Obesity: A National Epidemic and its Impact on Australia
Foreword

The mission of Obesity Australia is to drive change in the public perceptions of obesity, its prevalence and its treatment. Currently in Australia 63% of the adult population is overweight or obese, with 28% obese. Public perceptions - commonly, that obesity is merely a personal issue - must change if as a community we are to address the escalating medical and societal costs, and the often hidden productivity losses. Key to changing public perceptions are the media and medical practitioners, in particular general practitioners.

“Obesity: A National Epidemic and its Impact on Australia” charts the three-fold increase in overweight and obesity over the past 30 years, its genetic, epigenetic and environmental drivers, and the ways in which we have attempted to address the issue to date. It is aimed at the widest possible audience, as an accessible source and quick reference for all those in the area who interact with overweight and obesity, in the media, in the consulting room, in schools and workplaces, in the community as a whole.

We thank Novo Nordisk for their untiied support, and commend this report to the widest possible readership.

Prof John Funder OA
Executive Chairman
Obesity Australia

Obesity Australia Scientific Advisory Council:
Prof. Jennie Brand-Miller (University of Sydney)
Prof. Stephen Colagiuri (University of Sydney)
Prof. Michael Cowley (Monash University)
Prof. John Dixon (Baker-IDI)
Prof. Joe Proietto (Melbourne University)
Dr. Matt Sabin (Murdoch Children’s Research Institute)
Prof. Steve Simpson (Charles Perkins Centre)
Prof. Gary Wittert (University of Adelaide)

Written by Jason Leung PhD, Project Officer, Obesity Australia and Professor John Funder OA, Executive Chairman, Obesity Australia. Edited by Professor John Funder OA, Executive Chairman, Obesity Australia and A/Professor Stella Clark, CEO Obesity Australia.

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Executive summary

Epidemiology of obesity

Obesity represents a major health and societal issue for Australia. The most recent Australian Health Survey (2011-2012) highlights that 63% of adults are now overweight or obese, with 28% classified as obese. Projections suggest that by 2025, the prevalence of overweight and obesity will increase to over 70%, with approximately one third of the adult Australian population classified as obese.

Drivers of obesity

The current obesity epidemic is driven by the interplay between genetics and the environment. Obesity has a substantial genetic component with up to 90% of the population predisposed genetically to being overweight and obese. Coupled with the current environment of widespread abundance and access to energy dense food and a sedentary lifestyle, obesity has continued to increase.

Complications of obesity

Obesity is commonly recognized as causing a variety of associated disorders (Type 2 diabetes, cardiovascular disease, some cancers), but often not seen as a disease in its own right. Osteoarthritis, sleep apnoea, reproductive difficulties, stigmatization are part and parcel of being obese. Being obese increases your risk of associated disorders and a reduction of body weight of just 5-10% will have beneficial effects on both cardiovascular and metabolic outcomes.

Managing obesity

Managing obesity can be broadly divided into Prevention and Intervention.

- Prevention is best done early (prior to conception, during pregnancy, or at the latest prior to a child’s third birthday) so that epigenetic “set-points” for the regulation of appetite and fat mass are optimised. However this must be coupled with a broader societal program for healthy food choices and the opportunities for increased energy expenditure.
- Intervention can be classified as:
  - Lifestyle modification including supervised weight loss programs leading to improved nutrition, physical activity or behavioural change, with a combination of all three being most effective.
  - Pharmaceutical assistance in weight loss and maintenance.
  - Bariatric medicines/surgery, which produces substantial weight loss.

Cost of obesity

Estimating the cost of obesity is complicated. In 2008, the annual financial cost of obesity was estimated at AUD$8.3 billion with an additional AUD$49.9 billion in the form of lost wellbeing, bringing the combined cost of obesity to AUD$58.2 billion.

Current policy

In recent years, there has been an increased focus on obesity by the Federal and State Governments. This included establishing obesity as one of nine National Health Priority Areas, the creation of various taskforces, community and social marketing programs, with funds allocated from the Federal Government to the States and Territories.

Call to action

Obesity Australia calls for the following actions to be taken:

1. For Australia-wide (i.e. Federal Government) action to harmonise and complement the State/Territory efforts in prevention, and to directly support treatment of overweight and obesity.
   a. Prevention can be achieved through programs which educate parents and young children in food and health literacy.
   b. Treatment of obesity relies on access to effective and safe obesity therapies with minimal side effects including accredited multi-faceted weight loss and weight loss maintenance programs, pharmaceutical interventions and provision of bariatric medicine/surgery in the public sphere.

