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(Inq into Obesity)

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Murdoch Childrens
Research Institute

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The **Royal Children's**
Hospital Melbourne



**The Parliament of the Commonwealth of Australia:
Inquiry into Obesity in Australia**

**Support for children's hospitals and research institutes
to prevent and treat childhood and adolescent obesity,
and its associated co-morbidities.**

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Executive Statement

With one quarter of all children now overweight or obese, it is imperative that Australia acts quickly in order to avoid a pandemic of obesity-related health consequences, such as Type 2 diabetes, heart disease, cancer, mobility problems, and psychological harm. This submission outlines:

- the importance of **children's hospitals to primary prevention** of childhood obesity, and
- the urgency of **upgrading services to treat obese children and avoid complications**, loss of life-years, and spiralling health and disability costs.

Primary prevention remains a key focus in the battle against childhood obesity. In addition to community-based preventive intervention, hundreds of thousands of children pass through Australia's children's hospitals every year. Every day, hospitals could be providing health promotion, surveillance, counselling and intervention at a time and in a setting where parents are likely to be most receptive to health change advice. They could also be collecting data about the true burden and costs of childhood obesity. At the moment these are largely missed opportunities.

In spite of the current investment into primary prevention, it will be many years before obesity prevalence falls. Vast numbers of children already suffer obesity's immediate effects, and are at very high risk of life-long health problems and significant psychological and socioeconomic harm.

Prevention for children who are already obese means effective clinical management to avoid the devastating short- and long-term complications of obesity. Prevention is perhaps even more critical in these children, since it is the obesity-related illnesses (and not the obesity itself) that accounts for both the massive burden and extraordinary healthcare costs of obesity.

We estimate that around 250,000 Australian children aged 2-18 years are already obese, of whom 85,000 are seriously obese (equivalent to an adult BMI of 35 or greater). To service these 85,000 children, a recent national survey identified just 9 weight-management clinics for children and adolescents with severe obesity, with these assessing an average of just 12 new patients/month.

Summary of Key Recommendations

1. Fund essential multidisciplinary clinical services for children and adolescents with established obesity in every state and territory. These should have the resources to prevent and treat both physical and psychosocial morbidities.
2. Establish a national network of obesity clinics to support and coordinate large-scale:
 - a. childhood obesity management trials, so that faster research advances can be made in preventing morbidity and reducing BMI when obesity is already established.
 - b. quality improvement and training activities that can be fed straight back into the clinical prevention of obesity and its associated morbidity.
3. Support Australia's children's hospitals to:
 - a. use every clinical encounter as an opportunity for health promotion, surveillance, and intervention to reduce childhood obesity.
 - b. collect data and report on the burden of obesity (prevalence, impacts and costs) for hospital populations as a whole and for children across the range of special health care needs.
 - c. act as a support for primary care services (training, materials and resources, and referral).
4. Recognise and support the leadership role that children's research institutes and hospitals play in population intervention and epidemiological research into childhood obesity.

Introduction

One in four children in Australia is now either overweight or obese – an extremely concerning statistic, given its association with numerous short- and long-term health complications. Recognising this, the Government has determined that it will make obesity a National Health Priority Area, as evidenced by initiating the Healthy Kids Check, supporting the Stephanie Alexander Kitchen Gardens program, evaluating successful community initiatives, developing guidelines on healthy eating and physical activity, supporting the 'Healthy Places, Healthy Spaces' project, and conducting the long-overdue national nutrition and physical activity survey. The Government's commitment towards reducing childhood obesity is to be applauded and these are worthy initiatives geared to the necessary monitoring and prevention of childhood obesity.

Unfortunately, while preventive and monitoring strategies remain extremely important in the wider public health approach to obesity, they are unlikely to be of significant help to the 250,000 two to 18 year old Australians who are already obese - nor to those who will become obese despite the preventive programs. These children and adolescents, at the present time, are at the greatest danger of developing associated serious health complications.

Obesity in childhood is associated with numerous adverse effects on health and wellbeing, including an increased risk of psychosocial problems, Type 2 diabetes, hypertension, dyslipidaemia, liver disease, sleep abnormalities (impacting upon school performance, social skills and mental health) and orthopaedic/mobility issues. Cancer, dementia and heart disease are all related to obesity and it is likely that these will present earlier over the next 20-30 years unless current trends can be reversed.

