

2<sup>nd</sup> July 2018

Committee Secretary  
Department of the Senate  
PO Box 6100  
Parliament House  
Canberra ACT 2600  
[obesitycommittee.sen@aph.gov.au](mailto:obesitycommittee.sen@aph.gov.au)

Dear Committee Secretary,

**Submission to the Select Committee into the Obesity Epidemic in Australia**

**The Problem:**

We write to emphasise the critical need to focus on obesity prevention in women preconception and during pregnancy to prevent maternal *and* childhood obesity because the two go hand in hand. Pre-pregnancy maternal body mass index (BMI) and excessive gestational weight gain in pregnancy are unequivocally shown to be significant contributors of childhood obesity. The interactions here are multifactorial, ranging from biological mechanisms of maternal obesity on the egg and embryo during development and of epigenetic programming in the womb. This is supported by long term population studies and underpins the undeniable intergenerational impact of maternal obesity of childhood obesity; and extends to encompass the social determinants of disease and of obesity which also have intergenerational effects.

We know that:

- Two-thirds of Australian adults are overweight or obese with reproductive aged women leading this trend, gaining more weight yearly than older women and progressing more rapidly to obesity than men;
- Over half of Australian women enter pregnancy overweight or obese;
- Preconception higher BMI independently increases pregnancy risks including birth weight and large-for-gestational-age infants;
- Intergenerational epigenetic risks are alarming, with maternal weight at conception a key determinant of childhood obesity and those born to obese mothers having twice the obesity rate, higher insulin resistance and metabolic syndrome - maternal weight at conception is the primary determinant of childhood BMI at the age of 8;
- In pregnancy, excess gestational weight gain (GWG) above US Institute of Medicine (IOM) recommendations occurs in the majority of pregnancies in Australia and in developed countries internationally, with every kilogram above IOM recommendations increasing adverse maternal and foetal outcomes by ~10%;
- Excessive GWG also increases subsequent childhood and maternal obesity 3 fold, independent of maternal pre-pregnancy BMI;
- Vulnerable women are most affected with ~57% of Indigenous (Aboriginal and Torres Strait Islander) women overweight or obese at conception and with culturally and linguistically diverse (CALD) women also experiencing high rates of excessive GWG.

### Our Vision:

For more than 10 years, our research has been focused on creating, capturing, and delivering health promotion, lifestyle improvement, and obesity prevention strategically targeting women preconception and during pregnancy to address the social, developmental and economic burden of maternal obesity and childhood obesity. We aim to support all women, children and families to live long, healthy lives.

### The Solution – The Health in Preconception, Pregnancy, and Postbirth (HiPPP) Centre of Research Excellence:

Thousands of women have gone through pregnancy lifestyle randomized controlled trials (RCTs) on our intervention and 35,000 have completed RCTs in lifestyle interventions at this life stage. No more RCTs are needed. Clear health promotion preconception and pregnancy priorities (maintain a healthy lifestyle, diet and physical activity, and weight, reduce smoking/alcohol, take folate) await implementation, given the intergenerational health effects of adverse lifestyle at conception, specifically increased risk of childhood obesity.

Similarly, effective low-intensity and low-cost lifestyle interventions in pregnancy that promote healthy lifestyle and reduce excess gestational weight gain, are now needing implementation at scale. We have developed and tested these effective interventions and are world leaders in this area of research.

***Our HiPPP program of research and translation addresses how to meaningfully implement multifaceted obesity prevention strategies at pace and scale, to deliver tangible public health impact.***

This program of research was generated from our HiPPP Collaborative, formed in 2013. HiPPP is a national/international network with the primary aim of improving lifestyle improving health and preventing maternal obesity, underpinned by partnership, research, capacity building and knowledge translation. Multidisciplinary expertise includes stakeholders across community, government, private and public health services, workplaces, primary care, end-users and international collaborators.

HiPPP involves three interrelated themes: (1) Preconception Health; (2) Pregnancy Health; (3) Upskilling of Health Professionals to support, enable and optimize healthy lifestyle.

### The Policy Context:

The World Health Organisation, Institute of Medicine, Australian Medical Association (Obesity-2016-AMA-Position-Statement), and the NHMRC Obesity Translation Committee (Case for Action authored by our research team) have unanimously called for targeted efforts to improve lifestyle preconception and during pregnancy to prevent obesity and improve health. Our work has influenced current maternity guidelines calling for greater action in these areas.

