

Dear Senate Select Committee into the obesity epidemic in Australia,

## Submission to the inquiry into the obesity epidemic in Australia

Please find enclosed the submission from the Global Obesity Centre (GLOBE) for the Submission to the inquiry into the obesity epidemic in Australia.

This submission has been prepared by Kathryn Backholer, Adrian Cameron, Jaithri Ananthapavan, Claudia Strugnell, Gary Sacks, Devorah Riesenberg, Anna Peeters and Steven Allender on behalf of GLOBE, Deakin University, Australia.

Please do not hesitate to contact us should you have any further queries.

Yours sincerely,

Professor Steve Allender For and on behalf of the Global Obesity Centre (GLOBE) World Health Organization Collaborating Centre for Obesity Prevention Centre for Population Health Research Deakin University School of Health & Soc. Dev., Faculty of Health

#### Global Obesity Centre (GLOBE)



# DEAKIN

# About the Global Obesity Centre

The Global Obesity Centre (GLOBE) is a World Health Organization Collaborating Centre for Obesity Prevention, situated within the Centre for Population Health Research at Deakin University, Melbourne, Australia. Our vision is to catalyse improvements in population health, with a focus on obesity, through innovative research that empowers people and enables healthier environments.

### **General comments**

GLOBE welcomes the opportunity to input into the Senate Select Committee Inquiry into the Obesity Epidemic in Australia. Australia has some of the highest rates of childhood overweight and obesity in the world. This Senate inquiry, and the actions that follow, will be a crucial step in Australia's goal to meet the targets for non-communicable diseases and to halting the rise of diabetes and obesity by 2025, committed as a member state of the World Health Organization. Achieving these targets will be essential to reduce the growing health and economic consequences of overweight and obesity in Australia.

# **GLOBE** response to the Terms of Reference

# a. The prevalence of overweight and obesity among children in Australia and changes in these rates over time

- According to the Australian Health Survey, the prevalence of overweight and obesity in 2014/15 was 27% among children and adolescents (age 5-17 years) – among the highest rates in the world. This is an increase from the 21% reported in the 1995 National Health Survey.
- The prevalence of overweight and obesity is higher among children and adolescents from more disadvantaged backgrounds, as well as among Aboriginal and Torres Strait Islander children. Research shows that these inequalities are widening (1) and will continue to widen in future years if those with greater social and economic resources preferentially benefit from obesity prevention efforts (2).
- Our studies involving measured heights and weights among children in Victoria, using opt out rather than opt in consent, show that in reality prevalence rates of overweight and obesity in many Australian communities are higher than that represented in the national statistics(3). For example, The Great South Coast childhood obesity surveillance study in South-West Victoria achieved a 70% school and 93% student response rate (N=2,198 students consenting) and found the prevalence of combined overweight/obesity to be 27.1% among boys and 32.3% among girls in Grade 4 (approx. 9-10 years of age) compared to the 2014/15 AHS which found 26.5% of boys and 24.9% of girls aged 9-10 years of age to be with overweight/obesity (all IOTF growth reference) (4).
- The importance of an opt-out consent process is highlighted in our work which shows that those who choose to participate in research studies where height and weight and measured among school-children under an active (opt-in) consent process are healthier compared to those who participate under a passive (opt-out) consent process. The magnitude of this nonparticipation bias has been shown to be as high as 5.4% among primary school girls (3).



High participatory and measured surveillance systems for childhood obesity and related behaviors are required to examine the prevalence of childhood obesity, trends over-time, identify populations at increased risk and evaluate interventions. These efforts exist in several other jurisdictions and are feasible within current Australian legal and ethical constraints (5). For example, for the past decade all children in England within state maintained primary schools have their height and weight measured in Reception (aged 4-5 years of age) and Year 6 (aged 10-11 years of age) and achieve participation rates ≥92% (past 5-years) (6). In the United States of America, 25 states have legislated BMI surveillance programs in schools (7).

# b. The causes of the rise in overweight and obesity in Australia

- The drivers of the obesity epidemic are extremely complex and inter-related. There is no doubt that population changes in diet and physical activity have driven the rise in overweight and obesity, but the determinants of these changes to diet and physical activity are many and varied.
- Importantly, the rise in overweight and obesity cannot be attributed to the collapse of will power among individuals in Australia and globally. Clear evidence has demonstrated that our food systems and food and physical activity environments have dramatically changed over the past few decades. Foods are more processed, more convenient, cheaper and better marketed than ever before. Work, travel and play are more sedentary than previously.

