



| <b>Engaged Research Case Study Template</b> |  |
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| <b>Project title</b>                        | Maternal health And Maternal Morbidity in Ireland (MAMMI): Co-Producing Health Research with Women   |
| <b>Descriptor (50 words max)</b>            | Many women experience motherhood in excellent physical health and enjoy the emotional fulfilment that it brings. Other mothers experience physical and mental health challenges, sometimes caused by pregnancy or an event that happens during or after the baby's birth. The MAMMI study investigates the health and wellbeing of women in Ireland during pregnancy and the first year after the birth of their first baby.   |
| <b>Societal Challenge (50 words max)</b>    | Ultimately, there is a national silence surrounding women's postpartum health problems and needs. Many first-time mothers experience one or several health problems that persist throughout the first year postpartum. The lack of information on the health of women in Ireland after the baby's birth prevents us from understanding what causes some of these problems. These health needs are not being identified and opportunities for promoting women's health after their first baby's birth are therefore lost.   |
| <b>Project Synopsis (200 words max)</b>     | <p>MAMMI is a longitudinal cohort study with 3,041 first-time mothers, which started in 2011. Women were recruited from three maternity hospitals in Ireland in early pregnancy, completed self-administered surveys antenatally, and at 3, 6, 9 and 12 months postpartum. Retention rates were 87%-93% at 3 months, and 78% at 12 months postpartum. Health problems investigated included:</p> <ul style="list-style-type: none"> <li>• Urinary and anal incontinence;</li> <li>• Pelvic girdle and other pain;</li> <li>• Mental health problems, including anxiety and depression;</li> <li>• Sexual health problems;</li> <li>• Intimate partner violence; and</li> <li>• Attendance at health services and readmission to emergency rooms/hospital.</li> </ul> <p>Findings show that considerable proportions of women experience one or several health problems at all time points, and that many women experience persistent health problems at 12 months postpartum. While these health problems have a negative impact on women's lives, and are preventable or treatable,, when women have regular contact with healthcare professionals during the first three months postpartum, many women were not asked about these problems directly by a General Practitioner (GP), Midwife or Public Health Nurse (PHN), and many did not talk to a health professional, or anyone else, about them. Follow-up studies at year five and with the second baby started in 2018.</p> <p>Maternity service users, first-time mothers and MAMMI study participants, were invited to contribute to the content of the study surveys, and prioritise, co-design, co-conduct women-directed research. The information that women provided by taking part in the MAMMI study fills in some of the gaps in the current knowledge about women's health after childbirth.</p> |



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| <b>Principal Investigators</b>                              | Drs Deirdre Daly, Francesca Wuytack, Patrick Moran, Prof Margaret Carroll and Prof Cecily Begley  |
| <b>Higher Education Institution</b>                         | Trinity College Dublin  |
| <b>Civic / civil society organisation or other</b>          | <p>The MAMMI study team collaborate closely with:</p> <ul style="list-style-type: none"> <li>• Three maternity hospitals in Ireland: the Rotunda Hospital Dublin, Galway University Maternity Hospital, and the Coombe Women and Infants University Hospital.</li> <li>• Association for Improvements in Maternity Services in Ireland (AIMS Ireland)</li> </ul> <p>Clinicians from each institution, and AIMS Ireland, are co-applicants and/or collaborators on several of our findings applications.</p>   |
| <b>Funding source</b>                                       | <p><i>Current and past funders</i></p> <ul style="list-style-type: none"> <li>• Health Research Board</li> <li>• Health Services Executive</li> <li>• Science without Borders</li> <li>• Irish Research Council</li> <li>• Friends of the Rotunda</li> <li>• Friends of the Coombe</li> <li>• Trinity College Dublin</li> </ul>   |
| <b>Engaged research method or technique (200 words max)</b> | <p>All interactions with the MAMMI study participants were designed to involve and engage women. In 2011, 34 women were consulted on, and influenced, the study documents and surveys. Eighty women took part in individual interviews, describing their experiences of a specific morbidity, and women themselves directed whether they would participate in one or several of these interviews. The research team shared findings at a special ‘maternal morbidities’ conference, and invited research participants to attend for free. Study findings are shared through quarterly newsletters, via email and the project’s websites, as well as presentations and publications on the website’s ‘Sharing the Findings’ section.</p> <p>In 2017, MAMMI hosted a ‘Sharing the Findings’ seminar for women as a Saturday event. At this seminar, the research team identified 35 women who were interested in becoming involved in the study’s future development. Subsequently, 18 women participated in focus groups and one-to-one discussions to co-design the content of the follow-up surveys. In 2017, the MAMMI project team co-presented with one study participant, and Dr Deirdre Daly, Co-PI, was recognised with the HRB’s ‘Ones2Watch’ Award.</p> <p>In November 2017, MAMMI was awarded a HSE grant to further develop the public participation in research initiative. Focus group meetings with approximately 24 women will be held in 2018. A participant Chair will be elected, terms of references agreed, and the contractual work plan, deadlines and outputs reviewed. Roles and responsibilities will be defined, and women-directed research topics will be listed. The aim is to co-conduct research with women and to identify each woman’s desired level</p> |



