Submission No 5

INQUIRY INTO INQUIRY INTO CHILDHOOD OVERWEIGHT AND OBESITY

Organisation: Alzheimer's Australia NSW

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NSW Legislative Council

STANDING COMMITTEE ON SOCIAL ISSUES

Inquiry into childhood overweight and obesity

Submission from Alzheimer's Australia NSW

Alzheimer's Australia NSW is the peak body for people with dementia and their carers in NSW. We provide advocacy, support services, education and information. Our organisational mission is to minimise the incidence and impact of dementia through leadership, innovation and partnerships - in advocacy, policy, education, services and research.

Dementia describes the symptoms of a large group of illnesses that cause a progressive decline in a person's functioning including loss of memory, intellect, rationality, social skills and physical functioning. Dementia is the single greatest cause of disability in Australians over the age of 65 years and the third leading cause of disability burden overall[i].

There are currently 342,000 Australians living with dementia and, without a significant medical breakthrough, it is projected that this number will rise to almost 900,000 by 2050[ii]. In NSW there is estimated to be almost 112,000 people living with dementia, with this number to reach 272,000 by 2050[iii].

Our interest in this inquiry may seem odd at first glance, however, there is a strong connection between obesity and related conditions that significantly increase a person's risk of developing dementia. There is also a very strong likelihood that overweight and obese children will become overweight and obese adults. In the absence of a cure for dementia, risk reduction represents our greatest hope, at this point in time, that there may be less than 900,000 people with dementia in 34 years time.

We are therefore very supportive of the Inquiry and efforts to reduce the prevalence and magnitude of overweight and obese people in the NSW population.

Please contact Brendan Moore, General Manager of Policy, Research and Information at Alzheimer's Australia NSW for further information, comment or feedback on this submission.

Yours Sincerely,
The Hon. John Watkins AM
CEO, Alzheimer's Australia NSW

Any other related matter.

The financial costs of dementia to the Australian economy are significant. Total direct health and aged care system spending on people with dementia was at least $4.9 billion in 2009-10[iv]. As the population ages, the growing demand for care not only poses direct costs to the health and aged care system, it also creates significant costs of an indirect nature to the government in terms of social welfare payments as well as lost productivity as people provide informal care at home[v] [vi]. Dementia will become the third greatest source of health and residential aged care spending within two decades, costing approximately one percent of gross domestic product (GDP)[vii].

As a result of the high financial and social costs of dementia worldwide, a growing body of research aims to identify risk factors which may increase an individual's likelihood of developing Alzheimer's disease by calculating the proportion of cases that can be attributed to modifiable risk factors[viii]. Seven risk factors have been identified as having important implications for the prevalence of Alzheimer's disease specifically. They are:

diabetes

midlife obesity

smoking

depression

cognitive inactivity or low educational attainment

midlife hypertension

physical inactivity[ix]

Risk reduction has a strong role to play at a population level and at this stage represents the most effective approach to reduce the prevalence and societal impact of dementia. It is important to note that these seven modifiable risk factors are connected and interdependent. For instance, having one condition predisposes an individual to be more susceptible to developing another condition

due to the fact that many of the risk factors are interrelated. In addition, there are a range of complex social factors that influence both education and health.

Social determinants of health

The World Health Organisation (WHO)[x] defines social determinants of health as the "circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics." Public health research has demonstrated persistent statistical associations between social conditions and health. People of higher socioeconomic status consistently exhibit better health than those who experience less favourable social conditions[xi]. Further, research suggests that health vulnerability is comprised of both individual and societal factors[xii]. As stated above, there are a range of complex factors that influence a person's health status. Whilst there is a correlation / association between the risk factors, they are not deterministic and causative in all cases.

With this in mind, public health campaigns and dementia risk reduction programs may have a limited population pool in which its messages can be successful. Education and the subsequent increased cognitive activity, has a principle role and is key to social mobility and good health outcomes over the life course. The other six modifiable risk factors for Alzheimer's disease are more common in people with low educational attainment and from low socio-economic backgrounds. It is therefore important that in addition to addressing individual actions, dementia risk reduction address socially determined aspects of health through macro-level policy settings.

