The right care, in the right place, at the right time

A Policy Brief

Authored by

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THE UNIVERSITY OF NEWCASTLE AUSTRALIA

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Summary

Children with overweight and obesity are at greater risk of developing chronic diseases at younger ages, along with a range of health conditions and comorbidities that affect their quality of life across their lifetime.

In 2017, more than 35 leading community, public health, medical and academic groups united for the first time to call for urgent Federal Government action to address Australia's serious obesity problem and published the 'Tipping the Scale' report which calls for the establishment of a national obesity taskforce. In 2018, Australian ministers agreed that a National Obesity Strategy would be developed and that the initial development phase would include a Commonwealth funded National Obesity Summit held in February 2019.

Given the adverse health impact of obesity on children with excess weight, the New South Wales (NSW) Premier has prioritised timely and accessible interventions to optimise lifestyle factors contributing to excess adiposity to "efficiently reduce overweight and obesity rates of children by five percentage points by 2025".

Problems

Prevalence of childhood overweight and obesity remains alarming; currently impacting one in four (25%) children aged 5-17 years in Australia. The Australian Bureau of Statistics (ABS) Australian Health Survey 2014-15 reported there were around 750,000 children aged 5-14 years (26% of children within this age group) with overweight or obesity across the nation.[1]

Compared to peers with a healthy weight, children with overweight and obesity often:

- Experience bullying or teasing at school.[2]
- Have significant mental health issues, including depression, anxiety, and disordered eating, exacerbated by weight stigma and bias.[3]
- Have greater risk of having heart attacks or stroke in adulthood.[4,5]
- Have increased risk for developing type 2 diabetes,[6-8] of which 90% of cases are preventable through healthy lifestyle interventions that incorporate improvements in dietary patterns and physical activity levels.

The latest Australian Health Survey 2017-18 showed that:[9]

- 6% of children aged 2-17 years met the Australian Dietary Guidelines recommended number of serves of both fruit and vegetables.
- 41% of children aged 2-17 years consume sugar sweetened beverages at least once a week, 31% consume one to three days per week, and 7% consume them daily, with the highest consumption in adolescent boys.
- <2% of children aged 15-17 years met the physical activity guidelines.

Australian public health services for personalised child overweight and obesity treatment have limited geographical reach.[10-12] There were only nine identified tertiary child weight management treatment services across Australia, some of which have waiting lists of up to 12 months.[11,13] Three of these services were in NSW, two in Victoria, one in Queensland and one in South Australia, while no services were identified in Western Australia, the Northern Territory, the Australian Capital Territory or Tasmania.[11] It is evident that some services have attempted to obtain funding to develop a child weight management program in these states/territories but had not been successful.[11]

Further, there is no universal/national strategy and referral pathway to public health services for child weight management for families in Australia.[10] Queensland Health has developed a new model of care which integrates a comprehensive referral pathway for children with overweight or obesity, in line with the Queensland Health Clinical Prioritisation Criteria.[14] However, child weight management services and intervention programs vary between states and depend on funding support from local state and territory governments.

One jurisdiction, NSW, delivers a free community based obesity treatment program, Go4Fun,[15] which has been delivered at scale since 2011. While this program supports the obesity prevention and treatment effort in NSW, similar programs are not widely available in other jurisdictions. A case study of NSW services shows a range of complementary services available for child overweight and obesity treatment and include:

As part of the NSW Healthy Eating and Active Living (HEAL) strategy,[16] the NSW Healthy Children Initiative (HCI)[17] delivers a suite of primary and secondary childhood obesity prevention programs, Go4Fun is one of this suite of programs. The HEAL Strategy has four strategic directions: Environments to support healthy eating; State-wide healthy eating and active living programs (including HCI); Healthy eating as a part of routine service delivery; and Education and information to enable healthy choices.

Go4Fun Program

- A free 10-week group-based weight management program, delivered by trained qualified health professionals which focuses on improving child eating habits, fitness and confidence. The program has reached over 12,000 children with overweight or obesity across NSW since 2011.[18]
- The standard program is delivered face-to-face (typically after school once a week in selected locations). There is also an online version comprising self-paced website modules and weekly health professional phone coaching, as well as a culturally adapted version of the program for Aboriginal families and currently being delivered in partnership with over 35 Aboriginal communities in NSW.
- To be eligible to participate, children must be aged 7 to 13 years above a healthy weight and have a family member available to participate. A gap does, however, exist for some families, including those of children with complex comorbidities, outside the Go4fun target age group, or special needs may still require individualised treatment.
- A wider program uptake is needed in order to reach a larger proportion of children with overweight or obesity. Based on the 2016 ABS report, there were 951,988 children aged 5-14 years living in NSW, and among them 25% (n=237,997) were above a healthy weight. The program had reached only about 5% of this population.