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|  | <p>of involvement in the conduct of the identified research. Women-directed research topics will be prioritised, and the methodological approach, roles, responsibilities, target journals and conferences for dissemination will be identified.</p>  |
| <p><b>Outputs: (200 words max)</b><br/>Outputs are key areas of work that enable desired outcomes<br/>Who we will reach<br/>What we will do<br/>Where, when and how it will happen<br/>Targets for numbers to be reached<br/>Frequency of activities</p> | <p>Outputs (2011-2018) are as follows:</p> <ul style="list-style-type: none"> <li>• 8 surveys developed, validated and tested for reliability</li> <li>• Follow-up surveys contain purposively-developed questions on cost of specific maternal morbidities</li> <li>• 5 peer-reviewed journal articles</li> <li>• Winner of the HRB’s inaugural Ones2Watch Award 2017</li> <li>• Accessible and easy-read participant information booklet (Plain English Award from the National Adult Literacy Agency (NALA)), easy-read surveys and website</li> <li>• MAMMI study website and social media platforms</li> <li>• 12 MAMMI newsletters</li> <li>• MAMMI study HRB RedAlert Taboo – the body and childbirth at Science Gallery Dublin (<a href="https://www.youtube.com/watch?v=jXp-wjd18MQ">https://www.youtube.com/watch?v=jXp-wjd18MQ</a>)</li> <li>• 40+ interviews, press releases and media engagements</li> <li>• 50+ conference presentations, seminars, posters</li> <li>• 6 presentations to 3 participating maternity hospitals</li> <li>• 6 presentations to women/consumer organisations</li> <li>• 4 national and 1 international collaborations</li> <li>• 4 videos (HRB-funded Knowledge Exchange and Dissemination Scheme, freely available on website and YouTube) used by maternity hospitals, clinicians (midwives, obstetricians and physiotherapists) to inform pregnant and postpartum women, and in education and training</li> <li>• 1 video ‘Sharing the findings’ (#865 views on YouTube)</li> <li>• 6 PhDs, 2 awarded, 4 in progress, and 4 MSc (Taught), and 1 HRB Summer Studentship</li> <li>• 3 post-doctoral researcher awards</li> <li>• 2016 international conference and Experts’ workshop (Irish Research Council funded)</li> <li>• 2017 Sharing the Findings Saturday seminar for MAMMI participants</li> <li>• Professional and Public Services Outcomes: MAMMI study has contributed to the evidence-base for the <i>National Maternity Care Strategy</i></li> <li>• Capacity Building Outcomes: MAMMI has successfully attracted research funding to train 5 PhDs, 1 MSc (Research) and 3 post-doctoral researchers</li> <li>• Economic Outcomes: MAMMI has provided jobs for 3 research assistants, and provided training for 1 visiting professor, 3 MSc students and 1 HRB Summer Student, and has leveraged €2.3 in grant funding</li> <li>• Internationalisation Outcomes: MAMMI is harmonised with 1 international longitudinal study</li> <li>• Health and Wellbeing Outcomes: Since 2012, MAMMI has engaged 3,041 first-time women during their first pregnancy. The response rate is 86%-93% at 3 months, and over 70% at 12months postpartum. Over 80% of women consented to being contacted about follow-up studies.</li> </ul> |