In short, context matters and for Aboriginal communities the statistics on prevalence of Alzheimer's disease are evidence of this. Prevalence rates are three to five times higher than the non-Aboriginal population due to higher risk profiles for each of the seven risk factors discussed in this paper, and for other risk factors such as heart disease, blood cholesterol, diet and alcohol consumption[xiii]. It is clear that the circumstances and resources available to Aboriginal people in Australia are not equal to the non-Aboriginal population[xiv]. Therefore, for disadvantaged communities,

focusing on changes to the social environment will reap great benefits in improving their health indicators. The Closing the Gap initiative is attempting to do this and has made some progress in improving health indicators for the Aboriginal population in Australia, however, much more is needed.

Obesity

There are a number reasons why a person may become/be obese, with the most common being the development of bad food and exercise habits from a young age[xv]. Obesity commonly occurs as a result of energy intake exceeding energy expenditure and the subsequent surplus being stored as fat[xvi].

Australia has seen a sharp increase in the number of overweight or obese adults over the last few decades. In 2011-12, approximately 60 percent of Australian adults were classified as overweight or obese, with more than a quarter (27 percent) falling into the obese category. Australia ranks fourth on the obesity scale within the Organisation for Economic Cooperation and Development (OECD)[xvii]. Approximately 6.3 million middle-aged Australians are obese, with an estimated 7,200 Australians dying each year due to obesity and obesity-related disease[xviii].

Healthcare costs for overweight and obese Australians substantially exceed those for Australians of normal weight[xix]. In 2008, the total annual cost of obesity to Australia (including health system costs, loss of productivity costs and caring costs) was estimated to be approximately $58 billion; $21 billion of which were indirect costs in the form of subsidies, pensions, unemployment benefits and sick pay[xx]. In 2010, the annual direct cost per person increased from $1472 for those of normal weight to $2788 for people who are obese[xxi]. The direct costs of obesity are associated with four main medical conditions – cardiovascular disease, type 2 diabetes, osteoarthritis and some specific forms of cancer[xxii].

Midlife obesity and dementia

Insulin resistance plays a particularly important role in explaining the association between midlife obesity and Alzheimer's disease. Research suggests that the majority of overweight or obese people in midlife are also insulin resistant, which has been linked to an increased risk of cognitive impairment[xxiii]. Midlife obesity has

consistently shown a strong and independent association with an increased risk of Alzheimer's disease and dementia; although being overweight later in life is a positive for brain health[xxiv]. Obesity and insulin resistance are associated with an impaired vasodilator response, which is an independent predictor of cardiovascular disease and plays an integral role in predisposing people to the development of dementia and Alzheimer's disease[xxv]. With earlier onset of obesity and insulin resistance, there is potential for cognitive decline to occur at an earlier age, further increasing the burden of Alzheimer's disease[xxvi].

PAR for Midlife Obesity

Alzheimer's Australia NSW estimates that approximately 10,305 cases of Alzheimer's disease can be attributed to midlife obesity. Our analysis indicates that by 2020 this will increase to 12,409, 17,077 in 2030, 22,894 in 2040, before reaching approximately 27,668 in 2050.The relationship between midlife obesity and Alzheimer's disease has been attributed to insulin resistance that is common amongst overweight and obese people. This indicates that as midlife obesity becomes an increasingly prevalent issue, Alzheimer's and dementia will also increase accordingly. Our analysis has assumed a constant rate of obesity in the population, however, the trend is upwards suggesting that our numbers will be under-estimations.

Success with strategies to reduce midlife obesity could result in the types of reduction shown in Table 3, with resultant reductions in direct and indirect costs as shown in Figure 4 with a 10% reduction and Figure 5 with a 20% reduction. Alzheimer's Australia NSW estimates potential savings of up to $168m with a 10% reduction in the population with obesity attributable Alzheimer's disease, and up to $336m should a 20% reduction be achieved by 2050.

Table 1. Population Attributable Risk for Midlife Obesity

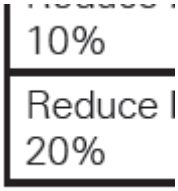

Figure 1: Cost savings with a 10% reduction in population with midlife obesity attributable Alzheimer's disease

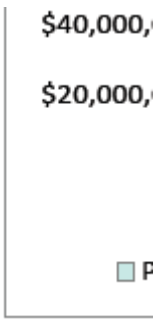

Figure 2: Cost savings with a 20% reduction in population with midlife obesity attributable Alzheimer's disease

What does this mean for public health measures and childhood obesity?