# c. The short and long-term harm to health associated with obesity, particularly in children in Australia

- There is evidence that obese children are 2-3 times more likely to require hospitalisation (8) compared to healthy weight children and our recent study found that the health related quality of life is lower in overweight and obese children compared to their healthy weight peers (9).
- 80% of obese children become obese adults (10), highlighting the need to for early life prevention of weight gain.
- A high BMI in adulthood is responsible for 52% of the diabetes burden, 38% of chronic kidney disease burden, 23% of coronary heart disease burden and 17% of stroke burden (11).
- Our research has shown that overweight/obese girls in primary school (aged 9-12 years) engage in significantly less objectively measured physical activity (light-intensity physical activity and moderate-to-vigorous physical activity) compared to their normal weight peers (12). Additionally, insufficient sleepers (<10hrs/night) were shown to have 1.9 times higher odds of being overweight and 2.4 times higher odds of being obese (13). Both behaviours are key for mental health, wellbeing and academic achievement (14, 15).
- Children who are overweight/obese have poorer academic performance compared to normal-weight children (16).

# d. The short and long term economic burden of obesity, particularly related to obesity in children in Australia

Our recent study estimated that obese children cost an additional \$367 per child per year (2016 values) compared to healthy weight children, which translates to an annual cost of approximately \$17 million to the Australian health care system (17).



- The total cost of obesity is borne by individuals, employers and the government. The cost to the individual consists of out of pocket healthcare costs, and lost earnings as a result of lower employment rates. Obese workers have lower productivity levels compared to healthy weight employees resulting in increased employment costs and lower profitability for employers. The greatest costs of obesity are borne by governments through higher healthcare costs, reduced tax revenue and higher welfare costs (18) Estimates of the annual cost of obesity ranges from \$8.6 to 21 billion (19, 20).
- In Australia, inequalities in obesity contributes to more than \$1billion in avoidable healthcare costs each year (unpublished GLOBE research).

# e. The effectiveness of existing policies and programs introduced by Australian governments to improve diets and prevent childhood obesity

- Our recent comprehensive assessment of the policies of Australian Federal and State governments with respect to obesity prevention show that Australia is lagging behind other countries (21), such as the UK, France, Ireland, Canada and many Latin American countries, with no comprehensive national obesity or nutrition plan, despite being a key recommendation of the National Preventive Health Taskforce more than a decade ago. Such a plan is required for concerted and coordinated efforts across all levels and sectors of government. For further reading of GLOBE's key benchmarking of Australia's obesity prevention efforts and recommendations for Federal and State governments and for the food industry, please refer to: 1) http://www.opc.org.au/what-we-do/tipping-the-scales 2) www.foodpolicyindex.org.au 3) www.insideourfoodcompanies.com.au
- National efforts to address poor nutrition in Australia have traditionally focused on educating individuals or providing information. Whilst these actions are important to empower Australians to make healthy choices, they will only have limited success unless complemented with actions that create supportive food and physical activity environments.
- Improving the healthiness of food environments requires a comprehensive societal response, including government policies and wide-scale action from the food industry. In Australia, current government policy in this area relies heavily on voluntary company actions through flagship initiatives such as the Health Star Rating (HSR) food labelling scheme and the Healthy Food Partnership (a collaboration between government, food companies, and community groups, with the current focus mainly on product reformulation). Some food and beverage manufacturers and retailers in Australia have taken positive steps to address population nutrition and obesity-related issues through changes to product development, reducing promotion of 'less healthy' food to children, and nutrition labelling (22). Despite this, our recent assessments of company policy and commitments related to nutrition found they are frequently non-specific and limited in scope, and the overall response from the food industry to date has been weak and insufficient to meaningfully address population nutrition issues in Australia (22, 23). This is consistent with evidence from other countries (such as in relation to the UK government's Public Health Responsibility Deal) where voluntary action has been limited and compliance with voluntary pledges has been poor (24).