2. For the Australian Medical Association, and the various medical colleges to formally recognise obesity as a disease.
   a. Recognition of obesity as a disease is essential to reducing the stigma around obesity, and also key to increasing community engagement in practices and policies that reduce obesity rates.

If obesity rates continue to grow in Australia at current rates over the next decades, it is conceivable that the health and economic cost due to obesity will also grow to overwhelming proportions. Alternatively, if we can commit to an obesity prevention plan starting with defining obesity as a disease and gaining additional federal support for prevention and intervention, then it may not only save billions of Australian tax dollars, but also improve the health and wellbeing of Australians now and for future generations. There is therefore no time to wait.
1. What is obesity?

Obesity is described by the World Health Organisation (WHO) as abnormal or excessive fat accumulation that presents a risk to an individual’s health\(^1\). Obesity is a complex disease with multiple drivers such as energy imbalance between calories consumed-calories expended and a person’s genetics and epigenetics. The empirical definition for obesity is having a body mass index (BMI) score of 30kg/m\(^2\) or more. BMI is the most commonly used measure of appropriate weight for height, although it is important to recognise that it is more a rule of thumb rather than a precise definition. The problem with BMI is that it does not differentiate between subcutaneous fat and the higher-risk visceral fat. For these and other reasons, there is debate about the appropriateness of using BMI as a universal indicator of a healthy body shape\(^1\).

There are also substantial ethnic differences in overweight and obese at the same BMI. For example, Maori and Pacific Islanders are commonly assigned higher cut-offs for normal/overweight/obese and southern Asians lower cut-offs, the former reflecting body type and the latter the tendency to lay down visceral fat at considerably lower BMI values than Caucasians\(^3\).

Body mass index (BMI) explained

A person’s body mass index (BMI) is calculated by dividing their weight in kilograms by the square of their height in metres. A score of <18.5 is considered underweight, 18.5-24.9 normal weight, 25-29.9 overweight, ≥30 obese\(^3\). Within the last category, obesity is divided into Grade 1 (BMI 30-34.9), Grade 2 (BMI 35-39.9), and Grade 3 (BMI ≥40)\(^3\). A BMI between 18.5 and 25 is the healthiest range but this should be viewed as ‘optimal’ rather than ‘normal’. There is debate about whether the optimal range for healthy BMI differs according to age, gender and ethnicity\(^4\).

2. Epidemiology of obesity

The growth of obesity

Obesity was once considered a disease of excess confined to the developed world, but is now widely accepted as a global concern\(^1\). Between 1980 and 2008, the prevalence of obesity worldwide has nearly doubled. As of 2008, 1.5 billion adults worldwide (35%) aged 20 years and over were overweight or obese, with more than 500 million (11%) classified as obese\(^1\).

It is worth noting that in the 2010 OECD report\(^6\) the prevalence of overweight and obesity in Australia was projected to reach 60% by 2014, and 64% by 2019, placing Australia third amongst OECD countries by 2020, behind only the USA and England (Figure 1). Considering the latest ABS Health Survey (2011-2012) which showed a prevalence of overweight and obesity of 63%, with 28% obese, these findings look certain to have surpassed the OECD estimates. A more recent projection suggested that by 2025, the prevalence of overweight and obesity will increase to 72%, with 34% obese\(^7\). In terms of population, a separate study projected that by 2025 this would result in a total of 16.9 million Australians who are overweight and obese, having risen from 10.2 million in 2005\(^8\).

![Figure 1: Proportion of overweight and obese by country](Modified from Wang et al., (2011)\(^9\))
Youth obesity

Although the prevalence of obesity is lower in Australian children than in adults, the statistics remain alarming. Between 1985 and 1995, overweight and obesity in children doubled to 21% (Figure 2). By 2008, this increased to 25% and in the ABS Australian Health Survey (2011-2012), this rose even further to 26% (Figure 2). By 2025, an estimated one third of Australian children will be overweight and obese (Figure 2). Children who become obese are likely to stay obese into adulthood, the consequences of which are a greater risk of suffering from obesity-related chronic diseases such as diabetes, cardiovascular disease, certain cancers and other complications.