### Who we are:

We are a multidisciplinary team with expertise in psychology/behaviour change, endocrinology, obstetrics, dietetics, exercise physiology, public health, maternal health, systems thinking, healthcare improvement, implementation science.

### Where are we based and our national networks:

The Monash Centre for Health Research and Implementation (MCHRI) is a key partnership between Monash Health and Monash University, forming a unique collaborative centre focused on directly delivering improved health outcomes through prevention. MCHRI aims to create, synthesise, implement and translate clinical, health services and public health knowledge to prevent and reduce the rate of chronic disease (with a particular focus on maternal and childhood obesity) and to reduce inequalities in health and wellbeing. We apply population and place-based approaches to our work to solve the wicked and complex health and health care problems we face. Our national network is supported by a substantive Medical Research Future Fund HIPPP initiative to reduce maternal and hence childhood obesity, an NHMRC Centre for research excellence focused on women's health and obesity related complications, significant funded efforts with Australia's Indigenous community and international activities including leadership of the international HIPPP initiative in preconception and pregnancy healthy lifestyles.

**Our MCHRI expert team includes:**

**Professor Helena Teede**

Endocrinologist and clinical, health services and public health researcher

**Professor Helen Skouteris**

Developmental psychologist, healthcare improvement & implementation science researcher

**A/Professor Jacqueline Boyle**

Obstetrician and gynaecologist who works in/researches Indigenous women's health

**A/Professor Lisa Moran**

Dietetics and public health researcher

**Dr Cheryce Harrison**

Early career researcher (ECR), expertise in exercise physiology, obesity prevention and reproductive women's lifestyle health

**Dr Briony Hill**

ECR, expertise in exercise physiology, health behaviour change and reproductive women's lifestyle health

**Dr Siew Lim**

ECR, expertise in dietetics and reproductive women's lifestyle health

**Dr Melanie Gibson**

ECR, expertise in public health and reproductive women's lifestyle health

**Dr Cate Bailey**

ECR, expertise in health economics

**Dr Tracy Robinson**

Middle career researcher, expertise in implementation science

**Our National collaborators include:**

**Professor Robert Norman**

Reproductive endocrinologist and obstetrician gynaecologist and is an international Doyen of reproductive health and a leader and advocate for preconception health. He is emeritus and founding Director of the Robinson Institute, Adelaide

**Professor Alison Venn**

Professor of epidemiology and the Director of the Menzies Institute of Medical Research, Hobart

**Professor Andrew Hills**

Professor of Sports and Exercise Science School of Health Sciences, University of Tasmania

**Professor Louise Baur**

Professor of Child and Adolescent Health at the University of Sydney, and has a conjoint appointment as Professor in the Sydney University School of Public Health

**Professor Leonie Callaway**

Deputy Head of School, Medicine and Head, Northern Academic Cluster, The University of Queensland, and Senior Specialist in Obstetric and Internal Medicine at the Royal Brisbane and Women's Hospital

**Professor Cate Nagle**

Co-joint appointment at James Cook University (JCU) and the Townsville Hospital and Health Service (THHS) and is the Director of the Centre of Nursing and Midwifery Research, JCU

**Professor Sandra Eades**

Domain Head of Aboriginal Health, Baker Heart and Diabetes Institute

**Associate Professor Louise Maple-Brown**

Endocrinologist in the Menzies School of Health Research, Darwin

**Professor Danielle Mazza**

Academic general practitioner and Chair of General Practice at Monash University

**Professor Caryl Nowson**

Chair in Nutrition and Ageing in the Institute for Physical Activity and Nutrition Research, Deakin University

**Professor Andrew Wilson**

Director of the Australian Prevention Partnership Centre

**Next steps:**

We urge the commission to recognize the impact of maternal lifestyle, obesity and the role of targeting these in prevention of childhood obesity. The approaches we are now delivering and scaling across Australia and Asia are feasible, low cost and effective. We urge you to recommend that this action to prevent maternal obesity, from a systems perspective, is taken as a priority so that mothers and their children can live productive and healthy lives. It is vital we support women to enter pregnancy with a healthy BMI and to prevent excessive gestational weight gain in order to reduce the prevalence of childhood obesity.

Yours faithfully,

Professors Helena Teede and Helen Skouteris

*On behalf of all the named clinicians and researcher leaders named here and our national and international collaborators*

**Attachments:**

NHMRC Case for Action on the single area within obesity where the most evidence is available on impacting the obesity epidemic

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Director Monash Centre for Health Research and Implementation - MCHRI  
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