How to meaningfully engage stakeholders in behavioural intervention research: Focusing on impact

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Overview

• Research: Flipping the paradigm to impact
• Understanding the problem from all perspectives
• Partnership and empowerment moving to solutions
• Knowledge to action framework
• Application principles to behavioural intervention work
  • Healthy lifestyle in pregnancy
Unidirectional translational research

Figure 3: Health and medical research pathway from bench-to-bedside to practice
Adapted from Meslin et al. 2013 and Westall, Mold & Fagnan 2007.
Implementation and impact
Unidirectional translational research

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Silo’s and research
Systems level barriers

System design and metrics
Dysfunctional system

1 – Hospitals
   Episodes of care, waiting times, patient flow, quality metrics

2 – University
   Student enrolments, higher degree completions

3 – Research Entities
   Bibliometrics, grants, investor-led paradigm

4 – Primary Care
   Private businesses
FLIPPING THE PARADIGM
Community as stakeholders

The community are the funders and beneficiaries of research

The community are the funders and beneficiaries of healthcare and public health innovation

The community have a fundamental role to ensure research, healthcare and public health initiatives meet their priorities and needs
Monash Centre for Health Research and Implementation

**OUR STRATEGIC PRIORITIES AND GOALS**

**Research Theme: Women’s and Children’s Health**
- Consumer and community involvement
- Collaboration, partnership, stakeholder engagement
- Health equity and intersectionality

**Research Theme: Data driven healthcare improvement**
- Implementation methodology and evaluation
- Data harmonisation and management
- Building a multidisciplinary healthcare embedded workforce, in research and translation

**Research Theme: Healthcare improvement and implementation, research, Monash Warwick Alliance**
- Clinical research methodology and facilitation
- Measurement methodology, statistics and epidemiology
- Leadership and academic career development for women and groups at risk of disadvantage
- Research Theme: Diabetes and Chronic disease Healthy Lifestyle and Obesity Prevention

Our Vision is to create, synthesise, implement and translate clinical, health care and public health knowledge, underpinned by cross sector end user engagement, to deliver health impact.
Knowledge to Action framework

- Stakeholder engagement, partnership, formative research, framing problem, identifying gaps, priorities, needs
- Evidence/Knowledge synthesis
- Co-developed efficacy research & new knowledge generation
- Implementation research to determine broader effectiveness
- Evaluation of health and economic outcomes
- Knowledge dissemination, translation and scale-up

Harrison, C 2016, Midwifery
Managing Complex Change

- Vision + Skills + Incentives + Resources + Action Plan = Change
- Vision + Skills + Incentives + Resources + Action Plan = Confusion
- Vision + Skills + Incentives + Resources + Action Plan = Anxiety
- Vision + Skills + Incentives + Resources + Action Plan = Resistance
- Vision + Skills + Incentives + Resources + Action Plan = Frustration
- Vision + Skills + Incentives + Resources + Action Plan = False Starts

Knowledge to Action framework

- **What scales and impacts**
- **What matters**
- **What implements**
- **What works**

**Stakeholder engagement, partnership, formative research, framing problem, identifying gaps, priorities, needs**

**Evidence/Knowledge synthesis**

**Evaluation of health and economic outcomes**

**Co-developed efficacy research & new knowledge generation**

**Knowledge dissemination, translation and scale-up**

**Implementation research to determine broader effectiveness**

Harrison, C 2016, Midwifery, Robinson, T Seminars 2018
Lifestyle Preconception, Pregnancy Postpartum

HiPPP

- Obesity and diabetes
- Increased weight retention
- Epigenetic impacts
- Risk of complications
- Excess weight gain
- Increased weight gain (~50%)
Knowledge to Action framework

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Strategic approach, national and international networks
Consumer and community framework
Stakeholder mapping, targeted diversity, range settings,
Policy, organisation and individual levels
Developed single vision, clear priorities / problems
Healthy Lifestyle HiPPP program

Create, capture, and deliver healthy lifestyle and obesity prevention strategically targeting women around pregnancy, and underserved populations to improve the health of women and the next generation.