Gender

Over the period from 1995 to 2011, the average weight in Australia has increased by 3.6kg for men and 4kg for women. In 1995, only 19% of women in Australia were obese with a further 30% overweight, compared to 19% obese and 45% overweight for men (Figure 3). By 2011 the weight distribution for both men and women shifted to more obese, with 28% of women obese and a further 28% overweight, compared to 28% of men obese and a further 42% overweight (Figure 3). Obesity rates are predicted to increase even more by the year 2025, where the obese population in Australia is predicted to rise to 36% in women and 35% in men.

Figure 3: Proportion of overweight and obese Australian females and males. Data from Walls et al., (2012), Australian Health Survey (2011-2012)
Within Australia, the prevalence of obesity differs, according to country of birth and ethnicity. For instance, while 30% of Australian-born individuals are obese, those born in North Africa and the Middle East, Southern and Eastern Europe, and Oceania are more likely to be obese than their Australian counterparts (32%, 35% and 37%, respectively are obese). Conversely, those born in Asia and sub-Saharan Africa in particular have a much lower prevalence of obesity ranging from as low as 5% to 22%11.

Within Australia, the prevalence of overweight and obesity can vary based on geography. Although the variations are generally small, differences can be seen between the states, with Queensland having the highest (30%) and the Australian Capital Territory the lowest (25%) prevalence of obesity11 (Figure 4).

A greater disparity in weight can be seen when comparing urban Australia and remote and rural Australia: 60% of Australians in major cities are overweight or obese, compared to 69% in inner regional Australia and 70% in outer regional and remote Australia11. Based on the 2007-2008 National Health Survey, Australians in outer regional and remote areas are 1.5-times more likely to be obese than those living in major cities (22% vs. 16%)11. In the 2007-2008 National Health Survey, Australians of greatest disadvantage were almost twice as likely to be obese (23%) than those of least disadvantage (13%)11.

Indigenous Australians

Based on the 2004-2005 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), 29% of Indigenous Australians were overweight while a further 31% were obese: 34% of Indigenous men were overweight with a further 28% obese, while 24% of Indigenous women were overweight, with a further 34% obese11. Not only are Indigenous Australians more likely to be obese than their Non-Indigenous counterparts, but distribution of fat among Indigenous Australians is more abdominally located than in Non-Indigenous Australians11,12.

29% of Indigenous Australians were overweight
31% were obese

Figure 4: Overweight and obesity by state. Data sourced from Australian Health Survey (2011-2012)11

Figure 4: Overweight and obesity by state.
3. Drivers of obesity

Genetics

The interplay of genetics and the environment has contributed to the current epidemic which started in the 1980’s. Genes have not changed materially since then: the widespread abundance of food and a sedentary lifestyle, on the background of up to 90% of the population predisposed genetically to overweight/obesity, has been the principal driver. It has long been suspected that obesity has a substantial genetic component. For example the fat mass and obesity associated gene (FTO) has a number of variants which differentially affect hunger and satiety. Less common variants will produce a 3kg heavier person than the more common variants, and around 15% of the population fall into this category. In the global sense this is a billion individuals: at a national level it is one of many genetic contributors geared towards obesity.
Epigenetics refers to modifications to DNA that turn genes “on” or “off.” These modifications do not change the DNA sequence, but instead, affect how cells “read” genes. These modifications can occur as a result of external factors. One example is the impact that the environment within a mother’s womb can have on a developing foetus. In terms of obesity, this means that during pregnancy, and the first 2-3 years after birth, epigenetic modifications occur, defining “set-points” for hunger and satiety for the offspring.

During pregnancy, if a woman’s diet is too low in calories or protein, epigenetics set an unfavourable hunger and satiety balance in the offspring, causing them to experience accelerated weight gain. Conversely, if a woman is obese, diabetic, or consumes a diet too high in calories during pregnancy, the tendency towards obesity persists in the offspring. Furthermore, once DNA is imprinted by these epigenetic modifications, hormonal mechanisms within the body act to increase hunger and inhibit satiety, thereby making it more difficult for the offspring to maintain any subsequent weight loss in future years.

It is also important to note that food intake patterns and taste preferences are set in the first 2-3 years of a child’s life, again by epigenetic modification of the DNA in the relevant brain centres. If a child is fed a high carbohydrate/sugar/fat diet initially, those taste preferences will make the resultant adult prefer high sugar/high fat food and beverages, which are major environmental drivers in the obesity epidemic.

