking at a workforce for the future, we have to look at people not achieving their full potential and also having a shorter working life through illness and premature death.[42]

Future implications

2.44 Witnesses to the Committee identified three main areas where the obesity epidemic could have future implications for the Australian economy and society:

- cost of co-morbidities;
- hospital costs; and
- the need for ongoing monitoring of interventions.

Cost of co-morbidities

2.45 The Committee was advised that the link between obesity and a range of co-morbidities will produce substantial future cost increases for the health system. These co-morbidities take time to develop and given the current high rates of obesity it is difficult to accurately predict the number of people who will experience obesity-associated disease down the track. In addition, any changes to obesity rates will take years to filter through and impact on the levels of chronic disease. As the Committee heard from the University of Adelaide researchers:

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40 Access Economics 2008, *The growing costs of obesity in 2008: three years on*, <http://www.accesseconomics.com.au/publicationsreports/showreport.php?id=172&searchfor=2008&searchby=year> accessed 17 April 2009.

41 Commonwealth Science and Industrial Research Organisation (CSIRO), Submission No. 113, p 16.

42 Associate Professor K Samaras, Australian Healthcare and Hospitals Association, Official Transcript of Evidence, 12 May 2008, p 36.

> This is a sleeping time bomb. So far the economic estimates for the costs of obesity to society … are largely underestimated. The real impact is going to be in a few years time.[43]

2.46 This view is shared by the Organisation for Economic Cooperation and Development (OECD). In their 2007 *Health at a glance* report they stated that:

> Because obesity is associated with higher risks of chronic illnesses, it is linked to significant additional health care costs…there is a time lag of several years between the onset of obesity and related health problems, suggesting that the rise in obesity over the past 2 decades observed in most OECD countries will mean higher health care costs in the future.[44]

2.47 At the hearing in Melbourne, Dr Stewart from the Baker Heart Institute identified two co-morbidities that will have a significant impact in Australia: type 2 diabetes and cardiovascular disease (CVD). He told the Committee that 4 per cent of Australians have type 2 diabetes and that a further 8 per cent do not know they have it. In respect of CVD he commented:

> …fat alone will contribute an extra 70,000 cardiovascular admissions in the next 20 years.[45]

2.48 Although there are a range of co-morbidities associated with obesity, to understand the future implications for the Australian economy and society, we will consider diabetes and CVD in some detail below.

Diabetes

2.49 In Australia, diabetes is the fastest growing chronic disease, with approximately 275 Australians developing the condition everyday.[46] There are two types of diabetes: in type 1 diabetes the body does not produce insulin which is required to convert sugar into energy; in type 2 diabetes the body produces insulin but cannot use it properly. Type 1 diabetes is usually diagnosed before a person turns 30 and is treated with insulin injections. While type 2 diabetes generally affects older people, there are emerging concerns about the increasing prevalence in children. It

43 Professor C Gericke, University of Adelaide, Official Transcript of Evidence, 13 June 2008, p 16.

44 Organisation for Economic Cooperation and Development (OECD), 2007, *Health at a glance: OECD Indicators*, OECD, p 50.

45 Professor S Stewart, Baker Heart Research Institute, Official Transcript of Evidence, 20 June 2008, p 2.

46 Diabetes Australia, <http://www.diabetesaustralia.com.au/Understanding-Diabetes/Diabetes-in-Australia/> accessed 17 April 2009.

is often associated with lifestyle factors including overweight and obesity.[47]

2.50 In 2005, the AusDiab study showed that there were 1.7 million Australians affected by diabetes. Their research also estimated that up to half of the cases of type 2 diabetes remain undiagnosed.[48] While these statistics refer to both type 1 and type 2 diabetes, they are considerable and the fact that half of type 2 diabetes remains undiagnosed is of significant concern. Further, according to ANZOS, over 60 percent of the burden of diabetes is attributable to obesity.[49]

