SHORT COMMUNICATION:

Maternal obesity prevention: The Health in Preconception, Pregnancy and Postpartum Early- and Mid-career Researcher Collective

Running Title: Collective action for maternal obesity prevention

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This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/AJO.13316

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Acknowledgements
We would like to acknowledge the contribution of the HiPPP EMCR Collective members who are not listed as co-authors on this publication: Professor Andrew Hills, School of Health Sciences, College of Health and Medicine, University of Tasmania; Dr Erin Hoare, Food and Mood Centre, IMPACT, School of Medicine, Deakin University; Professor Helena Teede, Monash Centre for Health Research and Implementation, Monash University and Monash Partners; Associate Professor Jacqueline Boyle, Monash Centre for Health Research and Implementation, Monash University; Dr Katrina Moss, Centre for Longitudinal and Life Course Research, School of Public Health, University of Queensland; Dr Lisa Vincze, School of Allied Health Sciences and Menzies Health Institute Queensland, Griffith University, Dr Melanie Hayman, Physical Activity Research Group, Appleton Institute, CQUniversity; Dr Melinda Hutchesson, School of Health Sciences, Faculty of Health and Medicine, and Priority Research Centre for Physical Activity and Nutrition, University of Newcastle; Dr Rachael Taylor, School of Health Sciences, Faculty of Health and Medicine, Priority Research Centre for Physical Activity and Nutrition, University of Newcastle; Dr Shamil Cooray, Monash Centre for Health Research and Implementation, Monash University and Diabetes Unit, Monash Health; Dr Susan De Jersey, Department of Nutrition and Dietetics, Royal Brisbane and Women’s Hospital, Metro North Hospital and Health Service and Centre for Clinical Research and Perinatal Research Centre, University of Queensland; Dr. Wai-Kwan Chislett, The George Institute for Global Health.

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Funding for this research was provided from the Australian Government’s Medical Research Future Fund (MRFF; TABP-18-0001). The MRFF provides funding to support health and medical research and innovation, with the objective of improving the health and well-being of Australians. MRFF funding has been provided to The Australian Prevention Partnership Centre under the MRFF Boosting Preventive Health Research Program. Further information on the MRFF is available at www.health.gov.au/mrff. B.H. and S.L. were supported by National Health and Medical Research Council fellowships. V.S. was supported by funding from the Rainbow Foundation and Hunter Medical Research Institute. C.B. was supported by the above MRFF grant. J.L.H. was supported by the Prevention Research Support Program, funded by the New South Wales Ministry of Health. M.K. was supported by funding from the Royal Hobart Hospital Research Foundation. L.J.M. was supported by a National Heart Foundation Future Leader Fellowship.

Conflicts of Interest Statement
The authors declare no conflict of interest.

MeSH Keywords: Obesity; maternal; capacity building; preconception care; pregnancy; postpartum period

Manuscript word count: 1743

Abstract word count: 103

Figure count: 0

Table count: 1

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Abstract

There is a clear impetus for researchers to facilitate cross-sector and interdisciplinary collaboration to achieve collective action for maternal obesity prevention. Building early- and mid-career researchers’ capacity to sustainably develop collective action into the future is key. Hence, the national Health in Preconception, Pregnancy, and Postpartum Early and Mid-career Researcher Collective (HiPPP EMR-C) was formed. Here, we describe the purpose, key goals, and future directions of the HiPPP EMR-C. Guided by the Simplified Framework for Understanding Collective Action, we aim to build our capacity as researchers, form policy stakeholder relationships, and focus on generating impact to optimise maternal and child health and wellbeing.
The reproductive years are a key period of weight gain in women. Preconception overweight/obesity (50% of women) and excess gestational weight gain (>40% of pregnancies), can lead to increased risk of adverse maternal and infant short- and long-term outcomes, including gestational diabetes, caesarean section, macrosomia, postpartum weight retention, developmental and cognitive concerns for offspring, and maternal and offspring obesity. Consequently, the preconception, pregnancy, and postpartum periods are recognised nationally and internationally as key opportunities for preventing maternal obesity. Highlighting an imperative for action, the 2019 Australian National Obesity Summit reiterated “the importance of the first 2000 days” for health promotion and obesity prevention across these life phases. The Summit emphasised the substantial impact of unhealthy lifestyles and obesity on women’s health and the next generation. This call to action underscores the urgent need to maximise prevention opportunities and break down silos to support cross-sector and interdisciplinary collaboration. Consequently, there is a clear impetus for researchers in the field of maternal obesity prevention to work towards “collective action”, that is, acting on a problem in unified ways.

Research capacity building is a strategic priority of the World Health Organization and National Health and Medical Research Council to support health research and translation. Early and mid-career researchers (EMCRs) are encouraged to take leadership in collective action to contribute to their career development. Among many factors considered essential to successful leadership development in both academic and healthcare sectors are availability of mentoring, developing networks and collaborations, and demonstrating impact such as translating evidence into practice and policy changes. While there are many early career networks, often linked to national or international societies, there was an absence of formalised, connected, EMCR capacity building opportunities linked directly to maternal obesity prevention. There is also a clear growing body of EMCRs that would both readily contribute to and benefit from such a network. Furthermore, given that today’s EMCRs are tomorrow’s research leaders, EMCRs have the ability and time to build quality, long-term, sustainable stakeholder partnerships in order to achieve collective action moving forward.