This makes interventions for obesity during early stages of development potentially easier than corrective efforts later in life.
Weight maintenance is predicated on calories consumed equalling calories expended therefore two key drivers for obesity are decreased expenditure and/or increased intake. Causes of decreased expenditure, or less ‘burning’ of calories can include: move away from physically demanding jobs; passive entertainment over sporting activities and the increased use of the motor car. Such lifestyle changes have contributed to the imbalance between intake and expenditure driving overweight/obesity over the past 30 years.

There have been major changes in patterns of consumption over time. Over the last few decades there has been a radical shift in food culture in the developed world, so that now more than half of the food consumed is pre-prepared and packaged, making access to high fat/high sugar/energy dense food easier. Such factors have contributed to the imbalance between intake and expenditure driving overweight/obesity.

Two things have been shown to be useful in this complex area. First, although moderate exercise is only marginally effective in weight loss, it does increase overall health. Secondly, prolonged modest calorie restriction, lowering body weight by 5-10% has beneficial effects on cardiovascular and metabolic status (such as type 2 diabetes and blood pressure), even if the person remains in the overweight or obese BMI range.
Cognitive impairment and depression

The prevalence of mood and anxiety disorders increases with BMI. Obesity is often coupled with negative self-body image, feelings of guilt, hopelessness, and poor self-esteem, exacerbated by failed attempts to lose weight, particularly in younger women with poor body image. Conversely, depression can lead to obesity, as a result of inactivity, the tendency to indulge in comfort behaviour (including eating), and even as a side-effect of mood stabilising and anti-depressant medications that induce weight gain.

Cancer

Higher BMI is associated with increased risk for colon cancer, breast cancer (postmenopausal), oesophageal cancer, endometrial cancer and kidney cancer. As a particular example obesity is associated with a 2- to 3-fold increased risk of endometrial cancer.

Non-alcoholic fatty liver disease

The most common risk factor associated with Non-Alcoholic Fatty Liver Disease (NAFLD) is obesity, with one review suggesting that between 69% and 100% of NAFLD patients are obese.

Obesity is not always thought of as being a cause of other diseases, nor is it often seen as a disease itself. However, obesity has been associated with cardiovascular diseases such as hypertension (high blood pressure), dyslipidaemia, coronary artery disease and stroke, obstructive sleep apnoea, insulin resistance, type 2 diabetes, non-alcoholic fatty liver disease (NAFLD), cancer, osteoarthritis, as well as mental health issues such as cognitive impairment and depression.

4. Complications of obesity

Obstructive sleep apnoea

Obesity is an important risk factor in the development of obstructive sleep apnoea (OSA) with population-based studies demonstrating over 70% of individuals with OSA are obese. A reduction in OSA and related symptoms, such as daytime sleepiness, is observed in individuals who lose weight through diet, exercise, or bariatric surgery.

Cardiovascular disease

It has been suggested that excess weight may be responsible for up to 78% of hypertension in men and 65% in women. Studies have shown a correlation between body weight and blood pressure.

Renal dysfunction

Renal dysfunction can begin early on in obesity, where the kidneys become enlarged and expanded, producing hypertension through increased renal tubular sodium and water reabsorption, causing a shift in renal pressure, and physically compressing the kidneys. Hypertension is an additional risk factor with diabetes, further contributing to accelerated renal damage. Kidney function begins to decline, progressing to end-stage renal disease if not treated.

Type 2 diabetes

Weight gain alone during adulthood increases the risk of type 2 diabetes, irrespective of initial body weight, highlighting the importance of weight maintenance. The risk of type 2 diabetes increases with weight gain even within normal levels of the BMI range, but sharply increases with BMI ≥30 Kg/m² (obese). The long-term effects of type 2 diabetes include cardiovascular disease and chronic renal failure. Approximately half of the obese population have type 2 diabetes.

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Osteoarthritis

There is a strong link between obesity and osteoarthritis that is thought to be the result of increased force being exerted on joints.
Burden associated with obesity

It is estimated that among 40 year old non-smokers, obese women and men lost 7.1 and 5.8 years of life, respectively, compared to their normal weight counterparts\(^5\). In addition, high BMI was estimated to be responsible for 8\% of the total burden of disease and injury in Australia. Type 2 diabetes and ischaemic heart disease accounted for roughly three quarters of this obesity-related burden\(^5\). A report from Access Economics estimated that in 2008, obesity was involved in 21\% of cardiovascular disease, 24\% of type 2 diabetes, 25\% of osteoarthritis cases and 21\% of some cancers in Australia\(^5\) (Table 1).