2.51 The Committee heard that treatment of diabetes places a significant annual burden on the health system. The 2008 Access Economics report calculated that the economic cost of type 2 diabetes as a result of obesity was $8.3 billion. This figure includes $3.0 billion in financial costs and $5.3 billion in cost of lost wellbeing.[50] The Committee heard at a public hearing in Melbourne that the annual cost of diabetes was significant:

> Currently if you become a type 2 diabetic, in federal dollars, in 2006 dollars, it is $11,000.[51]

2.52 And the costs of treating type 2 diabetes are predicted to increase significantly over the next 30 years. A large proportion of these cost increases is attributable to obesity. Recent data from the AIHW highlights the significant problem that type 2 diabetes will present in the future, due in large part to the high levels of obesity in Australia.

2.53 It is projected that the cost of type 2 diabetes will increase by 520 percent from $1.3 billion to $8.0 billion by 2033. Factors that are projected to increase expenditure for type 2 diabetes are ageing ($1.4 billion), overall population growth ($1.0 billion), an increase in the prevalence rate of diabetes - largely driven by an expected increase in obesity ($1.8 billion), extra volume of services per case of disease ($2.5 billion) and treatment of diabetics who are currently untreated ($0.1 billion).[52]

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47 Diabetes Australia, <http://www.diabetesaustralia.com.au/en/Understanding-Diabetes/What-is-Diabetes/> accessed 17 April 2009.

48 Diabetes Australia, <http://www.diabetesaustralia.com.au/Understanding-Diabetes/Diabetes-in-Australia/> accessed 17 April 2009.

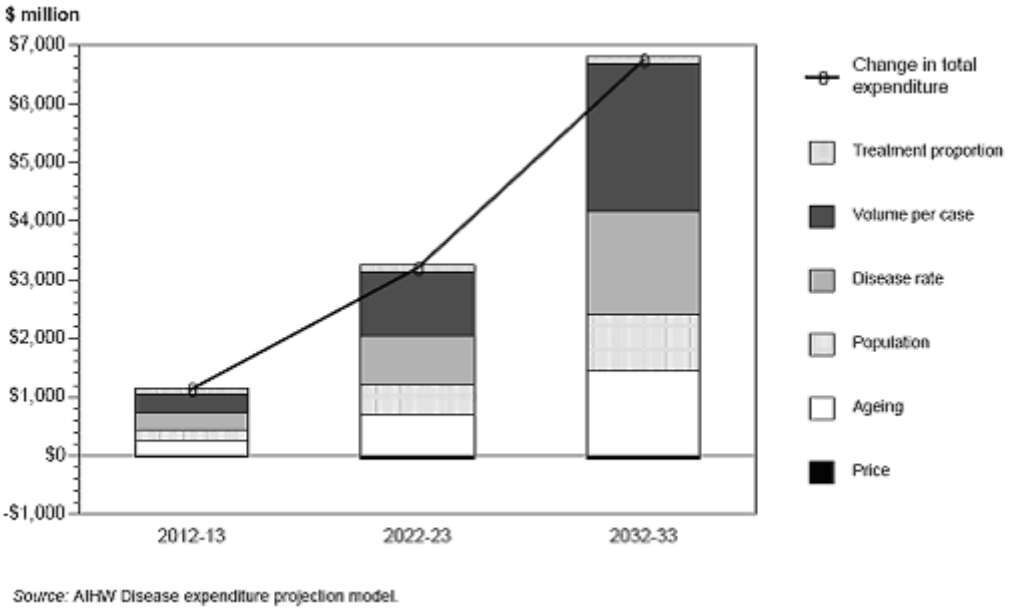
49 Australian and New Zealand Obesity Society (ANZOS), Submission No. 11, p 7.

50 Access Economics 2008, *The growing costs of obesity in 2008: three years on*, <http://www.accesseconomics.com.au/publicationsreports/showreport.php?id=172&searchfor=2008&searchby=year> accessed 17 April 2009.