#### Global Obesity Centre (GLOBE)



**DEAKIN** 

- f. Evidence-based measures and interventions to prevent and reverse childhood obesity including experiences from overseas jurisdictions
  - The World Health Organization's Ending Childhood Obesity (ECHO) Report (2016) reinforced the need for a comprehensive approach to the prevention of obesity, which should address the environmental context and critical periods across the life-course (pre-conception and pregnancy; infancy and early childhood; older childhood and adolescence). The report also highlights the need to address the prevention of weight gain, weight management and treatment. This report was supported by Member states, including Australia, at the 2016 World Health Assembly but is yet to be acted upon by Australian governments.
  - Whole-of-population and high-risk targeted interventions and policies are required that span the information-environment spectrum. Education and personal responsibility alone will not be effective.
  - Regulatory measures to prevent obesity (as suggested in the WHO ECHO report, e.g restrictions on junk food marketing to children and taxes on sugar sweetened beverages) should be included in any government response to preventing childhood obesity. These types of measures provide an even-playing field for industry to ensure those who are proactive are not disadvantaged.
  - Several scientific demonstration trials and meta-analysis (25) show that childhood obesity can also be prevented by actively involving community leaders such as policy makers, educators, retail association leaders, and parents in the intervention design and delivery. This approach has shown statistically significant reductions in obesity (measured BMI) compared to controls in children under five and adolescents (26) in multiple Australian communities.
  - A recent trial in ACT high schools found significant reductions in overweight and obesity prevalence of between 2% and 4% relative to controls over the two-year intervention period (27) alongside significant reductions in pre-clinical depression. The ACT Government has since translated this approach to a policy position for all ACT Schools.
  - More recently trials in Western Victoria (28) have systems thinking for intervention design and implementation, tracking of change in these community systems, and social network analysis to optimise collaboration. These communities name their own interventions and two of these projects, *SeaChange* Portland and *Genr8Change* Southern Grampians, have catalysed > 300 community members to drive over 200 actions in areas ranging from council food policy banning sugar-sweetened beverages to improving water provision as an alternative beverage. This work is underpinned by a community led monitoring system (29) for behavioural (diet, physical activity, sedentariness) and anthropometric outcomes in these communities.
  - GLOBE has made a specific list of recommendations for the prevention of childhood obesity below.

# g. The role of the food industry in contributing to poor diets and childhood obesity in Australia

• Food industry must play a role in addressing poor diets and childhood obesity. However, the food industry should only be included post policy formulation. Whilst the food industry may be interested in the promotion of public health, they have an unavoidable conflict of interest as their primary responsibility is to their shareholders and to the profitability of their business.



- DEAKIN UNIVERSITY
- Some food and beverage manufacturers and retailers in Australia have taken positive steps to address population nutrition and obesity-related issues through changes to product development, reducing promotion of 'less healthy' food to children, and nutrition labelling (22). Despite this, our recent assessments of company policy and commitments related to nutrition found they are frequently non-specific and limited in scope, and the overall response from the food industry to date has been weak and insufficient to meaningfully address population nutrition issues in Australia (22, 23).

# h. Any other related matters

• At the time of the National Partnership Agreement on Preventive Health and the Preventive Health Agency, Australia was showing leadership in some critical strategic approaches to obesity. Now Australia is far behind most other high income countries. String leadership is required to reduce the prevalence of childhood obesity in Australia and to catch up with other countries who are showing leadership in this area.

# **GLOBE recommendations**

# **Overarching**

- Implement the recommendations from WHO's ECHO Commission.
- A whole systems approach is required for obesity prevention, which provides multiple activities across multiple levels of society from Federal and State policy level to regional and local community level.
- Whole system activities should emphasize a strengths-based approach, which incentives and provides ways to contribute for government, business, education, health and community leaders.
- Any approach to obesity prevention should take into consideration the unequal distribution
  of overweight and obesity among more disadvantaged Australians. Policies and programs
  that preferentially benefit those with more social and economic resources should be
  amended or complemented so that all Australian's health is improved and inequalities in
  weight and health are reduced over time.
- Rigorous monitoring of childhood obesity is required using a legislated opt out consent approach to provide meaningful, timely data which can identify and share place based success in prevention over time and which can ensure allocation of prevention resources on the basis of greatest need.
- In addition to a comprehensive national framework for the prevention of obesity, a policy implementation plan and a robust monitoring and evaluation framework is required.
- A regular (at least every two years) National Nutrition survey and regular height and weight monitoring (using opt-out consent)
- GLOBE endorses the recommendations of the Tipping the Scales report and makes additional recommendations, supported by the WHO Ending Childhood report (2016), the UK House of Commons report into Childhood Obesity (2018) and the National Preventive Health Taskforce report (2009). All recommendations are listed below:



