Submission No 22

INQUIRY INTO INQUIRY INTO CHILDHOOD OVERWEIGHT AND OBESITY

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Date received: 25 August 2016

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22 August 2016

Dear

Thank you for the opportunity to respond to the NSW Government's *Inquiry into child overweight and obesity*. I am a child obesity epidemiologist at the University of Sydney and have worked within the child obesity space for approximately 20 years. I am aware that my colleagues at the University have also responded to the Committee's request, however given my expertise I am responding as an individual with particular reference to school age children.

Briefly, I lead the NSW Schools Physical Activity and Nutrition Survey (SPANS), which is a representative population surveillance field survey of NSW child age 5-16 years. SPANS is funded by the NSW Ministry of Health and is conducted every five years, the most recent conducted in 2015 with approximately 7,500 students participating. The SPANS collects indicators of weight status and weight-related behaviours.

The 2015 SPANS report is currently with the Ministry of Health awaiting Ministerial release. The findings are very relevant to the *Inquiry into child overweight and obesity*. To this end, I am including the recommendations that were based on the 2015 SPANS data, *in confidence. Please treat these recommendations in strict confidence as the 2015 SPANS report has not yet been released by the NSW Ministry of Health*. Further, because I am responding as an individual I have tabulated areas of needs and potential policy responses which are based on my opinion guided by my expertise.

Yours faithfully

Dr Louise L Hardy *PhD*

2015 NSW Schools Physical Activity and Nutrition Survey (SPANS)

The following section comprises the recommendations within the 2015 SPANS report. The recommendations are based on the 2015 findings and presented by sector/setting.

EVIDENCE-BASED RECOMMENDATIONS

There have been substantial and significant improvements in weight and some weight related behaviours since the last SPANS in 2010, however these have mainly been among primary school age children. Overweight and obesity remained unchanged for primary schoolchildren, with no increases since 2010, but among secondary school adolescents, increases were seen in the proportion who were classified as overweight and obese. The following section uses the evidence gathered in the current SPANS (combining the findings from primary and secondary schools) to develop recommendations across a range of settings to improve children's lifestyle behaviours associated with increased risk of poor health outcomes.

The findings showed that many health behaviours require ongoing attention. In 2015, NSW children and adolescents still have;

- Low levels of physical activity, cardio respiratory and muscular fitness
- Low levels of active travel to school
- Low levels of fundamental movement mastery
- High consumption of processed 'junk food' and sugar sweetened beverages
- High screen time (i.e., television, computer, smart phone and other electronic devices)

Overall, the findings suggest that health literacy is low and efforts to improve knowledge of health promotion and health services among parents, carers and schoolchildren is a priority. Strategies to improve healthy literacy include s*ocial marketing and media campaigns* to communicate information about healthy lifestyle choices that can reach parents, children and adolescents and age-appropriate *health promotion programs* to complement and reinforce social marketing messages.

Formative research is required to ensure that social marketing messages and campaigns are designed so that they are relevant and effective for families that are more socially disadvantaged and from culturally diverse backgrounds. Similarly, the evidence presented in this report should be used to guide the development of targeted health promotion activities towards specific child and adolescent populations which are at greatest need of intervention.

Actions to improve children and adolescents weight-related lifestyle choices are needed at all levels of society – individual, family, local, national, national and international. The following section uses a settings approach guided by the findings to develop recommendations across various settings where changes are required in order to support healthier behaviours in children and adolescents. A review of these childhood obesity prevention strategies has been conducted in 2015, updating the evidence base for action,[2] which summarises the evidence underpinning the settings approach used below.

Actions within the family and home environment

The findings indicate that parents need encouragement to help their families to adopt healthier lifestyles by improving weight and health related behaviours and improving healthy literacy. The evidence showed that family and home practices which require attention include;

Daily breakfast: is recommended for everyone. The data showed that only three in four children and adolescents ate breakfast every day.

- Encourage families to eat a nutritious breakfast every day with guidance on ideas for quick and nutritious breakfasts.

Soft drinks in the home increases children and adolescents' overall consumption of soft drinks which provide substantial energy with little or no nutritional value. The data showed that one in ten children and adolescents usually had soft drinks available at home.

- Encourage parents to limit the availability of soft drinks in the home and to provide non sweetened alternative drinks, especially plain water for children and adolescents.

Fast food and take away food should be considered "treats" and eaten only occasionally. The data showed that one in four children and adolescents ate takeaway meals or snacks from fast food outlets one or more times a week.