Systems level and implementation approaches, stakeholder led, to generate and implement new knowledge to deliver on this vision

Global HiPPP Alliance, National Centre for Research Excellence, linked to iWHP and PONI, Community and consumer framework,
**Healthy Lifestyle HiPPP program**

Stakeholder Engagement:
Effective network principles; Brown field collaborations
Governance, Processes
Transparency, Trust, Values, Respect
Representativeness, diversity, equity
Training and capacity building
Individual, organisational, policy level

Strategies to engage and coproduce – project management, resources, roles/PDs, recognition of expert status, training, buddy systems, Delphi, nominal group technique and think out loud, qualitative research
Healthy Lifestyle HiPPP program

Collaboratively develop a deep understanding of the problem from all perspectives and develop a collective vision
Knowledge to Action framework

Stage 1
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Stage 2
Evidence/Knowledge synthesis

Stage 3
Co-developed efficacy research & new knowledge generation

Stage 4
Implementation research to determine broader effectiveness

Stage 5
Knowledge dissemination, translation and scale-up

Stage 6
Evaluation of health and economic outcomes

Systematic reviews on prevalence and impact of gestational weight gain, lifestyle RCT’s; 140 studies Taxonomy, TiDIER and PIPE framework analyses, Network meta-analysis Health economic SR
Association of Gestational Weight Gain With Maternal and Infant Outcomes
A Systematic Review and Meta-analysis

Rebecca F. Goldstein, MBBS, FRACP; Sally K. Abell, MBBS, FRACP; Sanjeewa Ranasingha, MSc, MEpi; Marie Misso, MSc, PhD; Jacqueline A. Boyle, MBBS, FRANZCOG, PhD; Mary Helen Black, MS, PhD; Nan Li, MSc; Gang Hu, MD, MPH, PhD; Francesco Corrado, MD; Line Rode, MD, PhD; Young Ju Kim, MD, PhD; Margaretha Haugen, BSc, PhD; Won O. Song, MPH, PhD; Min Hyo Young Kim, MD, PhD; Annick Bogaerts, RM, MSc, PhD; Roland Devlieger, MD, PhD; Judith H. Chung, MD, PhD; Helena J. Teede, MBBS, FRACP, PhD

Table 1. Recommendations for Gestational Weight Gain During Pregnancy

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Prepregnancy Weight</th>
<th>Normal Weight</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>&lt;18.5</td>
<td>18.5-24.9</td>
<td>25-29.9</td>
<td>≥30</td>
</tr>
<tr>
<td>Total weight gain range, kg</td>
<td>12.5-18</td>
<td>11.5-16</td>
<td>7-11.5</td>
<td>5-9</td>
</tr>
<tr>
<td>Total weight gain range, lbs</td>
<td>28-40</td>
<td>25-35</td>
<td>15-25</td>
<td>11-20</td>
</tr>
</tbody>
</table>

CONCLUSIONS AND RELEVANCE
In this systematic review and meta-analysis of more than 1 million pregnant women, 47% had gestational weight gain greater than IOM recommendations and 23% had gestational weight gain less than IOM recommendations. Gestational weight gain greater than or less than guideline recommendations, compared with weight gain within recommended levels, was associated with higher risk of adverse maternal and infant outcomes.

i-WIP International Weight Management in Pregnancy IPD meta-analysis Collaborative Network

Effect of diet and lifestyle interventions in pregnancy on maternal and fetal outcomes

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International network IPD collaboration

- NIHR HTA funded Systematic review
- 44 RCTs (7278 women)
Lifestyle Intervention in pregnancy

• Systematic review expanding to 140 RCTs - no more needed
  ▪ Taxonomy of behavioural interventions
  ▪ TiDIER framework
  ▪ PIPE framework
  ▪ Network meta analysis
  ▪ Most effective interventions
    ▪ components, approaches and delivery methods
  ▪ Health economic analysis to determine
    ▪ cost effectiveness and
    ▪ cost savings that we “have” to spend on interventions
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Knowledge dissemination, translation and scale-up

Stage 6
Evaluation of health and economic outcomes

Multiple RCTs thousands of women, increasingly focused on pragmatic implementability
Diverse settings
International reach including LMICs

Implementation research to pragmatic implementation / sustainability
Random allocation within routine care
Learnings to inform scale up
Healthy Lifestyles Program in Preconception Pregnancy Postpartum (HIPPP)

2005-2009
RCT to prevent weight gain in women in 250 urban, reproductive aged women

2008-2011
RCT to prevent excess weight gain in 250 pregnant women

2012-2015
RCT to prevent weight gain in 840 rural reproductive aged women in 42 towns Implementation