51 Mr GJ Fyfe, Be Well Australia Pty Ltd, Official Transcript of Evidence, 24 October 2008, p 18.

52 Goss, J 2008, *Projection of Australian health care expenditure by disease, 2003 to 2033*, Australian Institute of Health and Welfare, Canberra, p 21.

Figure 2.1 Treatment costs of type 2 diabetes 2012 – 2033



Source *Australian Institute of Health and Welfare, 2008, Projection of Australian health care expenditure by disease, 2003 to 2033, p 21*

Cardiovascular disease (CVD)

2.54 The National Heart Foundation states that CVD affects more than 3.5 million Australians, and that it is the leading cause of death in Australia, accounting for more than 34 percent of all deaths in 2006.[53] As type 2 diabetes is a risk factor for CVD, increases in one will lead to increases in the other, and excess weight compounds the risk in both.[54]

2.55 The Committee was interested to learn that the incidence of CVD has actually declined over time. Professor Vos stated:

> Over time we have seen dramatic declines in cardiovascular disease. It has dropped by 70 percent over the last 30 or 40 years.[55]

2.56 However, while the incidence of CVD will continue to decline, the increase in obesity will contribute to a cost increase in its treatment. The DoHA submission points out that:

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53 The Heart Foundation, <http://www.heartfoundation.org.au/Heart_Information/Statistics/Pages/default.aspx> accessed 17 April 2009.

54 Stewart, S et al., 2008, *Australia's future 'fat bomb': A report on the long-term consequences of Australia's expanding waistline on cardiovascular disease*, Baker Heart Research Institute, Melbourne, p 3.

55 Professor T Vos, School of Population Health, University of Queensland, Official Transcript of Evidence, 1 October 2008, p 13.

> …while incidence will continue to decline, one of the factors driving increased expenditure will be a 96% ($0.6 b) increase in the proportion of those with the CVD risk factors of hypertension and hyperlipidemia (also associated with obesity, poor diet and sedentary lifestyle) being treated with blood pressure and lipid lowering drugs to prevent cardiovascular events.[56]

2.57 Of utmost concern of course is the potential for obesity to undermine the reductions in CVD that have been achieved thus far. This possibility was underscored by DoHA in their submission to the inquiry:

> …the projected growth in obesity has the potential to reverse reductions in heart disease mortality achieved over the past two to three decades.[57]

2.58 The Access Economics report estimated that the economic costs of CVD in 2008 was $162.0 billion and the net cost of lost wellbeing was $99.1 billion. The report went on to state the cost of CVD as a result of obesity was $34.6 billion, with $2.8 billion being financial costs and $31.8 billion the cost of lost wellbeing.[58]

Hospital costs

2.59 Hospitals bear a significant cost as a result of overweight and obesity, and the evidence presented to the Committee reinforced the significant impact that obesity will have on our hospital system.

2.60 The Committee heard that the increased cost of specialised equipment was a major concern for hospitals. At Greenslopes Private Hospital, the Committee was shown the specialised equipment which is required to provide adequate treatment to obese patients, including special beds and theatre equipment. Staff from Greenslopes told the Committee that a standard bed cost approximately $8,000 to $10,000 while specialised beds were estimated to cost $40,000.[59] Mattresses for the larger beds are also more expensive to replace and need to be replaced more often than regular ones owing to greater wear and tear.

2.61 The costs of obesity to a hospital are more diverse than just equipment costs. Professor Samaras from St Vincent's Hospital in Sydney alluded to a

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56 Department of Health and Ageing, Submission No. 154, p 19.

57 Department of Health and Ageing, Submission No. 154, p 20.

58 Access Economics 2008, *The growing costs of obesity in 2008: three years on*, <http://www.accesseconomics.com.au/publicationsreports/showreport.php?id=172&searchfor=2008&searchby=year> accessed 17 April 2009.