- Encourage families to reduce the frequency of purchasing takeaway meals or snacks from fast food outlets.

Unrestricted snacking may encourage unhealthy food consumption and have a deleterious effect on the quality of family meals. We did not measure the quality of the foods that children may snack on, but the data showed that one in three children and adolescents had unrestricted snacking at home.

- Encourage parents who allow unrestricted snacking to provide healthy foods, such as cut up fruit and vegetables, and non-sweetened drinks.

Offering sweets as a reward for good behaviour is problematic because using food as a reward can be associated with long term health consequences, including overeating, increasing intake of unhealthy foods and shaping future eating habits. The data showed that one in two parents sometimes or usually offered their child or adolescent sweets as a reward for good behaviour.

- Encourage parents to use non-food rewards for good behaviour, for example, verbal praise, which is important to build self-esteem, or reward charts which focus on a goal such as spending time with their child (e.g., playing in the park, playing with child).

Eating dinner in front of the television has been associated with poorer diet quality and with a higher body mass index. The data showed that one in ten children and adolescents regularly (i.e., five or more times a week) ate dinner in front of the television.

- Encourage families to sit at a table to eat dinner with the television turned off.
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Screen time is the primary contributor to children and adolescents' total sedentary time, and excessive screen time is linked to a range of adverse health outcomes. The data showed that one in two children and adolescents met the recommended daily limit on screen time on week days and one in five on week end days; one in five have no rules on screen time; one in five have a television in their bedroom and one in six used electronic media during sleep time.

- Increase parent, children and adolescents awareness of the recommended limits for daily screen time.
- Encourage parents to remove screen devices (e.g., televisions, smart phones, tablets) from children and adolescents' bedrooms.
- Encourage parents to impose rules on screen time.
- Encourage parents to remove screen devices from children and adolescent's bedrooms at night.

Active travel to school by either walking, cycling, scooter, or using public transport may contribute towards daily physical activity, which in turn, is associated with a range of improved health outcomes. Further, increasing children's active travel to school may contribute to reduction in traffic congestion and carbon emissions around schools. The data showed that one in six children used active transport and one in seven used public transport to get to school.

- Promote community walking buses for children to safely travel to and from school.

- Encourage parents to promote active travel within the family unit (role modelling) for short distances (e.g., < 1.5 kms = 15 minute walk) including school, shops, green spaces.

Physical activity is associated with a wide range of health, social, economic, and environmental benefits and children should be physically active every day. Physical activity can be planned (i.e., sports) or unplanned (i.e., active play, unorganised physical activity). The data showed that one in five children and adolescents met the daily physical activity recommendation.

- Encourage parents to promote daily physical activity (e.g., walking short distances, i.e., < 1.5 kms, to destinations including school, local parks, shops).
- Encourage parents to limit screen time during day light hours
- Encourage parents to purchase 'active' items (i.e., skipping rope, balls, Frisbee) rather than screen devices for child and adolescent entertainment.
- Encourage parents to be positive role models through participating in physical activity with their children.

Actions within the primary health care setting

In 2013 *Clinical Practice Guidelines for the Management of Overweight and Obesity for Adults, Adolescents and Children in Australia*[3] were developed for primary health care professionals to promote healthy eating plans, increased physical activity and behavioural modification as the first approach to managing obesity for individuals, bringing about a range of health benefits.

- Support primary care health providers to adopt the clinical practice guidelines.
- Provide pre-service training to primary health care providers including general practitioners, practice nurses, Aboriginal health workers and allied health professionals (e.g. dieticians, psychologists, exercise physiologists, diabetes educators, social workers, occupational therapists, physiotherapists, mental health nurses) on the assessment and measurement of overweight and obesity in children and adolescents.
- Health professional training on discussing weight with children, adolescents and parents.

Actions within the school setting

A range of government funded school-based initiatives have been developed to support schools deliver healthy eating and physical activity programs, with the focus to date on primary, rather than secondary schools. The data suggested that the main barrier to

promote physical activity in primary and secondary schools were competing demands on curriculum time.