- 1) Establish obesity prevention as a national priority with a national taskforce, sustained funding, regular and ongoing monitoring and evaluation of key measures and regular reporting around targets, which includes afocus on addressing the inequitable burden of overweight and obesity.
- 2) Legislation to implement time-based restrictions on exposure of children (under 16 years of age) to unhealthy food and drink marketing on free-to-air television up until 9:30pm (as a first step to restrict advertising of unhealthy foods and beverages across all advertising mediums). Set clear reformulation targets for food manufacturers, retailers and caterers with established time periods and regulation to assist compliance if not met.
- 3) Make adjustments to improve the Health Star Rating System, and make mandatory by July 2019. Improvements should be based on technical feedback and include i) modification to correct the inappropriate high rating of some foods relatively high in added sugar, sodium or saturated fat; ii) replace the 'as prepared' rule with an 'as sold' rule (with the exception of products that are required to be drained or reconstituted with water prior to consumption; iii) allocate appropriate funds to promote the system firmly in the context of a healthy diet.
- Implement a health levy on sugary drinks to increase the price by at least 20%. Develop and fund a comprehensive national active travel strategy to promote walking, cycling and use of public transport.
- 5) Regulation to restrict price promotions on unhealthy foods and beverages and removal of unhealthy foods from ends of aisles and checkouts.
- 6) Fund high-impact, sustained public education campaigns to improve attitudes and behaviours around diet, physical activity and sedentary behaviour.
- 7) Incentivise State government, community organisations and businesses to implement supportive healthy food and physical activity policies.
- 8) Develop, support, update and monitor comprehensive and consistent diet, physical activity and weight management national guidelines.
- 9) Ensure there are sufficient systems in place to identify children who are overweight or obese, and provide them and their families with a multidisciplinary service.
- 10) Establish a high quality childhood monitoring system for BMI and obesogenic behaviours.

Global Obesity Centre (GLOBE)

#### Obesity Epidemic in Australia Submission 13



## References

- 1. Chung A, Backholer K, Wong E, Palermo C, Keating C, Peeters A. Trends in child and adolescent obesity prevalence in economically advanced countries according to socioeconomic position: a systematic review. Obesity reviews. 2016;17(3):276-95.
- 2. Backholer K, Mannan HR, Magliano DJ, Walls HL, Stevenson C, Beauchamp A, et al. Projected socioeconomic disparities in the prevalence of obesity among Australian adults. Australian and New Zealand journal of public health. 2012;36(6):557-63.
- 3. Strugnell C, Orellana L, Hayward J, Millar L, Swinburn B, Allender S. Active (Opt-In) Consent Underestimates Mean BMI-z and the Prevalence of Overweight and Obesity Compared to Passive (Opt-Out) Consent. Evidence from the Healthy Together Victoria and Childhood Obesity Study. International journal of environmental research and public health. 2018;15(4):747.
- 4. Crooks N, Strugnell C, Bell C, Allender S. Establishing a sustainable childhood obesity monitoring system in regional Victoria. Health Promot J Austr. 2016.
- Lacy KE, Nichols MS, de Silva AM, Allender SE, Swinburn BA, Leslie ER, et al. Critical design features for establishing a childhood obesity monitoring program in Australia. Australian journal of primary health. 2015;21(4):369-72.
- 6. NHS Digital. National Child Measurment Programme England 2015/16 school year. Leeds: Government Statistical Service; 2016.
- 7. Ruggieri DG, Bass SB. A comprehensive review of school-based body mass index screening programs and their implications for school health: do the controversies accurately reflect the research? Journal of School Health. 2015;85(1):61-72.
- 8. Hayes A, Chevalier A, D'Souza M, Baur L, Wen LM, Simpson J. Early childhood obesity: Association with healthcare expenditure in Australia. Obesity. 2016;24(8):1752-8.
- Brown V, Tan E, Hayes A, Petrou S, Moodie M. Utility values for childhood obesity interventions: a systematic review and meta-analysis of the evidence for use in economic evaluation. Obesity Reviews. 2018.
- 10. Herman KM, Craig CL, Gauvin L, Katzmarzyk PT. Tracking of obesity and physical activity from childhood to adulthood: the Physical Activity Longitudinal Study. International Journal of Pediatric Obesity. 2009;4(4):281-8.
- 11. Australian Institue of Health and Welfare. Overweight & obesity Canberra2018 [cited 2018. Available from: <a href="https://www.aihw.gov.au/reports-statistics/behaviours-risk-factors/overweight-obesity/overview">https://www.aihw.gov.au/reports-statistics/behaviours-risk-factors/overweight-obesity/overview</a>.
- Strugnell C, Turner K, Malakellis M, Hayward J, Foster C, Millar L, et al. Composition of objectively measured physical activity and sedentary behaviour participation across the school-day, influence of gender and weight status: cross-sectional analyses among disadvantaged Victorian school children. BMJ open. 2016;6(9).
- 13. Morrissey B, Malakellis M, Whelan J, Millar L, Swinburn B, Allender S, et al. Sleep duration and risk of obesity among a sample of Victorian school children. BMC Public Health. 2016;16(1):245.
- 14. Smith PJ, Blumenthal JA, Hoffman BM, Cooper H, Strauman TA, Welsh-Bohmer K, et al. Aerobic exercise and neurocognitive performance: a meta-analytic review of randomized controlled trials. Psychosomatic medicine. 2010;72(3):239.
- 15. Eime RM, Young JA, Harvey JT, Charity MJ, Payne WR. A systematic review of the psychological and social benefits of participation in sport for children and adolescents: informing development of a conceptual model of health through sport. International journal of behavioral nutrition and physical activity. 2013;10(1):98.