59 Inspection, Greenslopes Private Hospital, 1 October 2008.

range of other costs, including higher staff number requirements and health and safety concerns:

> The demands on hospital services are extensive. They impact on our cardiac services and, obviously, on our diabetes services; they impact on our orthopaedic services; most of the sleep apnoea we see is due to obesity; and, increasingly, obesity impacts on our cancer services, as we come to realise that the majority of cases of oesophageal carcinoma, endometrial carcinoma and non-genetic breast cancer are obesity related. The demands on staff are huge particularly when you have only two nurses per ward after hours and it takes eight people to shift somebody to do a reposition. You can imagine what that does to services across the whole hospital.[60]

2.62 The issue of staffing, and the impact of obesity on hospital staffing was also raised at the public hearing in Lake Macquarie. Here the Hunter New England Health Service presented evidence to the Committee about the extraordinarily high levels of staff required to physically manage some patients within the hospital. The Committee heard a case study for a 188.2 kilogram patient, who was a non compliant insulin dependent diabetic. The patient had to have an amputation and over the course of their six month stay at hospital had 10,912 staff attendances.[61]

2.63 Of additional concern to hospital administrators is the increase in potential injuries to staff and related health care workers due to handling overweight and obese patients. Evidence to the Committee suggests that this will be a growing problem and will impact on a variety of long-term cost areas including insurance. Mr Wood, the Manual Handling Coordinator for Hunter New England Health Service told the Committee of an ambulance officer who was injured lifting a 167 kilo patient and ended up with rotator cuff injury, a shoulder injury which required considerable time off work.[62]

2.64 Another issue brought to the attention of the Committee is the increased care required by obese patients when they present with wounds. At the hearing in Sydney, KCI Medical Australia (KCI) explained that obese or overweight patients are often in poor health and suffering from co-morbidities such as diabetes and cardiovascular disease which make it difficult for them to heal. Additionally their skin may be thin and fragile

60 Associate Professor K Samaras, Australian Healthcare and Hospitals Association, Official Transcript of Evidence, 12 May 2008, p 36.

61 Mr E Wood, Hunter New England Health Service, Official Transcript of Evidence, 12 September 2008, p 5.

62 Mr E Wood, Hunter New England Health Service, Official Transcript of Evidence, 12 September 2008, p 4.

and they may have problems with blood circulation and oxygenation.[63] KCI provided evidence to the Committee that in 2004-05, 54.3 percent of the 126,800 hospital admissions presenting for diseases relating to skin or subcutaneous tissue, were overweight.[64] KCI outlined the complications that excess body weight can cause for wound management:

> [Patients have] increased visits to GPs, multiple visits to community nursing services and multiple attendances at clinics. They have the need for long-term medical specialist involvement … They have lots of hospital admissions and, due to the complication rates, they can be extended admissions. They have a need for amputation and complex reconstructive surgeries associated with the wounds …[65]

2.65 Another medical procedure affected by the rise in obesity is knee and hip replacement surgery. A recent study alerted the Committee to the influence of obesity on osteoarthritis and the ageing Australian population, and the subsequent increase in demand for joint replacement surgery:

> The obesity epidemic … is likely to have a significant impact on the future demands for knee and hip replacements for osteoarthritis …[66]

2.66 The Committee also learnt of the need for new, heavy-duty ambulances which are able to transport obese patients. In Newcastle, a witness told the Committee of an ambulance stretcher collapsing under the weight of a patient and in Adelaide, a patient had to endure the undignified experience of being transported to hospital by truck because there was not an ambulance available with the capacity to carry her.[67] State and territory governments are spending large sums to provide these custom built vehicles. Ambulance Victoria ordered four such vehicles in early 2009 at a cost of $350,000 each.[68]

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63 Ms C-L Burnard, KCI Medical Australia Pty Ltd, Official Transcript of Evidence, 11 September 2008, pp 9-10.