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**Outcomes: (200 words max)**

Outcomes are shorter terms changes in knowledge and skills attitudes & behaviour. Organisational development Change in local situation and circumstances Social change – policy, practice, decision-making

The main outcome is genuine woman-led involvement in maternal health research initiative. The MAMMI study, and the research team, have been influenced positively by consulting, engaging, co-presenting and co-designing research with women. This project develops our level of engagement further, ensures its direct relevance to women, and will strengthen our capacity for seeking funding to sustain public involvement in the future. As researchers, this project embeds our commitment to genuine engagement with the women taking part in the MAMMI study, co-prioritising research topics, co-producing and co-conducting research directed by and relevant to women as mothers. Specific outcomes are as follows:

*Advancing international collaborations* – Disseminating the research findings, through conference presentations and scientific publications, has generated interest within the international maternal health research community. For example, x maternal health experts attended and presented at our ‘Minding Mothers with Morbidities’ conference, and participated in an Experts’ workshop designed as a precursor to establishing an international research consortium to prepare future funding applications. A team member is leading on a COST IS1405 project on comparing the cost of births in different countries.

*Informing public dialogue and debate* – Sharing MAMMI processes through various media offers other maternal health researchers a model for engagement. Additionally, significant print and broadcast has allowed the MAMMI study to reach women 1000s+ of women. In 2016, our International ‘Minding Mothers with Morbidities’ conference, live streamed on Facebook, received 58,469 views, 26782 or 11.6% watched until the final message. The ‘Sharing the Findings’ video was watched for 32,430 minutes, and shared 1134 times on Facebook. An analysis of the shares showed that a large proportion of shares were done by organisations and people involved with mothers and babies thereby targeting the information to those who it was most relevant to. Most of those sharing wrote a comment with the share post about the value of the study and its findings. A total of 260 comments were made and 2280 reactions (likes etc.). A detailed analysis showed that 93% of the views and interactions were by women, mostly women aged 35-44, our target audience, and the Facebook post potentially reached an audience of 150,000.

*Improving Ireland’s research capacity* – Three research assistants (RAs) have been employed to help manage this project and, by working directly with the PIs, are developing new skills in project management, research methods, scientific conference organisation, and in co-authoring presentations and scientific publications.

**Longer term anticipated areas for Impact (Choose from below):**

- Economic
- Policy & Public Service
- Societal Engagement
- Health & Wellbeing

As a research team, we have evolved from consulting with women in 2011, to co-designing research and co-presenting research with women in 2017, and in 2018/2019, MAMMI and women in Ireland will co-author and co-present women-directed research. This is a significant achievement which enriches the research ecosystem.



CampusEngage

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Professional services  
Environmental  
New knowledge  
Human Capacity

MAMMI dissemination activities continue to generate new knowledge which genuinely improves the health and wellbeing of new mothers in Ireland. Already, women tell us that they are learning about health problems simply by taking part, that completing the surveys gives them opportunities to reflect on their health: women said they took better care of themselves and sought professional help because of taking part, demonstrating that taking part prompts positive decision-making and health behaviours. Women who attended our presentations at consumer organisations also said they will actively seek professional help because of listening to the study's findings. Our overall mission is to use the study to improve the health of all childbearing women, to enable them to communicate with their healthcare providers, to inform maternity care health providers of the extent and prevalence of health problems and improve all maternity services, and especially postpartum services, for all women. Findings have demonstrated the prevalence of particular health problems, factors amenable to modification, and our follow-up study is developing and testing the feasibility of an intervention targeting urinary incontinence. If this intervention is shown to be effective, we will seek further funding to test it in a national randomised trial. We are, for the first time in Ireland, capturing data on the economic burdens of maternal health problems for women and services. This new knowledge will further national, and international, dialogue and debate, and has the potential to influence future service provision.