Norton et. al. note that:

> *"Public health interventions targeted at vascular risk factors (e.g. physical inactivity, smoking, midlife hypertension, midlife obesity, and diabetes), depression, and low educational attainment will probably achieve the greatest reduction in the prevalence of the modifiable risk factors and will provide other major benefits to society and health-care systems."* [xxvii]

Health outcomes are a result of social, cultural and economic factors, therefore the main focus of Government policy settings in the future should be on increasing educational attainment and providing access to ongoing learning opportunities. A socially determined view of health would see that this has implications on the other

six key risk factors to reduce the prevalence of Alzheimer's disease in the future. For example, people with higher levels of education generally have lower rates of diabetes, depression, hypertension, smoking and obesity, and be physically active.

The highest PAR for Alzheimer's disease is physical inactivity, at almost 25 percent. Therefore, increasing levels of physical activity represents the biggest opportunity to reduce prevalence of Alzheimer's disease. It would also impact on reducing other modifiable risk factors including obesity, diabetes, and hypertension. Physical activity is one of the three key components of Your Brain Matters, a risk reduction program Alzheimer's Australia has developed but is not currently funded by any Government to deliver. Increasing physical activity levels of Australians has been a focus for a number of public health issues. However, levels of inactivity continue to rise while the population who undertake physical activity to the recommended levels declines. Policy makers should make this an immediate focus – getting Australians active by whatever incentives and disincentives are shown to be effective.

The figures cited above for cost savings would multiply exponentially should costs of other diseases be included (public health costs and chronic disease management). For example, obesity intervention policies aimed at reducing the prevalence of obesity will yield strong economic and social benefits by reducing the prevalence of associated diseases[xxviii] and indirect costs. Reducing obesity through a range of interventions has the potential to benefit individuals through reduced health costs, improved quality of life and longer life expectancy and benefit the government and employers through reduced public healthcare costs and improved productivity. Expenditure on initiatives to reduce the exposure of the population to these risk factors will reduce costs elsewhere. This represents a double-dividend for Government and an efficient use of taxpayers' money.

Most successes in public health initiatives have utilised coercive measures (eg. limiting areas where smoking is permitted, random breath testing with associated fines and penalties). Physical inactivity and obesity are both, unfortunately, complex, systemic issues where coercion is unlikely to succeed on its own. McKinsey Global Institute[xxix] argues that to address these issues, the following is needed:

1. a multi-pronged approach to addressing rising obesity rates,

2. changes to the environment and societal norms which requires some level of Government regulation and/or community based action,
3. engagement from as many sectors as possible with a mixed approach of top-down and bottom-up,
4. employment of as many interventions as possible, learn from these approaches, and allow for agencies and organisations to be innovative, and
5. conduct research to understand what approaches are most effective, with emphasis on action research and evaluation as ways of improving the existing knowledge base.

Most crucially, in its analysis of 74 interventions to reduce obesity, McKinsey Global Institute came to the conclusion that the cost savings and higher productivity outweigh the direct investment required to deliver the interventions.

Research has shown that incentives and disincentives work in the form of taxes, sanctions, rebates and subsidies. One recent publication[xxx] showed that adding a tax to soft drinks would bring down their consumption. The authors recommended an excise tax would be more effective than a sales tax at reducing consumption rates. Therefore policy makers should use incentives and disincentives to promote desirable behaviours and reduce deleterious behaviours.

The development of policy measures needs to draw on the work of behavioural and economic psychology to understand what motivates people, how to change their behaviours for the better, and what incentives and disincentives can be put in place to steer or nudge people towards better choices. In such a comprehensive policy approach, any new initiatives need to be mutually supportive and complementary. The Australian Public Service Commission (APSC) publication *Changing Behaviour: A Public Policy Perspective*[xxxi] is instructive to policy makers in designing a long-term comprehensive approach to childhood obesity and dementia risk reduction. The ASPC framework is based on four key elements for which this submission argues an obesity and dementia prevalence reduction model for Australia should be developed:

1. Regulation, Legislation, Sanctions, Taxes, Subsidies
2. Provision of public services
3. Addressing Social, Economic and Cultural Determinants of Health
4. Tailoring Initiatives for Disadvantaged Groups

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