- 16. Sahoo K, Sahoo B, Choudhury AK, Sofi NY, Kumar R, Bhadoria AS. Childhood obesity: causes and consequences. Journal of family medicine and primary care. 2015;4(2):187.
- 17. Brown V, Moodie M, Baur L, Wen LM, Hayes A. The high cost of obesity in Australian pre-schoolers. Australian and New Zealand journal of public health. 2017;41(3):323-4.
- 18. Duckett S, Swerissen H. A sugary drinks tax. Recovering the community. 2016.
- 19. Price Waterhouse Coopers. Weighing the cost of obesity: a case for action. Canberra: Price Waterhouse Coopers; 2015.
- 20. Colagiuri S, Lee CM, Colagiuri R, Magliano D, Shaw JE, Zimmet PZ, et al. The cost of overweight and obesity in Australia. Med J Aust. 2010;192(5):260-4.
- 21. Obesity Policy Coalition. Food Policy Index [Available from: http://www.opc.org.au/what-wedo/food-policy-index.
- 22. Sacks G, Robinson E. Inside our food and beverage manufacturers: assessment of company policies and commitments related to obesity prevention and nutrition, Australia 2018. Melbourne: Deakin University; 2018.
- 23. Jones A, Magnusson R, Swinburn B, Webster J, Wood A, Sacks G, et al. Designing a healthy food partnership: lessons from the Australian food and health dialogue. BMC public health. 2016;16(1):651.
- 24. Knai C, Petticrew M, Durand M, Eastmure E, James L, Mehrotra A, et al. Has a public-private partnership resulted in action on healthier diets in England? An analysis of the Public Health Responsibility Deal food pledges. Food policy. 2015;54:1-10.
- 25. Wolfenden L, Wyse R, Nichols M, Allender S, Millar L, McElduff P. A systematic review and metaanalysis of whole of community interventions to prevent excessive population weight gain. Preventive medicine. 2014;62:193-200.
- 26. de Silva-Sanigorski AM, Bell AC, Kremer P, Nichols M, Crellin M, Smith M, et al. Reducing obesity in early childhood: results from Romp & Chomp, an Australian community-wide intervention program-. The American journal of clinical nutrition. 2010;91(4):831-40.
- 27. Malakellis M, Hoare E, Sanigorski A, Crooks N, Allender S, Nichols M, et al. School-based systems change for obesity prevention in adolescents: outcomes of the Australian Capital Territory 'It's Your Move!'. Australian and New Zealand journal of public health. 2017;41(5):490-6.
- 28. Allender S, Millar L, Hovmand P, Bell C, Moodie M, Carter R, et al. Whole of systems trial of prevention strategies for childhood obesity: WHO STOPS childhood obesity. International journal of environmental research and public health. 2016;13(11):1143.
- 29. Crooks N, Strugnell C, Bell C, Allender S. Establishing a sustainable childhood obesity monitoring system in regional Victoria. Health Promotion Journal of Australia. 2017;28(2):96-102.

Global Obesity Centre (GLOBE)