Tertiary children's hospitals (outpatient weight management clinic)

- Suitable for families with children who cannot participate or fall outside the eligibility criteria (e.g. aged <7 years or >13 years) for Go4Fun.
- Suitable for children who have difficulties participating in a group-based program due to psychosocial issues, learning difficulties, weight associated social stigma, or following a specific/selective diet because of health or personal preferences (e.g. coeliac disease, vegetarian).
- The weight management clinics at tertiary children's hospitals are scheduled once a week (4 hours) and can have long waiting lists due to the limited service capacity compared to population needs.[11,13]

- The prolonged waiting time to see paediatric dietitian for child weight management can be concerning for parents as their children will usually continue to gain weight, experience stigmatisation and endure ongoing poorer quality of life.[11,13]
- The extent of clinical waiting lists presents an opportunity for recruiting children to early intervention and to trial novel, scalable models of care which, if successful, could be employed in other services that are struggling to address obesity concerns.

Private practice dietitians

- Private healthcare and consultation fees are substantially less affordable than services offered through public systems.
- Families can claim Medicare rebates for up to five appointments per year to cover all allied health services (including dietitian) only if the child was referred by a general practitioner and has a chronic illness, and requires ongoing care from a multidisciplinary team.[19,20]
- Families with children who have excess weight or obesity (which is considered a risk factor, not a chronic health condition) but are generally healthy, are not eligible to obtain Medicare rebates when accessing private practice dietitian services.[19,20]

Gaps exist in the services' geographical coverage and capacity to meet the population needs. The scale of the childhood obesity problem far exceeds the capacity of many currently available public health services to address the national epidemic of childhood obesity.[11] (**Figure 1**) The limited tertiary child weight management treatment services are insufficient to meet the needs of urban families, and particularly restrictive for rural families who are usually required to travel to services located in major metropolitan areas.

This service gap is of a major concern as overweight and obesity rates are higher in:

- Lower socio-economic groups.
- Aboriginal and Torres Strait Islander Australians.
- People living in regional and remote areas compared to those living in major cities.

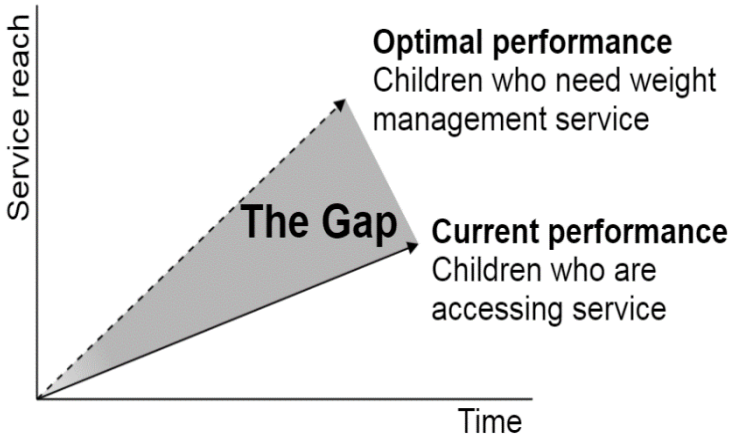

Figure 1 A model of gap in service delivery

To close the gap, we need to address the barriers and inequalities in access to child weight management services.

Barriers to health professional referrals to weight management service[11,12]

- Insufficient support in some public health services, especially for routine monitoring and screening of child weight status to enable early detection of excessive weight gain trajectory and refer to appropriate services.
- Shortage of professional training opportunities for communicating child weight issues and management strategies in some jurisdictions.
- Absence of a clear referral pathway and incentives in referring families to child weight management services.
- Knowledge of the beneficial effects of improving weight status for non-communicable disease prevention.

It should be noted that NSW Health has been supporting health professionals through the Healthy Kids for Professionals website (https://pro.healthykids.nsw.gov.au) and Weight4KIDS module in raising the issue of childhood obesity and to identify and refer children above a healthy weight to appropriate services. There is an extensive program in NSW which supports health professionals through training, professional development and quality improvements to clinical practice to routinely identify children above a healthy weight and refer to appropriate services. It would be beneficial to make it mandatory for all child health workers to complete the online learning modules, and implement routine monitoring and screening of child weight status.