64 Ms C-L Burnard, KCI Medical Australia Pty Ltd, Official Transcript of Evidence, 11 September 2008, p 9.

65 Ms C-L Burnard, KCI Medical Australia Pty Ltd, Official Transcript of Evidence, 11 September 2008, pp 9-10.

66 Wang, Y et al, 'Relationship between body adiposity measures and risk of primary knee and hip replacement for osteoarthritis: a prospective cohort study', *Arthritis Research & Therapy*, <http://arthritis-research.com/content/11/2/R31> accessed 17 April 2009.

67 Mr E Wood, Official Transcript of Evidence, 12 September 2009, p 12; Associate Professor K Samaras, Official Transcript of Evidence, 12 May 2009, p 39.

68 'Obesity epidemic forces Ambulance Victoria to buy bigger ambulances', *The Herald Sun*, 27 February 2009.

Figure 2.2 The Committee hears about the cost implications of special equipment for heavy patients from the Royal Flying Doctor Service, Broken Hill, NSW

Monitoring interventions

2.67 Evidence to the Committee identified the need for ongoing monitoring and evaluation of intervention programs as well as central data storage to facilitate data sharing. At a public hearing in Canberra, the AIHW told the Committee that the lack of monitoring and evaluation meant that the effectiveness of intervention programs is not being assessed.[69] They added that, where program evaluation was occurring, it was often of program roll-out and not program success.[70]

2.68 ANZOS also raised concerns about the lack of close and independent monitoring of interventions. They were particularly concerned that a lack of evaluation would prevent interventions from being improved. As their submission states:

69 Mrs K Roedinger, Australian Institute of Health and Welfare, Official Transcript of Evidence, 12 May 2008, p 23.

70 Mrs K Roedinger, Australian Institute of Health and Welfare, Official Transcript of Evidence, 12 May 2008, p 24.

> Community-based prevention programs and clinical services also need close (and sometimes independent) evaluation to ensure that they are delivering improvements in height and weight status and health and to help identify a way of improving their outcomes.[71]

2.69 The Committee was told that the data that is gathered from these evaluations should be made centrally accessible to researchers and public health advocates to build knowledge and expertise, and to ensure that funding is directed towards proven successful interventions. Professor Vos said:

> So we take the population-wide approaches and the targeted approaches and try, in a similar way, to evaluate them so that we can make judgements on what the bang for your buck is for each of them, but also what would be a useful cobbling together of a total strategy. If you have a limited amount of money, where would you put it and what would be your priority amongst the interventions that we know are there?[72]

2.70 A few submissions suggested practical ways to improve the monitoring and evaluation of interventions, and information sharing. The WHO Collaborating Centre on Obesity Prevention submitted that the establishment of Centres of Excellence could help to improve evaluation and data sharing.[73] The Public Health Association of Australia recommended that funding should be made available with program grants to:

> …allow for the evaluation and dissemination of intervention outcomes.[74]

2.71 The Australasian Child and Adolescent Obesity Research Network called for support for a national network of obesity researchers to assist with collaborative research. They also stressed the need for expert reviewers of research grant applications utilising, if needed, international experts.[75]

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71 Australia and New Zealand Obesity Society, Submission No. 11, p 13.

72 Prof T Vos, School of Population Health, University of Queensland, Official Transcript of Evidence, 1 October 2008, p 16.