In terms of population, this equated to 644,843 Australians with cardiovascular disease, 242,033 with type 2 diabetes, 422,274 Australians with osteoarthritis, and 30,127 with colorectal, breast, uterine or kidney cancer associated with obesity (Table 1).

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<td>Proportion (%)</td>
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<td>24.5</td>
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<td>Colorectal, breast, uterine and kidney cancer</td>
<td>20.5</td>
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Table 1: Proportion of disease attributed to obesity. Data sourced from Access Economics (2008)\(^5\).

Mortality

According to the Australian Institute of Health and Welfare in 2003, high body mass was responsible for 7\% (9,525 deaths) of total deaths in Australia, two thirds of which were from ischaemic heart disease and type 2 diabetes\(^5\). However, these figures are likely to be an underestimation given the amount of research since linking obesity with other co-morbidities.

Put simply, being obese increases your risk of mortality when compared with those who were never obese and is increased the longer the duration of obesity\(^5\) (Figure 5).
5. Managing obesity

Prevention and intervention

Prevention is best done early (prior to conception, during pregnancy, or at the latest prior to a child’s third birthday) to optimise the epigenetic ‘set-points’ for the regulation of appetite and fat mass. This would suggest that women who are obese should lose weight before considering pregnancy, while programs during the early years of primary school are required to optimise healthy weight and prevent chronic disease and disability.\(^{56}\)

Interventions fall into two categories – those to minimise the effects of the energy-dense food/drink environment, and interventions for chronic relapsing obesity.

For chronic relapsing obesity there are three main categories of weight loss options. The first is constant and supervised weight loss programs, leading to less dramatic and more gradual weight loss. The second is pharmaceutical assistance in weight loss and maintenance.\(^{57,58}\) The third, is bariatric surgery, which produces substantial weight loss.\(^{59}\)

Current guidelines

In May 2013, the National Health and Medical Research Council (NHMRC) updated its clinical practice guidelines for the management of overweight and obesity in adults, adolescents and children in Australia. The guidelines are built around a 5 “A” framework (Ask, Assess, Advise, Assist, Arrange) to manage overweight and obese individuals, carried out within a primary care setting by general practitioners and nurses:\(^3\):

- **ASK and ASSESS** current lifestyle and behaviour, BMI, co-morbidities and other factors related to health risk
- **ADVISE** and promote the benefits of a healthy lifestyle and explain the benefits of weight management
- **ASSIST** in development of a weight management program that includes individually tailored lifestyle interventions based on BMI, risk factors, co-morbidities etc., and plan subsequent review and monitoring
- **ARRANGE** regular follow-up visits, referral to secondary care providers as required, and support for long-term weight management

The aim of weight management, either delivered through a primary care physician or multidisciplinary teams is to manage co-morbidities, determine causes and identify interventions best suited for weight management in individuals, be it lifestyle, pharmaceutical, or ultimately surgical intervention.\(^1\) A moderate weight loss of 5-10% of total weight is seen as beneficial, with clinically relevant improvements in health outcomes observed in terms of blood pressure, glucose tolerance, OSA and fatty liver disease.\(^{30,31,32,33}\)
Lifestyle modification

Weight management can be assisted through improved nutrition, physical activity or behavioural change, with a combination of all three being most effective. Where possible, increased physical activity should be adopted, with 150-300 minutes of moderate activity, or 75-150 minutes of vigorous activity a week, which has been associated with improved health outcomes, irrespective of weight loss. The level of physical activity recommended will be dependent on an individual’s BMI, fitness levels, comorbidities and age.

There are currently a number of commercial weight loss programs operating in Australia that offer a range of services, such as dietary advice, ready to eat meals and fitness coaching. Often supported through apps, printed information, online/telephone support, or group/one-on-one meetings, these programs vary in cost from $70-$800 a month, depending on the level of support. These programs have shown varying degrees of success and the total amount of weight lost and maintenance of weight loss differ between programs.

Unfortunately, long term weight regain is common among lifestyle interventions, with patients often returning to their base weight. Given the powerful genetic and environmental drivers of obesity it should be seen as a chronic relapsing disease where many people will require external support (be it medical or surgical) alongside ongoing lifestyle management.