Barriers to family participation in weight management service[21,22]

- Geographical limitations.
- Time constraints for traveling to clinic, especially families not living in the area.
- Transportation to clinic appointments.
- Taking children out of school and parent/s taking leave from work.
- Non-traditional family structure which complicates shared care where a child regularly lives in multiple households due to separation of parents.
- Clinic environment was viewed as not age-appropriate for some children and did not match the expectations of some families.[23]

Clinical telehealth – a potential approach

The University of Newcastle researchers partnered with clinicians at the John Hunter Children's Hospital to address service needs by developing an alternate treatment option using Telehealth (an online videoconferencing platform) which may be used to address some of the barriers mentioned above. Telehealth can be used by clinicians to increase health service delivery capacity and extend service reach to rural regions, while reducing time and cost associated with staff travelling to service outreach and home visits. Telehealth technology for delivering child weight management intervention can be used as a standalone treatment option or to complement other services that exist in both the community and clinical realm of practice by offering more personalised dietary intervention to families. This approach can help to scale up the provision of dietary services which are low cost and widely accessible. It will allow more appointment times as less clinician time was used to travel between appointments (i.e. home visits).

Back2Basics Family healthy lifestyle program

The Back2Basics Family (B2BF) program[24,25] is informed by extensive evidence in family-based child weight management treatments research[26,27] and stakeholders opinions[21,28] and involved a combination of telehealth and technology-based intervention. (**Figure 2**)

Figure 2 Back2Basics Family 12-week intervention program

The online Australian Eating Survey (AES) generates an automated personalised nutrition report which provides an in-depth analysis of the child dietary intake compared to the Australian Dietary Guidelines. This tool maximises the dietitian appointment time to discuss child dietary feedback, goal setting, and tailoring personalised dietary strategies for families. The B2BF program also offered complementary components, including an evidence-based website with information on healthy eating, easy recipes, and physical activities. Both mothers and fathers (or primary caregivers) also received weekly nutrition text messages[28] and were invited to join B2BF parents Facebook group, to increase participants' engagement in the intervention.

The B2BF program has demonstrated high levels of feasibility and acceptability from parents and dietitians. After the 12-week program, children in intervention groups have maintained weight and significantly improved dietary intake (i.e. reduced percentage energy from energy-dense nutrient-poor food, and increased percentage energy from healthy core food). Parents were also highly commended the telehealth and text messages components of the B2BF program, with the majority reported they would like to continue to use them and would recommend to other parents.

The B2BF program may be used by health professionals to provide personalised child weight management advice and support to families who are unable or prefer not to participate in community lifestyle program or families who need more personalised advice could access child weight management treatment services. These could include children or families with special needs (e.g. learning difficulties, autism, coeliac disease).

Telehealth will likely reduce healthcare cost and the rate of failure-to-attend (FTA) as the online appointments are easier and more convenient to access, especially for families who live a fair distance away from the health service. The overall retention rate for the B2BF program (78%) is higher compared to existing childhood obesity intervention studies (ranging from 27% to 73%).[29] In addition, a requirement for families to complete the child AES prior to confirming their telehealth appointment is likely to help identify motivated families who need the intervention and are ready to change. This will therefore reduce the loss of clinicians' time related to FTA and thereby increase health services' efficiency and productivity.

Recommendations and Implications

1. B2BF program is a novel technology-based approach which can be used to provide families with a timely, comprehensive and personalised child weight management intervention that has the potential to be up-scaled and complementary to existing services in NSW or anywhere in Australia.

2. To establish telehealth dietetic clinic in health services, especially in rural health services, so more families can access personalised child weight management intervention.

3. To provide telehealth service delivery guidelines, and train dietitians in delivering telehealth dietetic services for child weight management, to complement service of children's hospital weight management clinic, and only offer face-to-face appointment to families who need it.

4. To establish a referral pathway for clinicians to refer families who are ineligible for Go4Fun, and those who need personalised dietary intervention and support after completing Go4Fun to Telehealth dietetic clinic.

Key Policy Options

Policy interventions that have been identified as most pressing for Australian governments in addressing obesity include:

- Establishment of a national obesity taskforce.

- Adoption of a whole-of-government obesity prevention and treatment strategy.

- Provision of funding for sustained, effective remotely delivered child obesity treatment interventions such as telehealth weight management clinic.

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