Primary schools

The data shows that in four out of five primary schools generalist (i.e., classroom) teachers deliver physical education and sport; two in five urban primary schools have implemented the NSW Healthy School Canteen Strategy (*Fresh Tastes @ School).*

- Monitor the implementation of the new *Australian Curriculum: Health and Physical Activity* in schools
- Consider incorporating physical activity as a mandatory reporting outcome linked to NAPLAN
- Encourage Principals of government primary schools to employ specialist physical education teachers to deliver quality physical education and sport.
- Ensure the delivery of remedial motor skill programmes, especially in the early primary school years.
- Encourage Principals of urban government primary schools to implement the NSW Healthy School Canteen Strategy.
- Assist schools with healthy fund raising options and healthy eating in their School Plans.
- Encourage wider linkage between schools and the NSW Office of Preventive Health, which supports a range of healthy eating and physical activity programs in schools (e.g., Live Life Well @ School, Crunch & Sip®)

Secondary schools

The data shows that the main barrier to promote physical activity in secondary schools in addition to competing demands on curriculum time was lack of interest from students. Less than one third of secondary schools addressed healthy eating in the School Plan

- Monitor the implementation of the new *Australian Curriculum: Health and Physical Activity* in schools.
- Consider incorporating physical activity as a mandatory reporting outcome linked to NAPLAN
- Provide suitable outdoor recreation facilities and opportunities for adolescents to be physically active
- Encourage wider linkage between schools and the NSW Office of Preventive Health, which supports a range of healthy eating and physical activity programs in schools (e.g., Healthy School Canteen Strategy)

Government policy

There are a range of actions that governments can undertake to promote healthy lifestyle behaviours with the community that can benefit children and adolescents. These actions can include social marketing to improve health literacy and policies to leverage behavioural change at a population level.

Social marketing campaigns

One in two parents, children and adolescents knew the recommended daily limits on screen time; and one in three knew the daily physical activity recommendation. One third of children and adolescents did not meet the recommendation for tooth brushing and three in four children and adolescents met the sleep recommendation on school nights and two in three on non-school nights.

- Sustained social marketing programmes that promote evidenced based recommendations on daily physical activity participation and daily limits on screen time.
- Social marketing programmes that promote brushing teeth twice a day.
- Social marketing programmes that increase awareness on child and adolescent sleep recommendations.

Policies[2]

- Implement fiscal or other regulatory policies to reduce the consumption of unhealthy foods including sugar-sweetened beverages and energy-dense, nutrient-poor foods.
- Implementing restrictions on the marketing of unhealthy foods, including fast foods, sugar-sweetened beverages and energy-dense, nutrient-poor foods to children and adolescents.
- Eliminating the provision or sale of unhealthy foods including sugar-sweetened beverages and energy-dense, nutrient-poor foods in the schools and sporting venues.
- Restrict corporate food and beverage sponsorship of children's sport and at sporting venues.

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The following section tabulates the Australian evidence-base on relevant information related to children and adolescents weight related behaviours and potential policy responses.

Disclaimer

The following response was prepared or accomplished by Dr Louise L Hardy in her personal capacity. The opinions expressed in this document are the author's own and do not reflect the view of the NSW Ministry of Health or the University of Sydney.

Background

In the last decade there has been substantial investment in child obesity prevention in NSW in the early childhood sector and primary schools which may account for the stabilisation in overweight-obesity in primary school age children. Little investment/intervention has occurred in secondary schools, which may account for the significant increase in overweight-obesity in secondary school students.

Much of the investment in child obesity prevention has been within the early childhood sector and schools and been led by the NSW Ministry of Health. In 2012, NSW Health funded the NSW Office of Preventive Health to deliver state-wide preventive health programs, including the Healthy Children Initiative (http://www.preventivehealth.net.au/). Health promotion units in NSW Local Health Districts play a key role in the delivery of these interventions at scale across NSW.

SPANS data suggests that current government investments are producing beneficial outcomes in children age 5-12 years. Although it would appear the current portfolio of healthy lifestyle programs 'work', the sociodemographic differences in children and adolescents weight and weight related behaviours, shows that different delivery processes maybe required for certain population groups. That is, new programs are not required per se, rather supporting the current program implementation (to ensure fidelity), using the current monitoring information on programs to identify sub populations that required targeted and enhanced program delivery.

Additionally, there is a need to engage parents to drive healthy role modelling within the family and home rather than continually encumbering the school sector.

Summary of key NSW Health funded programs in the early childhood sector and schools.