Medication

While a number of weight loss medications have shown potential over the years, only a few remain available for longer term use in Australia. There are a number of promising treatments currently in development or already available overseas, that are shown to be effective in clinical trials and may become available to help treat obesity in Australia.

Surgery

While interventions involving lifestyle modification and/or pharmacological treatment can achieve weight loss up to approximately 10% of body weight, these are often difficult to maintain in the long-term. Bariatric surgery may provide a longer lasting alternative to reaching weight loss and weight loss maintenance goals, but should only be considered for people with chronic, severe, relapsing obesity for whom other treatments have proved ineffective. Bariatric surgical procedures can reduce excess body weight by 50-75%, maintaining this weight loss for up to 16 years following surgery.

It is important to note that complications are experienced by up to 10% of patients that undergo bariatric surgery and that while the number of procedures point to their success, a minority of patients do not achieve weight loss even after bariatric surgery.
6. The cost of obesity to Australia

Estimating the cost of obesity is complicated. Besides the direct costs incurred by the healthcare system, obesity and its related co-morbidities are also associated with indirect costs such as lost productivity, lost wellbeing and carer costs, which are more difficult to estimate. A number of studies have sought to understand this in measurable terms.

In 2008, the financial cost of obesity was estimated at AUD$8.3 billion (Figure 6). An additional AUD$49.4 billion was lost in the form of lost wellbeing, bringing the combined cost of obesity to AUD$58.2 billion.

**Total financial costs were borne by:**

- 34.3% by Federal Government
- 29.4% by individuals
- 19.2% by family and friends
- 5.1% by State Governments
- 0.1% by employers
- 11.8% the rest of society

However, if the cost of lost wellbeing is included, the individual’s share rises markedly to 90.0% of the total.

**Total financial and lost wellbeing costs when broken down by obesity related diseases:**

- **CARDIOVASCULAR DISEASE**
  - Financial costs: $34.6 billion
  - Lost wellbeing: $31.8 billion
- **CANCER**
  - Financial costs: $9.7 billion
  - Lost wellbeing: $9.0 billion
- **TYPE 2 DIABETES**
  - Financial costs: $3.0 billion
  - Lost wellbeing: $5.3 billion
- **OSTEOARTHRITIS**
  - Financial costs: $1.8 billion
  - Lost wellbeing: $3.8 billion

*DWL = from transfers (taxation revenue forgone, welfare and other Government payments)
7. Current Australian obesity policy

In recent years, there has been an increased focus on obesity by the Federal Government. This included establishing obesity as one of nine National Health Priority Areas and the creation of the Preventative Health Taskforce in 2008. Also in 2008, the Federal State and Territory Governments committed AUD$932.7 million over 9 years for preventative health initiatives, including obesity. As part of this commitment, in 2011 the Federal Government established the Australian National Preventive Health Agency (ANPHA) to provide programs and initiatives to target chronic health issues.

At the community level, the Government has supported preventative health via the National Partnership Agreement to help local Governments deliver effective community-based physical activity and dietary education programs such as community gardens, cooking classes and group shopping trips, while the Healthy Children initiative has been funded through the States and Territories to implement local programs that promote greater levels of physical activity and improved nutrition. The Federal Government is also providing up to AUD$294.3 million over seven years for the Healthy Workers initiative with AUD$289.1 million provided to States and Territories to deliver healthy living programs and activities in the workplace.

In addition, the Federal Government also ran a “Measure Up” social marketing campaign focusing on how people can make lifestyle changes to improve their health. This campaign began in 2011 encouraging Australians to “Swap it don’t stop it” – swap less healthy foods and habits for more healthy ones and went through three national releases with the final phase “Shape Up” underway. Evaluation of the effectiveness of this program will be of considerable interest.

8. In conclusion

If obesity rates continue to grow in Australia at current rates over the next decades, it is conceivable that the health and economic cost due to obesity will also grow to overwhelming proportions. Alternatively, if we can commit to an obesity prevention plan starting with defining obesity as a disease and gaining additional federal support for prevention and intervention, then it may not only save billions of Australian tax dollars, but also improve the health and wellbeing of Australians now and for future generations. There is therefore no time to wait.