Section A. Improved paediatric weight management facilities to prevent physical and psychosocial morbidity

We estimate that around 250,000 Australian children aged two to 18 years are already obese, of whom 85,000 are seriously obese (equivalent to an adult BMI of 35 or greater). Much better services are needed throughout Australia for managing these individuals in order to avoid a pandemic of diabetes, heart disease, cancer, orthopaedic/mobility problems and psychosocial disadvantage. Multidisciplinary weight management services improve health and reduce the risk for long-term disease. Programs aimed at effective weight management in children and adolescents with obesity are likely to be associated with long-term health gains - particularly in terms of obesity-related conditions like Type 2 diabetes and heart disease.

Despite the high number of children that are already obese and at risk of developing further health problems, there is an astonishing dearth of specialist services. To serve the 85,000 children with

severe obesity, a recent national survey identified just nine weight-management clinics that were assessing an average of just 12 new patients each month (1). New policy initiatives (such as the 'Healthy Kids Check' for all 4 year olds) will improve identification of obese children or children at risk of obesity and increase demand on these services. It is therefore imperative that effective treatment strategies are urgently developed and resourced, so that these children have access to treatment programs that will be associated with long-term improvements in adiposity and health.

Furthermore, obesity may deal a double blow to children with existing special health care needs such as intellectual disability and cancer. Firstly, these children may be more likely to become obese. Secondly, they may then be particularly susceptible to its impact on health, wellbeing and disadvantage. These children require access to expert obesity prevention and management that are best coordinated within a multidisciplinary and family-centred framework.

We argue strongly for an increase in support for specialist multidisciplinary weight management services. They have a critical role to play in the spectrum of care required for obese children and adolescents, for the following reasons:

- Approximately 1-2% of obese children attending a specialist clinic for assistance in weight management have an underlying medical cause for their obesity and, with the growing number of obese children, it is vital that these children are appropriately recognised and treated.
- Identification and treatment of the medical consequences of obesity in childhood (including insulin resistance/Type 2 diabetes and heart and liver disease) requires specialist input.
- Hospital-based multidisciplinary weight management services can lead to significant improvements in body composition that are directly associated with beneficial health effects (2, 3). This is important, given the fact that no community-based strategies have, to date, shown such an effect in reducing adiposity and improving risk factors for later disease (4-6).
- Some children with severe obesity and/or co-morbid conditions require pharmacological therapy or referral to specialist centres for the consideration of bariatric surgery. This spectrum of treatment from lifestyle change to medication to surgery is best managed within specialised centres (7).

Finally, despite the successes outlined above, the best treatment currently available often achieves only modest success. The lack of well-organised and funded weight management services precludes rapid and efficient research and continuous quality improvement. The success of coordinated, multi-centre research and quality improvement is demonstrated by the advances in treatment for conditions such as childhood leukaemia and very preterm birth (both once uniformly fatal) that are now not only treatable but also usually followed by a normal, healthy childhood and fully-contributing adulthood.

Effective clinical weight management services should act as a central axis upon which clinical research projects can be developed. These projects should be aimed at:

- identifying factors important in the development of adiposity and obesity-related disease in children and adolescents, and
- developing strategies to improve weight control in children by the establishment of randomised controlled trials.

Specialist weight management services therefore act as an essential platform in the development of effective obesity research centres.

Key recommendations around paediatric weight management:

1. Fund essential multidisciplinary clinical services in every state and territory for children and adolescents with established obesity. These should have the resources to prevent and treat obesity and its associated physical and psychosocial morbidities.
2. Establish a national network of obesity clinics to support and coordinate large-scale:
 - a. childhood obesity management trials, so that faster research advances can be made in preventing morbidity and reducing BMI when obesity is already established.
 - b. quality improvement and training activities that can be fed straight back into the clinical prevention of obesity and its associated morbidity.

Section B. Role of children's hospitals & research institutes in preventing obesity and its associated co-morbidities

Most overweight and mildly obese children and adolescents do not need to be seen within specialist hospital-based weight management services. The majority will do well in primary care settings provided that effective interventions can be established. However, children's hospitals could be playing a much more active role in health promotion, prevention of obesity, and prevention of long-term disease.

As an example, Melbourne's Royal Children's Hospital (RCH) alone admits around 25,000 children and treats over ten times that number annually. As such, the hospital impacts directly upon the health of many children and has a leadership role in the community with respect to changes in child health practice. Public health initiatives are an important aspect of hospital-based care - for example, providing catch-up immunisations and discussing the impact of parental smoking are considered a standard part of patient management. Anecdotally, in the inpatient setting, discussion of a child's weight rarely occurs. One study of Australian paediatric inpatients showed a population prevalence of 22% of overweight/obesity (8), comparable to rates in the community. It

also noted marked under-recording of height and weight and thus under-reporting of obesity (9). Parents of overweight children with acute illnesses believe that hospitals should be assessing for overweight on admission and discussing overweight with parents (10).