These programs are administered by the Office of Preventive Health in partnership with NSW Department of Education, Office of Sport and the Heart Foundation. Each program has web-based resources available (http://www.healthykids.nsw.gov.au/default.aspx;

Current programs	Knowledge gaps/potential issues	Potential future directions
Munch and Move Promotes positive healthy eating & physical activity habits in young children age 0-5 years in NSW within the early childhood setting (including preschools, long day care and occasional care).	Program was last evaluated in 2008[1]; re-evaluation required. Information about dose-response. Training is currently a one-day workshop with supportive resources.	*Move to VET training.* Pre-service training in physical activity and diet for early childhood workers.
Live Life Well @ School A collaborative initiative between NSW Health, the NSW Department of Education, Catholic & Independent school sectors to promote healthy eating and physical activity to students and their families.	Information about dose-response. Training is currently a one-day workshop with supportive resources.	*Move to education sector +/- Australian Council for Health, Physical Education and Recreation (ACHPER)* Mandate primary schools to employ dedicated specialist PDHPE teachers to deliver quality PE/sports programs in schools.
Crunch&Sip® Is a set time in primary schools for students to 'refuel' on vegetables, salad and fruit and 'rehydrate' with water.	No known evaluation. Is this program additive or supplementary to children's dietary intake at school?	*Program evaluation*
Sporting Schools $100 million partnership program between the Australian Government, National Sporting Organisations and schools. Designed to help schools to increase children's participation in sport, and to connect children with community sport.	No known evaluation. Sporting schools replaces the Active After-School Community Program. The impact of this program was examined in 2010 SPANS and showed no difference between children who did attend and did not attend program.[2]	*Program evaluation* Mandate primary schools to employ dedicated specialist PDHPE teachers to deliver quality PE/sports programs in schools.

Physical activity (and associated domains)

Epidemiology

- 23% of primary school and 12% of adolescents in high school report spending 60 mins/day in moderate-to-vigorous intensity physical activity.[1]
- 63% of primary school and 59% of adolescents in high school are within the healthy cardio-respiratory fitness zone ('beep test')
- 37% of primary school and 35% of adolescents in high school are within the healthy muscular fitness zone (standing broad jump)
- 43.2% of children and adolescents travel to school by car; median trip time, 9.2 mins

SCHOOL SETTING		
Status quo	**Potential policy response**	**Important collaborators**
PE and sport are primarily delivered by generalist teachers in NSW primary schools who lack specialist training[3, 4]	Employ dedicated specialist PDHPE teachers	• Department of Education & Communities • Active Healthy Kids Australia[2] • Department of Sport & Recreation
Increasing physical activity within physical education lessons in high schools. Local data indicates that only 57% of high school PE lessons are spent in moderate-to-vigorous intensity physical activity[5].	Professional development for PDHPE teachers Adopting the Centers of Disease Control and Prevention (CDC) recommendation of 50% of class time in MVPA	
Two in five children/adolescents driven to school	Walking buses Increase frequency of the '*Walk to school day*'	Peak transport organisations, local bus services
COMMUNITY SETTING		
27% of parents of primary school children and 28% of adolescents know the physical activity recommendations.	Social marketing campaigns raising community awareness of the physical activity guideline. Social marketing campaigns must be sustained (years) and have high dose/exposure (regular/frequent)	Peak sporting bodies (could potentially contribute funding for social marketing initiatives)

[1] Current physical activity recommendations are that children age 5-18 years;

1. *Accumulate at least 60 minutes of moderate to vigorous intensity physical activity every day*
2. *Include a variety of aerobic activities, including some vigorous intensity activity*
3. *On at least three days per week, adolescents should engage in activities that strengthen muscle and bone*
4. *Engage in more activity – up to several hours per day to achieve additional health benefits*

[2] The primary goal of AHKA is to advocate for measures to increase the physical activity levels among Australian children, using the Physical Activity Report Card for Children and Young People as the core monitoring metric. The 2016 Report will be released in September 2016.

Sedentary behaviours & screen-time

Health concerns about *prolonged* sitting are based on research which shows sedentary behaviours are associated with increased risk of cardio-metabolic disease, all-cause mortality and a variety of physiological and psychological problems, independent of physical activity level.[6] Decreasing any time sitting is associated with lower health risk in children age 5-17 years. In particular, the research suggests that watching television for more than 2 hours a day is associated with reduced physical and psychosocial health, and that lowering time spent sitting among young people leads to reductions in body mass index.[7]

Screen time refers to leisure time spent watching television, DVDs, videos, using computers (for fun), playing computer or video games (e.g., Wii, PlayStation, Xbox, Nintendo) and, more recently, playing on smartphones or tablet devices. *The current guidelines recommend that children age 5-18 years) limit use of electronic media for entertainment to no more than two hours a day – and lower levels are associated with reduced health risks*.[8, 9]

