

Centre of Research Excellence in Health in Preconception and Pregnancy Summary of New Knowledge Activities

A key outcome of CRE HiPP is to generate new knowledge that will lead to improved health outcomes. With a focus on a systems approach to health promotion, targeting women, population wide, where they live and work, we will focus on the following new knowledge activities:

- Preconception lifestyle health
- Pregnancy lifestyle health
- Cultural adaptations

Stream 1: Preconception Lifestyle Health

The goal of the Preconception Lifestyle Health Stream is to adapt, co-design and test preconception lifestyle interventions reaching reproductive aged women where they live and work.

Whilst it is a global health priority to identify, target, and engage preconception women in healthy lifestyle interventions, there is limited evidence on the preconception health knowledge, behaviours and needs of reproductive-aged women in Australia, and there is a paucity of effective interventions in the preconception period that are targeted at maternal obesity prevention. No country has implemented systems evidence-based strategies targeting the preconception life stage to prevent maternal obesity.

Across the Knowledge to Action cycle, CRE HiPP will:

- Profile preconception women to understand their lifestyle attitudes, behaviours and needs;
- Synthesise existing literature, guidelines and policies to inform preconception lifestyle health promotion programs;
- Adapt and test an international preconception care intervention, “Gabby”, to include lifestyle intervention and adaptation to an Australian context; and
- Evaluate the efficacy of a workplace lifestyle health promotion program targeting women preconception.

We define preconception as the months or years needed to address preconception risk factors, e.g., diet and obesity, before pregnancy; which includes the time before conception and the time between pregnancies.

Cultural adaptations for preconception lifestyle health is an important cross-cutting theme for Stream 1 and will include design and testing models of preconception lifestyle health care for Aboriginal and Torres Strait Islander and CALD women.



Stream 2: Pregnancy Lifestyle Health

The goal of the Pregnancy Lifestyle Health Stream is to generate new knowledge of (1) which components should be implemented based on taxonomy and health economic analysis and (2) how to implement an adapted healthy lifestyle intervention (HeLP-her) into antenatal settings to inform national scale-up; and (3) to evaluate lifestyle intervention integration into antenatal care.

Evidence supports simple lifestyle interventions to prevent excessive gestational weight gain, assist obesity prevention, and reduce maternal pregnancy complications. With nominal impact on birth weight, they cause no harm to the neonate. However, evidence on lifestyle interventions in pregnancy is not being translated into practice, with implementation research now vital to enable translation and scale-up. In CRE HiPP we will engage stakeholders, synthesise evidence, and integrate guidelines on healthy lifestyle interventions in pregnancy.

Across the knowledge to action cycle, CRE HiPP will:

- Map current antenatal healthy lifestyle practice and alignment with current guidelines and capture implementation enablers and barriers
- Synthesise existing literature, guidelines and policies for pregnancy lifestyle health promotion, including secondary research on individual patient data meta-analysis of now >25,000 women from healthy lifestyle RCTs (iWIP) including: key framework analyses of synthesised evidence to inform on core elements and delivery methods, and health economic analysis on synthesised data;
- Co-design/adapt an efficacious antenatal lifestyle program based on formative work, evidence synthesis and cost effectiveness data, for pragmatic implementation;
- Implement the refined antenatal program into routine care at Monash Health Victoria and Royal Hobart Tasmania with evaluation through routinely collected maternity data; and
- Share implementation findings to inform future scale across CRE HiPP affiliated services nationally.

Cultural adaptations for pregnancy lifestyle health will focus on engaging CALD women around adaptations and needs for the refined antenatal lifestyle program.

Cross-cutting research theme: Cultural Adaptations

The goal of the Cultural Adaptations cross-cutting theme is to design and test models of preconception and pregnancy lifestyle health care for Aboriginal and Torres Strait Islander and CALD women.

Knowledge to Action Framework

These New Knowledge activities are underpinned by the Knowledge to Action Framework for impact, which involves the following activities:

1. **Formative research:** by engaging stakeholders on practices, programs and policies, creating evidence on how to maximise reach, effectiveness and sustainability of interventions for 'real world' scale-up.
2. **Evidence Synthesis:** of relevant evidence and guidelines into accessible resources.



3. **Co-Design Efficacy Research:** by co-designing and/or adapting pragmatic interventions for implementation and scale-up.
4. **Implementation Research:** to establish effectiveness via the Consolidated Framework for Implementation Research, leveraging success factors for effective Implementation.
5. **Dissemination, Translation and Scale-Up:** with stakeholders into practice and policy.
6. **Evaluation:** of outcomes via frameworks including process, impact and summative, and RE-AIM (Reach, Effectiveness, Adoption, Implementation and Maintenance) evaluations of health and economic outcomes to drive sustainability and scale-up.