Through the linking up of children's hospitals, it will be possible to develop and contribute to a national network of children's weight management services, with a view to a) the development of nationally-agreed standards for children's weight management, b) continuing quality improvement initiatives at a national level, c) research into the current and future burden and costs associated with paediatric obesity, and d) building a national clinical infrastructure on which the NHMRC can build high-throughput research responsive to the new National Health Priority.

Key recommendations around the role of Children's Hospitals and Research Institutes:

1. Support Australia's children's hospitals to:
 - a. use every clinical encounter as an opportunity for health promotion, surveillance, and intervention to reduce childhood obesity.
 - b. collect and report on the burden of obesity (prevalence, impacts and costs) for hospital populations as a whole and for children across the range of special health care needs.
 - c. act as a support for primary care services (training, materials and resources, and referral).
2. Recognise and support the leadership role that children's research institutes and hospitals play in population intervention and epidemiological research into childhood obesity.

Concluding statement

Within this brief document we have described the importance of children's hospitals and research institutes in the management of children and adolescents with obesity with a view to **prevention of the expected pandemic of obesity-related morbidity**. Research over the last 10 years has highlighted that only a joined-up approach, by all those involved in the care of children, will lead to an effective solution for this complex problem.

We urge those involved in the decision making process, particularly those whose remit focuses upon the allocation of valuable funding and resources, not to overlook the importance of children's hospitals and research institutes in the prevention and treatment of childhood obesity and its associated co-morbidities.

We also urge that national funding be made available for a coordinated network of specialist multidisciplinary weight management services. This network would be focussed around supporting

training in paediatric weight management, as well as assisting in the development of rapid research and quality improvement activities. The latter would provide results that can be fed directly back into clinical prevention strategies aimed at reducing levels of obesity-related morbidity.

References

1. Spilchak PJ, Denney-Wilson E, King L, Baur LA. Tertiary paediatric obesity services in Australia. *J Paediatr Child Health*. 2008 May;44(5):243-7.
2. Reinehr T, Temmesfeld M, Kersting M, de Sousa G, Toschke AM. Four-year follow-up of children and adolescents participating in an obesity intervention program. *Int J Obes (Lond)*. 2007 Jul;31(7):1074-7.
3. Sabin MA, Ford A, Hunt L, Jamal R, Crowne EC, Shield JP. Which factors are associated with a successful outcome in a weight management programme for obese children? *J Eval Clin Pract*. 2007 Jun;13(3):364-8.
4. McCallum Z, Wake M, Gerner B, Harris C, Gibbons K, Gunn J, et al. Can Australian general practitioners tackle childhood overweight/obesity? Methods and processes from the LEAP (Live, Eat and Play) randomized controlled trial. *J Paediatr Child Health*. 2005 Sep-Oct;41(9-10):488-94.
5. Reilly JJ, Kelly L, Montgomery C, Williamson A, Fisher A, McColl JH, et al. Physical activity to prevent obesity in young children: cluster randomised controlled trial. *Bmj*. 2006 Nov 18;333(7577):1041.
6. Rudolf M, Christie D, McElhone S, Sahota P, Dixey R, Walker J, et al. WATCH IT: a community based programme for obese children and adolescents. *Arch Dis Child*. 2006 September 1, 2006;91(9):736-9.
7. Joffe A. Pharmacotherapy for adolescent obesity: a weighty issue. *Jama*. 2005 Jun 15;293(23):2932-4.
8. O'Connor J, Youde LS, Allen JR, Baur LA. Obesity and under-nutrition in a tertiary paediatric hospital. *J Paediatr Child Health*. 2004 May-Jun;40(5-6):299-304.
9. O'Connor J, Youde LS, Allen JR, Hanson RM, Baur LA. Outcomes of a nutrition audit in a tertiary paediatric hospital: implications for service improvement. *J Paediatr Child Health*. 2004 May-Jun;40(5-6):295-8.
10. McLean K, Wake M, McCallum Z. Overweight in medical paediatric inpatients: detection and parent expectations. *J Paediatr Child Health*. 2007 Apr;43(4):256-61.