

The effectiveness of nurse-led interventions in the assessment and management of overweight and obese children and young people

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Nearly one quarter of Australian children (2-17 years) are overweight or obese¹, (ABS, 2019), and the projections forecast that these numbers will continue to grow. Over one third (35.7%) of children (2-17 years) in Australia in outer regional and remote areas are overweight or obese (AIHW, 2017). The number of obese children globally is predicted to reach 250 million by 2030, or one in five children, up from the current figure of 150 million (World Obesity Federation, 2019). The prevalence of overweight and obese children and young people in developing countries has also increased to around 13% (WHO, 2015). No country worldwide has reduced obesity rates in the last three decades (WHO, 2015). The World Health Organisation (WHO) set a target of no rise in childhood obesity between 2010-2025 but based on current projections, only one in ten countries have a 50% chance of meeting this target (World Obesity Federation, 2019).

There is a substantial cost burden associated with childhood obesity, compounded by lasting effects into adolescence and adulthood. It has been estimated that the treatment of obese two to four-year-olds costs the Australian healthcare system in excess of \$18 million dollars (Brown et al., 2017). Similarly, children who are overweight by the age of five will go on to cost Medicare an additional \$12 million dollars by age ten (Au, 2012). The Australian Institute of Health and Welfare (AIHW) figures showed that in 2015, almost 40% of the nation's disease burden, which is the impact of a health problem as measured by cost, or death, was preventable (AIHW, 2017). However, less than two per cent of all health spending is allocated to preventative health, considerably less than the UK, New Zealand and Canada. Calls for a five per cent budget allocation have been made (PHAA, 2019; DoH WA, 2019).

The link between childhood obesity and obesity in adulthood is strong and associated with the development of diseases such as diabetes, fatty liver disease and cardiovascular disease at a

younger age (Biro & Wren, 2010). The increase in population weight and obesity has been attributed to an obesogenic environment; an environment that promotes sedentary behaviour coupled with increasingly easy access to high energy dense food. Globally, WHO report insufficient physical activity in the majority of young people. In Australia, between 70-75% of males and 90-95% of females aged 11-17 years do not perform the recommended amount of physical activity of one hour of moderate to vigorous activity per day (WHO, 2015).

While strong national and state policies to address the obesity epidemic are required at a population level, major environmental changes take time to be implemented. Meanwhile, the proportion of people who are overweight and obese continues to rise. Individual level interventions, either through one-on-one sessions with health professionals or as part of community group programmes, seek to improve health outcomes at a local level. There are many examples worldwide and the potential for these interventions to be effectively implemented on a mass scale has not yet been fully tested and should not be underestimated when considering population behaviour change. With more than 400,000 nurses in Australia, nurses make up more than 50% of the health workforce and of all the health professions have the best distribution across Australia. Nurses working in schools and community settings are especially well placed to provide support to children and families in the prevention and management of overweight and obese youths.

Clinical interventions to manage childhood weight have the potential to reduce the prevalence of obesity in adults, improve long-term quality of life, and reduce health care costs (Barton, 2010; Oude et al., 2009). Comprehensive, high intensity behavioural interventions for childhood obesity, compared with usual clinical care has been evidenced to reduce the prevalence of overweight children. However, the adoption of expert recommendations and nationally standardised performance measures in relation to the prevention and management of overweight and obese children and young people has been limited.

¹ The term "overweight" is defined by a body mass index (BMI)-for-age of ≥85th percentile but <95th percentile in children and young people, and "obesity" is defined as a BMI-for-age of ≥95th percentile (Barlow, 2007).

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A systematic review on the effectiveness of nurse-led interventions (the authors) and a scoping review (the authors) found that nurse-led interventions are run in the home, childcare facilities, primary care and school settings. These interventions have seen nurses deliver counselling and motivational interviews, develop nutritional and physical activity guidelines and conduct workshops with the aim of promoting lifestyle and behaviour change in children and their parents. Many of these studies reported small to moderate decreases in overweight and obese children, as well as some success in improving diet and nutritional choices and increased physical activity. Nurse-led interventions were described as highly acceptable amongst children and parents in relation to behaviour change strategies, particularly in the school setting. This suggests the capacity for nurses to provide high-fidelity treatment strategies targeting the overweight and obesity.

The evidence suggests that nurse-led interventions to reduce childhood obesity are feasible, acceptable and effective. However, limited economic evidence has been put forward to evaluate these strategies. Given the adaptability of nurses to the home, school and primary care settings, the size and geographical spread of the workforce, and the low-cost relative to other health care providers, nurses are well positioned in many ways to provide a cost-effective solution to tackle this issue. This requires a workforce with the knowledge and skills necessary to work in a complex environment and support to reduce the harmful effects of an obesogenic environment. Further opportunities for training, resources to support practice and opportunities for leadership in the prevention and management of overweight and obese youths are urgently needed.

ACN commends:

- the establishment of a national preventive strategy and the inclusion of nurses on the advisory committee
- the development of a National Obesity Strategy, expected to be presented to the Council of Australian Governments (COAG) Health Council in June 2020
- state level initiatives to reduce the promotion of junk food: for example, at government-owned sites (Queensland Government); on buses (ACT government)
- support to increase physical activity: for example, free membership for children ≤ 10 years of members of YMCA South Australia; provision of \$100 per child per year towards the cost of sporting activities (NSW) and free access to the Go4Fun program for overweight children and their families in NSW.

ACN calls on the Federal government to:

- ensure nursing representation on key advisory boards and consultation initiatives
- create mechanisms and opportunities to pilot innovative nurse-led approaches around overweight and obese youths at community and service levels
- create a nursing workforce that is equipped to empower children, parents and families to seek support to prevent and manage overweight and obese youths
- support and resource the nursing workforce to identify children at risk of excessive weight gain and provide timely, sensitive interventions targeting a whole of family approach to improve eating and activity behaviours
- allocate a minimum of five per cent of its health budget to preventative health
- regulate the marketing of unhealthy food to children across all media channels, as well as public spaces such as sports grounds and public transport
- call for a tax on sugar sweetened beverages and foods
- use public spaces, digital and television marketing opportunities to advertise healthier options
- ensure that every school aged child has access to a suitably qualified and experienced registered nurse.

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