The Simplified Framework for Understanding Collective Action can be used to focus activities towards achieving collective action. Drawn from social science literature, it posits three key interrelated social factors are required to achieve collective action: [1] collaborative capacity; [2] mutual trust; and [3] problem framing. These can be achieved through working together through identifying and engaging with stakeholders and taking the time to establish
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quality relationships. The pillars of these key factors are a focus on developing long-term committed partnerships to forge a collective identity; developing shared goals and a guiding vision that will facilitate achieving successful outcomes; and using a common language to frame the problem and build credibility and trust among stakeholders.\textsuperscript{13}

To meet the dual needs of collective action in maternal obesity prevention and capacity building in EMCRs, the national Health in Preconception, Pregnancy, and Postpartum Early- and Mid-career Researcher Collective (HiPPP EMR-C) was created in 2019. The HiPPP EMR-C fills a gap that is not met by other key collective action groups such as the Obesity Collective by simultaneously focusing on both HiPPP EMCR capacity building needs and the unique circumstances faced by women across the reproductive life phase – associated with fertility and conception, pregnancy (including gestational weight gain), postpartum life changes, and the transition to parenthood, including a significant disruption to lifestyle and behavioural aspects linked to weight.\textsuperscript{18-21} The aim of this short communication is to describe the establishment of the HiPPP EMR-C and outline our purpose, goals, and future directions.

Establishing the HiPPP EMR-C

HiPPP EMR-C membership currently includes PhD candidates, early-career (<5 years post-doctoral) and mid-career (5-15 years post-doctoral) researchers, and senior researchers, clinicians or policy makers (initially Australian-based) who are committed to providing mentorship, in the field of maternal obesity prevention. Potential EMCRs were identified through the extended networks of members of the HiPPP Global Alliance (an international group of mainly senior researchers, clinicians, and consumers, who work cooperatively towards optimising preconception, pregnancy, and postpartum healthy lifestyle) and their colleagues. We invited potential members from all states and territories except the ACT (connection not identified). Potential members were invited to join the HiPPP EMR-C and attend an inaugural meeting held in October 2019. This meeting focused on the following two activities in line with the guiding framework\textsuperscript{13}: [1] group discussion to identify our purpose; and [2] a consensus development exercise to identify our key goals. The meeting was facilitated by an EMCR (BH) with experience in consensus development activities.

Twelve EMCRs and five mentors attended the meeting (12 in person; 5 as a satellite group via Zoom Video Communications 2019, version 4.1.34801.1116); all are co-authors on this paper. The HiPPP EMR-C includes researchers who identify with different genders (male n = 2) and cultural backgrounds including Indigenous Australians (culturally and linguistically diverse n = 4, Aboriginal n = 1). Initial geographical representation covers...
metropolitan and regional Australia. Our expertise ranges across preconception, pregnancy, postpartum, early childhood, dietetics, obesity, exercise science, psychology, medicine, discovery research, epidemiology, co-design, consumer and community involvement (CCI), policy, health economics, and implementation and translation.

**HiPPP EMR-C Purpose**

Meeting attendees formulated ideas for the HiPPP EMR-C’s purpose via small and large group discussion, guided by four questions: [1] What is our strategic vision [2] What is our core purpose? [3] What are we trying to achieve? [4] How are we going to go about it? Ideas were drawn together to create the following statement:

“The HiPPP EMR-C is focused on improving maternal obesity and related outcomes through research that recognises both maternal and paternal wellbeing and impact on offspring outcomes. Our purpose is to create opportunities for EMCRs to build capacity, form collaborations, transcend discipline and sector-based silos, and generate impact across research, policy, and practice in the HiPPP field.”

The key themes of the HiPPP EMR-C’s purpose were therefore identified as progressing maternal obesity research while simultaneously building track record capacity, forming collaborations to break down silos, and generating research impact. Members identified these as both personal and group goals. Hence, the HiPPP EMR-C has a specific focus on capacity building that differentiates it from the HiPPP Global Alliance.22, 23

**HiPPP EMR-C Goals**

To identify the HiPPP EMR-C’s goals, we conducted a consensus development activity, guided by the Nominal Group Technique and Modified Delphi approach (inputs, ranking, and consolidation of ideas).24 Meeting attendees viewed short (10-minute) presentations on the following topics mapped against the guiding framework’s13 three key factors for attaining collective action: [1] HiPPP Global Alliance goals and their identified preconception and pregnancy research priorities22, 23 (problem framing); [2] CCI in the HiPPP field (mutual trust); and [3] knowledge mobilisation and translating research to practice and policy from researcher and policy perspectives (collaborative capacity). The key messages from each of the presentations are summarised in Table 1.