Epidemiology

- 62% of primary school and 36% of adolescents in high school meet the screen time recommendation on school days
- 21% of primary school and 17% of adolescents in high school meet the screen time recommendation on weekend days
- 37% of primary school and 31% of adolescents in high school have a television in the bedroom
- 13% of parents of primary school children and 28% of adolescents know the screen time recommendations

HOME SETTING		
Status quo	**Potential policy response**	**Important collaborators**
High screen time; evidence that parents screen time influences their child's, hence *family* screen time needs to be targeted.	Social marketing programs promoting screen hygiene (ie appropriate use of screen devices – eg limit during daylight hours, no screen time during meal time; remove screen devices from bedrooms; turn screens off if not in use.	
Children with a television in their bedroom are at greater risk of developing overweight and obesity,[10] have lower academic performance,[11] reduced sleep quality[12] and insufficient sleep.[13]	Social marketing campaigns raising community awareness of the screen time guideline. Social marketing campaigns must be sustained (years) and have high dose/exposure (regular/frequent)	
COMMUNITY SETTING		
13% of parents of primary school children and 28% of adolescents know the screen time recommendations.	Social marketing campaigns raising community awareness of the screen time guideline. Social marketing campaigns must be sustained (years) and have high dose/exposure (regular/frequent)	

Dietary habits and patterns

Unhealthy diets are a major risk factor for non-communicable diseases[14] and many Australian children have sub-optimal diet which is driven by obesogenic food environments that affect food promotion, availability, accessibility and affordability. [15]

National nutrition surveys indicate that Australian adolescents consume high volumes of sugary foods and beverages, and that the consumption of these foods exceeds dietary recommendations for adolescents.[16] At a population level, daily intakes of free sugars are highest among adolescents (age 14-18 years) consuming 88g, representing approximately 15% of their energy is coming from free sugars; more than three quarters adolescents exceed the <10% WHO recommendation.[16] Major food sources of added sugars in Australian adolescents' diets are soft drinks, cakes, confectionery, ice cream, which are high-calorie but low micronutrient foods. [17, 18]

Epidemiology

- 79% of children and adolescents met the recommended daily intake of fruit (i.e., 2 serves/day)[19]
- 7% of children and adolescents met the recommended daily intake of vegetables (i.e., 5 serves/day) [19]
- 48% of children and adolescents ate processed snack food products three or more times/week
- 9% of children and adolescents drank one or more cups of soft drink daily
- 76% of children and adolescents ate breakfast daily
- 23% of children and adolescents ate takeaway meals or snacks from fast food outlets ≥1 time/week
- 12% of children and adolescents ate dinner in front of the TV ≥5 days/week

SCHOOL SETTING		
Status quo	**Potential policy response**	**Important collaborators**
In 2006, Dept Education mandated 2 food policies *Fresh Tastes NSW Healthy School Canteen Strategy and a b*an on selling of sugar-sweetened beverages. Evidence on implementation of these policies is equivocal (especially in high schools).	Reduce policy implementation failure Ban the use of energy-dense, nutrient-poor food products for school fundraising.	*Healthy Kids Association* Peak organisation for school canteens in NSW and ACT (http://healthy-kids.com.au/)
HOME SETTING		
Parents are the main influence on children's diets, so any dietary intervention must include parents.[20] Provision of a healthy breakfast every day[21-24]	Social marketing campaigns raising parent's awareness of health risks associated with (i) highly processed food products (rather than keeping focus on the benefits of fruit and vegetables (ii) daily breakfast (iii) sitting at a table to eat family meals (not in front of the television).	Food industry – strategies to promote *daily breakfast* during breakfast cereal advertising

	Social marketing campaigns must be sustained (years) and have high dose/exposure (regular/frequent)	
LEGISLATION, REGULATION		
General confusion regarding composition of a healthy diet'. The food industry's initiatives to reduce obesity have centred around the establishment of voluntary marketing codes and product reformulation	Strengthening of accountability mechanisms that will create healthy food policies and environments. Government-led policies and regulations, such as restrictions on unhealthy-food marketing to children, interpretive front-of-pack labelling, healthy food policies in schools and the public sector, and taxes on unhealthy products, such as sugar-sweetened beverages, are needed.[14]	INFORMAS (International Network for Food and Obesity/NCDs Research, Monitoring, and Action Support)[15]

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