2015
NHMRC LIVING study - SE Asia – 1600 women post GDM Implementation

2016
Effectiveness - embedded in antenatal care targeting overweight pregnant women

2019
Centre Research Excellence HIPPP Evidence synthesis

2020
Horizons International Implementation Extensive evidence synthesis Remote delivery/ scale

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HIPPP Program

**Target groups**
- Reproductive aged women
- Pregnant women/mothers
- Indigenous, CALD,
- Rural

**Target settings**
- Local government
- Communities, schools, kindergartens
- Primary care/community health
- Ambulatory care/hospitals
- Workplaces

**Policy and strategies**
- m/e-health delivery
- Implementation approach
- Optimising health behaviours
- Scale up including cost and resources

A low intensity, community based lifestyle programme to prevent weight gain in women with young children: cluster randomised controlled trial

Catherine Lombard, senior research fellow; Amanda Jenkins, senior research fellow; Emanuel Bley, associate professor in biostatistics; Luke Hall, associate professor in behavioural epigenetics; Helen J Teede, professor in women’s health.

Optimizing Healthy Gestational Weight Gain in Women at High Risk of Gestational Diabetes: A Randomized Controlled Trial

Cheryce L. Harrison, Catherine B. Lombard, Boyd J. Strauss, and Helena J. Teede

Limiting postpartum weight retention through early antenatal intervention: the HeLP-her randomised controlled trial

Cheryce L Harrison, Catherine B Lombard, and Helena J Teede.

Measuring physical activity during pregnancy

Cheryce L Harrison, Russell G Thompson, Helena J Teede, and Catherine B Lombard.

Abstract

Background: Currently, little is known about physical activity patterns in pregnancy with prior minimum recommendations based on subjective assessment measures that are prone to error. Given the increasing obesity, chronicity, and the importance of physical activity in pregnancy, we evaluated the relationship and agreement between subjective and objective physical activity assessment tools to inform researchers and clinicians on optimal assessment of physical activity in pregnancy.

Preventing Weight Gain in Women in Rural Communities: A Cluster Randomised Controlled Trial

Catherine Lombard, Cheryce Harrison, Sarnadhe Kunz, Sophie Zourges, Sarjoo Ransome, and Helena Teede.

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Implementation research to determine broader effectiveness

Evaluation of health and economic outcomes

Health Economic analysis
Embedding interventions into routine care
Models of care and business models
Role fidelity, evaluation, ongoing learning, routine maternity data/measurement, harmonised outcomes, benchmarking

Multifaceted, driven by stakeholders
Policy round tables/white papers
Organisational implementation toolkits
Individual resources, algorithms, apps, pull for evidence implementation is strong

Stage 1
Stage 2
Stage 3
Stage 4
Stage 5
Stage 6
Stakeholder engagement, partnership, formative research, framing problem, identifying gaps, priorities, needs

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What scales and impacts

What matters

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What implements

Harrison, C 2016, Midwifery, Robinson, T Seminars 2018
Learning health systems

1. Expert working group
2. Systematic literature review
3. Qualitative research
4. Diverse expert / partner input
5. Co-design workshop with stakeholders
   • Vision - improve care and patient outcomes
   • Partnerships: community, academic, HPs, managers, primary care, others
   • Data from routine care- new knowledge, continuously informing healthcare improvement/ continuous iterative learning
   • LHS embedded in healthcare -benefits stakeholders
Learning Health System model

Stakeholder engagement, priorities

Evidence synthesis and guidelines
Embed harmonized core outcomes, benchmark, measure

Implementation knowledge and build rigor and capacity in our health services to drive this under their organizational improvement programs
Community and consumer involvement

- Vision for a National consistent approach to accelerate CCI
- International partnerships
- National engagement
- Systematic review, Qualitative research
- Codesigned a national framework
- Training program targeting diverse stakeholders
- Systems change e.g. Peer review
- Multifaceted evaluation
Capacity Building Framework

Organisational development
- CCI roadmap for MP
- Survey development to assess CCI in MP funded projects

Workforce development
- Online and face-to-face training
- Seminars by international experts
- Webpage resources (toolkits, database of consumer organisations)
- MP CCI mentoring and buddy program

Resource allocation
- MP fellows
- Website with toolkits, resources and training

Partnerships
- Consumer organisations for priority health conditions

Leadership
- MP fellows

Build Capacity
- Infrastructure
- Program sustainability
- Problem solving

CONTEXT

Systematic review of CCI education and training
Qualitative interviews with consumer organisations and health services researchers
Stakeholder engagement, partnership, formative research, framing problem, identifying gaps, priorities, needs

Co-developed efficacy research & new knowledge generation

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What matters

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Harrison, C 2016, Midwifery, Robinson, T Seminars 2018
HIPPP Centre Research Excellence

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