Next, using a Google Form, attendees individually ranked the potential goals from 1 (highest priority) to 10 (lowest priority). The responses were collated (by CB) and each goal’s mean score and ranking was presented to the group (Table 1). In small groups, members identified the top goals that could be achieved by the HiPPP EMR-C in the short-
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and medium-term which consequently led to some consolidation/amalgamation of the potential goals. Finally, a facilitated whole group discussion (led by BH) brought together all top goals identified by the small groups and the following two key priority areas for the HiPPP EMR-C were identified and agreed on by all attendees: [1] building stakeholder relationships and [2] generating impact. An underpinning theme of the discussions was how to build EMCR capacity via upskilling, knowledge building, networking, and identifying and generating funding opportunities while working towards the prioritised goals.

**Building stakeholder relationships**

The HiPPP EMR-C members prioritised building stakeholder relationships for collective action and impact, in line with our core purpose. Specifically, we aim to build relationships, partnerships, and collaborations with stakeholders, including people with lived experience, policy makers, healthcare professionals, and government and non-government organisations. Relationship building will include the concepts of CCI, co-design, and cultural appropriateness. Given relationship building takes time and long-term commitment, it is important to begin this process now, as the next generation of researchers, to develop our skills and establish relationships in this area so that opportunities for policy change can be capitalised on as they arise. Identifying and leveraging opportunities for mentors to support EMCRs is also a key focus of this goal.

**Generating impact**

The HiPPP EMR-C viewed generating impact via implementation research and knowledge mobilisation as a key challenge for maternal obesity prevention. There are several HiPPP EMR-C members who have this expertise, including senior mentors. The group saw opportunities to link with these members to identify gaps, and build projects, mutually beneficial collaborations, and connections with existing research teams in order to progress implementation research and drive evidence translation.

**Future Directions**

The HiPPP EMR-C, whilst continually building our capacity as EMCRs, are currently working on activities that align with the underpinning factors of the Simplified Framework for Understanding Collective Action by establishing the groundwork for partnerships, trust, and common goals. This will take time, which is why EMCRs are well placed for this challenge. Firstly, we will develop our collaborative capacity within our group through forming and consolidating partnerships within the HiPPP EMR-C. Secondly, we will develop our collaborative capacity with external stakeholders. Together, these activities will build the infrastructure needed to generate impact in the field of maternal obesity prevention. Over the
last 12 months, we have planned and begun the following activities: [1] provided networking and capacity building opportunities to members at our meetings; [2] begun to grow our membership by capitalising on the extended networks of members; [3] mapped our expertise and generated a recruitment strategy to continue to expand our network in expertise, diversity, and geographical representation; [4] planned the creation of a website and social media accounts; [5] planned a national survey to understand stakeholder needs; and [6] planned a virtual conference.

**Conclusion**

The HiPPP EMR-C, as the future generation of researchers working across the preconception, pregnancy, and postpartum periods, has been founded by a national group of EMCRs and mentors who have united to generate collective action towards the prevention of maternal obesity. We have defined our purpose, and developed and prioritised our goals, to build our capacity as researchers, form stakeholder relationships, and focus on generating impact. We welcome new members, including expanding our diversity, and have a goal to broaden internationally. Membership enquiries can be directed to the corresponding author.
Table 1. The HiPPP EMCR Collective potential goals, ranked to identify priority areas

<table>
<thead>
<tr>
<th>Proposed goals</th>
<th>Mean score</th>
<th>Overall rank†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing connections/relationships/partnerships with policy figures</td>
<td>2.7</td>
<td>1</td>
</tr>
<tr>
<td>Using consumer and community involvement principles</td>
<td>3.8</td>
<td>2</td>
</tr>
<tr>
<td>Conducting implementation research</td>
<td>3.8</td>
<td>2</td>
</tr>
<tr>
<td>Achieving HiPPP Global Alliance preconception priorities</td>
<td>3.8</td>
<td>2</td>
</tr>
<tr>
<td>Knowledge mobilisation</td>
<td>4.3</td>
<td>5</td>
</tr>
<tr>
<td>Using co-design principles</td>
<td>4.6</td>
<td>6</td>
</tr>
<tr>
<td>Achieving HiPPP Global Alliance pregnancy priorities</td>
<td>5.2</td>
<td>7</td>
</tr>
<tr>
<td>Evidence synthesis</td>
<td>5.3</td>
<td>8</td>
</tr>
<tr>
<td>Focusing on communications for the HiPPP EMR-C</td>
<td>5.9</td>
<td>9</td>
</tr>
<tr>
<td>Conducting primary studies</td>
<td>7.4</td>
<td>10</td>
</tr>
</tbody>
</table>

†1 = top priority
References


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Title:
Maternal obesity prevention: The Health in Preconception, Pregnancy, and Postpartum Early- and Mid-Career Researcher Collective

Date:
2021-02-03

Citation:

Persistent Link:
http://hdl.handle.net/11343/298197