73 World Health Organisation Collaborating Centre on Obesity Prevention, Submission No. 95, pp 7–8.

74 Public Health Association of Australia, Submission No. 101, p 6.

75 Australasian Child and Adolescent Obesity Research Network, Submission No. 131, p 6.

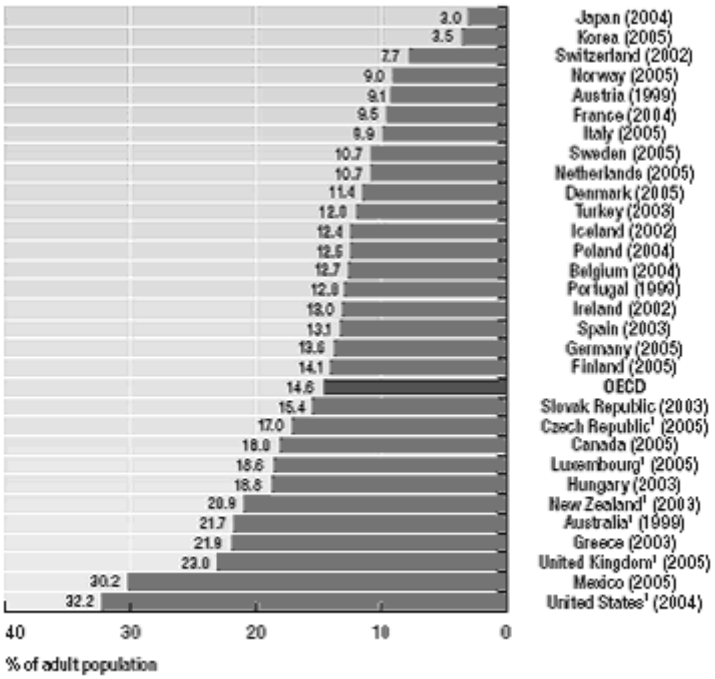
International perspective

2.72 While the costs of obesity in Australia are significant, the international evidence tells us that Australia is not alone in facing increasing rates of obesity. The WHO has classified obesity as a chronic disease,[76] and in 1997 declared that:

> …overweight and obesity represent a rapidly growing threat to the health of populations in an increasing number of countries worldwide.[77]

2.73 The latest OECD figures indicate that Australia has the fifth highest rate of population with a BMI over 30. These latest OECD statistics are illustrated in Figure 2.3.

Figure 2.3 Percentage of adult population with Body Mass Index over 30 (obese population), 2005 (or latest year available)



Source *Health at a Glance 2007: OECD indicators, p 51*

2.74 Within the global context of high levels of obesity, it is useful to consider the approaches of other governments, to see if there are lessons that Australia can learn from their policy directions and approaches. Throughout the course of the inquiry, the Committee has been informed of a number of other country's approaches, in particular those of the United Kingdom (UK). Given that there are many similarities between the

76 Australian General Practice Network, Submission No. 49, p 7.

77 Public Health Association of Australia, Submission No. 101, p 3.

UK and Australian experiences, it is opportune to consider the UK's approach in more detail.

The United Kingdom

2.75 The spiralling costs associated with obesity in Australia are mirrored in the UK where obesity is predicted to cost the National Health System (NHS) £10 billion by 2050. Further, it is expected that the wider costs to society will be £49.9 billion per year.[78] The UK Government has stated that their goal is:

> … to be the first major nation to reverse the rising tide of obesity and overweight in the population by ensuring that everyone is able to achieve and maintain a healthy weight. Our initial focus will be on children: by 2020, we aim to reduce the proportion of overweight and obese children to 2000 levels.[79]

2.76 To facilitate their goal, the UK Government commissioned the Foresight Programme, an agency of the Government Office for Science to produce a comprehensive report on obesity in the UK. The resulting report *Tackling Obesities: future choices project* (the Foresight Report) has been repeatedly brought to the attention of the Committee throughout the inquiry as a fresh and visionary approach. The report was launched in October 2007 and its aim is:

> …to produce a long-term vision of how we can deliver a sustainable response to obesity in the UK over the next 40 years.[80]

2.77 The report presents an extensive review of the scale of the UK obesity problem and covers:

- the complex causes and system of obesity;
- the evidence and uncertainty relating to tackling obesity;
- possible scenarios to 2050;
- the consequences of obesity; and
- options for a sustainable response.[81]

78 Butland, B et al., 2007, *Tackling Obesities: Future Choices*, <http://www.foresight.gov.uk/Obesity/17.pdf> accessed 17 April 2009.