9. A call to action

In Australia, obesity is not currently considered as a disease. While this was also the case in the United States of America (USA), on 18 June 2013 the American Medical Association (AMA) voted to recognise obesity as a disease. There is hope that classifying obesity as a disease will help reduce the stigma associated with obesity i.e. that it is not purely a lifestyle choice as a result of eating habits or levels of physical activity. By recognising obesity as a disease, prevention and intervention for obesity could also receive greater coverage from both public and private health insurance, making doctors more willing to address the issue, and options available to individuals more affordable, whether they are pharmaceuticals, surgical procedures, counseling etc.

Where are we now?

Currently, on the basis of BMI, 28% of adult Australians are obese and 35% overweight; on the basis of waist circumference, the figures are even higher. About one quarter of children are overweight or obese. While weight loss is often able to be achieved by calorie restriction and exercise, and can be aided by medication and/or mentoring, maintaining weight loss has proven much more difficult. Approximately, 90% of bariatric medicine and surgery is done through private health insurance, with indefensibly long waiting lists in the public sphere. There is still a strongly held view in the community and among policy makers that obesity is simply an individual’s personal responsibility, and represents a failure in terms of diet and exercise.

Although there is a long way to go, obesity is increasingly recognised as a disease in itself, with a spectrum of associated disorders. It is also increasingly acknowledged as a complex rather than a simple issue. In Australia, with the aid of Federal Government funding, several of the State and Territory Governments have introduced programs which may well make a significant contribution to prevention. These programs will need audit and evaluation for their effectiveness (or otherwise), and further initiatives based on their outcomes.
Where to next?

In 2013, the American Medical Association formally classified obesity as a disease - the first in the world. The time has come for the Australian Medical Association, and the various colleges - general practice, physicians, and surgeons - to do the same. If obesity is formally recognised as a disease, it makes it much more straightforward to address in general practice, a key driver in community attitudinal change. It also makes direct action by the Federal Government much easier, notwithstanding the shared Federal/State/Territory responsibilities in health. The academic sector devoted to the study of obesity - from neuroscience to epidemiology to public health - needs to continue amassing the evidence base, informing media reporting and educating the wider community. Advocacy needs to be evidence based, incremental and politically feasible. The role of patient support groups in advocacy is crucial. Recognition of obesity as a disease is essential to reducing the stigma around obesity, and also key to increasing community engagement in practices and policies that reduce obesity rates.

And in the longer term...?

Two things are key to a long-term solution. The first is educating parents and young children in food and health literacy. The second is effective and safe obesity therapies with minimal side effects. Hypertension is a condition affecting ~30% of adults which is controlled by medication: we need similar medications for the disease of established obesity. We need cultural change in food and health literacy e.g. food labelling practices, plate sizes, smaller portions, urban planning, broader choices of fast food. The two key drivers are the media and general practitioners, and for both evidence-based education and support are crucial. We need Australia-wide (i.e. Federal Government) action to harmonise and complement the State/Territory efforts in prevention, and to directly support treatment of overweight and obesity - pharmaceutical, accredited multi-faceted weight maintenance programs, provision of bariatric medicine/surgery in the public sphere, etc.

How long is the longer term?

Other public health initiatives have varied, in terms of adoption. Seat belts and bicycle/motorbike helmets are no brainers, and relatively rapidly implemented: ‘ride free’ and ‘nanny state’ had very short currency. Smoking is also a no-brainer, but it took decades for the undeniable evidence to be translated into regulation and legislation enabling the smoking rate to fall to its present historically low levels. Food and drink, unlike cigarettes, are a necessity of life and impossible to demonise, and obesity is a much more complex disease than addiction by nicotine. Even with the evidence currently available, it may take a decade (or more) to drive change in the public perceptions of obesity sufficiently to allow robust Government investment in prevention and treatment. That said, the tobacco campaign was a battle fought on many fronts, with a string of successes across time and a progressive fall in smoking rates over the decades. It is our hope that we will see the same trajectory for obesity, improving health by lowering the weight of the nation.
Novo Nordisk is a global healthcare company with 90 years of innovation and leadership in diabetes care. The company also has leading positions within haemophilia care, growth hormone therapy and hormone replacement therapy. Headquartered in Denmark, Novo Nordisk employs approximately 38,000 employees in 75 countries, and markets its products in more than 180 countries. In Australasia, Novo Nordisk is located in Sydney and is responsible for operations in both Australia and New Zealand. For more information, visit novonordisk.com.au