79 United Kingdom Department of Health, *Healthy Weight, Healthy Lives: A cross-government strategy for England*, <http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082378> accessed 17 April 2009.

80 Foresight Project, <http://www.foresight.gov.uk/OurWork/ActiveProjects/Obesity/Obesity.asp> accessed 17 April 2009.

2.78 Of particular interest to the Committee is Section 7 of the Foresight Report where several possible policy interventions were modelled to gauge their potential costs and effectiveness. From the modelling, the report concluded that the top five policy responses which had the greatest impact on obesity were:

- increasing walkability/cyclability of the built environment;
- targeting health interventions for those at increased risk (dependent on ability to identify these groups and only if reinforced by public health interventions at the population level);
- controlling the availability of/exposure to obesogenic[82] food and drinks;
- increasing the responsibility of organisations for the health of their employees; and
- early life interventions at birth or in infancy.[83]

2.79 The most significant finding of Foresight's modelling was that, irrespective of any interventions, the direct costs of obesity in the UK were still likely to rise and that:

> …direct obesity-related health costs will not be less than today's levels in the foreseeable future.[84]

2.80 However, the report went on to say that should nothing be done to reverse overweight and obesity, the related healthcare costs would become 'insupportable'.[85] The Foresight Report calls for action to reverse overweight and obesity that is 'comprehensive, coherent and sustained'.[86]

2.81 In response to the Foresight Report, the UK government developed the policy document, *Healthy Weight, Healthy Lives: a Cross-Government Strategy for England*. Released by the Prime Minister, Gordon Brown, in January 2008, the strategy outlines the responsibility of the UK Government in assisting individuals to maintain a healthy weight. It states that:

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81 Butland, B et al., 2007, *Tackling Obesities: Future Choices*, <http://www.foresight.gov.uk/Obesity/17.pdf> accessed 17 April 2009.

82 An obesogenic environment can be defined as one which causes obesity: tends to encourage excessive weight gain. Source: Encarta World English Dictionary, <http://encarta.msn.com/dictionary_701708213/obesogenic.html> accessed 17 April 2009.

83 Butland, B et al., 2007, *Tackling Obesities: Future Choices*, p 109, <http://www.foresight.gov.uk/Obesity/17.pdf> accessed 17 April 2009.

84 Butland, B et al., 2007, *Tackling Obesities: Future Choices*, p 116, <http://www.foresight.gov.uk/Obesity/17.pdf> accessed 17 April 2009.

85 Butland, B et al., 2007, *Tackling Obesities: Future Choices*, p 116, <http://www.foresight.gov.uk/Obesity/17.pdf> accessed 17 April 2009.

86 Butland, B et al., 2007, *Tackling Obesities: Future Choices*, p 117, <http://www.foresight.gov.uk/Obesity/17.pdf> accessed 17 April 2009.

> The responsibility of Government, and wider society, is to make sure that individuals and families have access to the opportunities they want and the information they need in order to make healthy choices and exercise greater control over their health and their lives.[87]

2.82 The Healthy Weight, Healthy Lives Strategy outlines various areas for policy interventions including focusing on healthy growth and weight in children, promoting healthier food choices, embedding physical activity into daily life, creating incentives for better health and developing a mechanism to provide personalised advice and support. There will also be an annual review of the UK Government's progress toward halting and reversing the rates of obesity which will be made publicly available.[88]

2.83 The UK Government has also focused on the quality of food in the UK and developed a food strategy to manage changing food production and consumption trends.[89] The strategy has been detailed in the *Healthy Food Code*.[90] The Food Standards Agency (FSA) is working closely with the food industry to promote healthy eating, including reducing levels of salt, fat and sugar in products, portion sizes, front of pack labelling, product marketing and provision of information to consumers. FSA has, for example, been working with industry to reduce the salt content of a wide range of foods, particularly processed foods. Implemented in 2003, the program has a target of 6 grams of salt per person per day by 2010 and has already seen a reduction from 9.5 to 8.6 grams per person per day.[91]

2.84 The question of food labelling is of major concern in the UK as it is here in Australia and they are currently implementing a series of rigorous tests on

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87 UK Department of Health, *Healthy Weight, Healthy Lives: a cross government strategy for England*, p iii, <http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082378> accessed 17 April 2009.

88 UK Department of Health, *Healthy weight, healthy lives: a cross government strategy for England*, pp xi - xv, <http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082378> accessed 17 April 2009.

89 UK Cabinet Office, *Food Matters: towards a strategy for the 21st Century*, p i, <http://www.cabinetoffice.gov.uk/strategy/work_areas/food_policy.aspx> accessed 17 April 2009.

90 UK Food Standards Agency, 'Taking forward the Healthy Food Code of Good Practice', <http://www.food.gov.uk/news/newsarchive/2008/jul/healthyfoodcode> accessed 17 April 2009.

91 UK Food Standards Agency, 'Progress with industry in relation to salt reduction', <http://www.food.gov.uk/healthiereating/salt/saltprogressstatement/> accessed 17 April 2009.

the various options.[92] The UK is considerably ahead of Australia in this area and it will be useful to consider their experience when formulating an Australian policy. Both food labelling and the reformulation of food products are dealt with in more detail in Chapters 3 and 4 of this report.

2.85 Most importantly, the Foresight Report and the UK experience show that obesity is a major challenge that will require a 'substantial degree of intervention'.[93] Further, the Foresight Report states that:

> The challenge is to produce a range of solutions that are effective across different areas of government policy rather than within them to deliver a corrective population-wide shift.[94]

2.86 To meet this challenge, the UK Prime Minister asked the Cabinet Office to set up a cross-government Food Strategy Task Force[95] to oversee and coordinate the response to obesity. The Task Force has been charged with implementing the UK Government's policy *Food Matters: Towards a Strategy for the 21st Century* and will review progress on a quarterly basis and publish an annual report. A detailed list of actions has been formulated assigning individual tasks to relevant departments and agencies. A copy of the list is provided in Appendix D.

Committee comment

2.87 There are inherent difficulties in attempting to calculate the true cost of obesity to the Australian economy and society. Nonetheless the Committee acknowledges that the present and future costs of the epidemic are substantial.

2.88 The Committee is concerned that inadequate and outdated data on the prevalence of obesity in Australia may obscure the true levels of the problem, and argues that there is a need to monitor and evaluate intervention strategies and data share to promote successful strategies.

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92 See UK Food Standards Agency, <http://www.food.gov.uk/foodlabelling/researchandreports> for the latest research reports. Accessed 17 April 2009.

93 Butland, B et al., 2007, *Tackling Obesities: Future Choices*, p 12, <http://www.foresight.gov.uk/Obesity/17.pdf> accessed 17 April 2009.

94 Butland, B et al., 2007, *Tackling Obesities: Future Choices*, p 12, <http://www.foresight.gov.uk/Obesity/17.pdf> accessed 17 April 2009.

95 The Task Force brings together senior officers from: the Department for the Environment, Food and Rural Affairs; the Department for Business, Enterprise and Regulatory Reform; HM Treasury; the Department of Health; the Department of International Development; the Department for Children, Schools and Families; and the Food Standards Agency.

2.89 The current obesity epidemic will add significantly to Australia's future health costs through the relationship between excess body weight and a range of co-morbidities. The Committee is concerned that overweight and obesity have the potential to undo many health gains made in the past few decades, particularly in regard to the decline in cardiovascular disease.

2.90 The UK's largest report into obesity - the Foresight Report - is an excellent reference and tool and for obesity prevention and management policies. It is especially useful for framing strategic thinking and government leadership in the short, medium and long-term.