

Institution: University of Exeter		
Unit of Assessment: UoA 4 Psychology, Psychiatry, and Neuroscience		
Title of case study: Transforming perinatal mental health care for women through modified cognitive behavioural therapy		
Period when the underpinning research was undertaken: 2005-ongoing		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Prof. Heather O'Mahen	Professor	2007-present
Prof. David Richards	Professor	2008-present
Dr. Fiona Warren	Senior Lecturer	2010-present
Period when the claimed impact occurred: August 2013 – July 2020		
Is this case study continued from a case study submitted in 2014? Y/N		
1. Summary of the impact		
<p>Approximately 351,000 parents every year in the UK suffer from perinatal mental health problems (PMH-P), including post-natal depression, which has a negative impact on infant development and costs the UK £8.1 billion each year. Whilst 50% of sufferers of mental health issues in the general population will seek support from services, for PMH-P only 13-20% of sufferers do so.</p> <p>O'Mahen's research on new psychological interventions for PMH-P has directly shaped Government policy and contributed to a wide-scale national transformation in the provision of perinatal treatment/improved access to PMH services across the UK by:</p> <ul style="list-style-type: none"> • Informing the 2014 NICE Antenatal and Postnatal Mental Health Guidelines and the 2017 Welsh Matrix Guidelines • Influencing clinical standard-setting in PMH psychological treatment provision in primary and secondary care leading to treatments for over 60,000 people. • Shaping Health Education England (HEE) perinatal psychological assessment and therapy competencies and IAPT perinatal competency framework • Creating national training programs, including an HEE funded program for all new UK perinatal psychologists, reaching more 3000 practitioners in total • Informing the development and production of face-to-face treatments and a successful online self-help programme with NetMums, the UK's biggest parenting website, reaching 240,000 people and now adopted internationally. 		
2. Underpinning research		
<p>When left untreated, perinatal mental health problems (PMH-P) result in significant disability for parents and increase the risk of socioemotional problems across the life span for the child. Over the years there has been an increase in ongoing mental health problems seen in parents and children due to PMH-P. This was due to a lack of high-quality evidence for effective perinatal interventions and treatment provisions. O'Mahen conducted some of the first research on psychological interventions for perinatal mental health (PMH) problems and parenthood. PMH research led by the University of Exeter has been carried out in both the UK (2007 onwards: NIHR, ESRC) and the United States (2005-2009) (NIMH, with O'Mahen continuing her NIMH research following her appointment to Exeter in 2007)</p> <p>In qualitative and survey research, O'Mahen worked directly with mothers who experienced PMH problems, identifying key barriers to accessing mental health interventions (e.g., stigma, childcare) and their preferences for treatment content (e.g., baby focus, parental transition) [3.1, 3.2]. This information informed the development of a perinatal-specific depression (PND) intervention, called modified Cognitive Behavioural Therapy (mCBT). O'Mahen and colleagues [3.3] at Exeter demonstrated mCBT is effective and acceptable to low-income perinatal women with Major Depressive Disorder in a randomised controlled trial (ECHO). The 12-sessions of mCBT were adapted for each participant and conducted wherever convenient for the mother (e.g., home, hospital clinic, phone). In traditional PMH care options, treatment adherence is quite low in low-income women (12-30%), but with mCBT treatment satisfaction and adherence was high (60%)</p>		

for this population. The trial demonstrated greater PND improvement (sustained over three months) in the mCBT group compared to the usual care control group [3.3]. This study demonstrated when treatments are adapted to parents' needs, access, adherence, and success increase.

From the success of mCBT, Netmums.com, an online UK parenting site with over 1 million members, approached O'Mahen to develop an online version of the mCBT intervention. This allowed Netmums to meet demands on their site for PND treatment provision. Before going live on Netmums, O'Mahen ran two trials of online mCBT for PND. The first trial demonstrated the widespread acceptability and effectiveness of the online intervention, treating over 1,000 women with PND (now over 3000) [3.4]. The second demonstrated that the addition of support of online access to mental health guidance resulted in high levels of adherence and rates of recovery [3.5]. NICE estimated that compared with usual treatment, treating 100 perinatal parents with O'Mahen's guided self-help intervention produces 780 additional quality-adjusted life-years (QALY) at an additional cost of only £2,269, equivalent to each QALY costing under £14,000, which is regarded as cost-effective by NICE [3.5].

O'Mahen and colleagues also conducted a multi-site trial of a brief group-based intervention for pregnant mothers with anxiety and their partners [3.6]. This study demonstrated the effectiveness, access, and acceptability of a treatment embedded into antenatal care through delivery by midwife/psychological provider pairs. O'Mahen's research includes some of the largest studies of PMHP, making a significant contribution to addressing healthcare gaps in perinatal parents' access to effective mental health care.

3. References to the research

*Authors in bold are from the University of Exeter - *Joint first-authorship*

- 3.1. **O'Mahen, H.A.**, Henshaw, E., Fedock, G., Himle, J., Forman, J., & Flynn, H. (2012). Modifying CBT for perinatal depression: What do women want? A qualitative study. *Cognitive and Behavioural Practice*, 19,2, 359-371, DOI: [10.1016/j.cbpra.2011.05.005](https://doi.org/10.1016/j.cbpra.2011.05.005)
- 3.2. **O'Mahen, H.A.**, & Flynn, H.A. (2008). Preferences and perceived barriers to treatment for depression during the perinatal period. *Journal of Women's Health*, 17, 1301-1309. DOI: [10.1089/jwh.2007.0631](https://doi.org/10.1089/jwh.2007.0631)
- 3.3. **O'Mahen, H.A.**, Himle, J., Fedock, G., Henshaw, E., & Flynn, H. (2013). A pilot randomized controlled trial of Cognitive Behavioral Therapy for Perinatal Major Depressive Disorder: Adapting delivery to women with low incomes. *Depression and Anxiety*. 30(7), 679-687. DOI: [10.1002/da.22050](https://doi.org/10.1002/da.22050)
- 3.4. **O'Mahen, H.A.**, **Woodford, J.**, McKinley, J., **Warren, F.**, **Richards, D.A.**, **Lynch, T.R.**, & **Taylor, R.S.** (2013). Internet-based Behavioral Activation Treatment for Postnatal Depression (Netmums): A Randomized Controlled Trial. *Journal of Affective Disorders*. 150, 814-822. DOI: [10.1016/j.jad.2013.03.005](https://doi.org/10.1016/j.jad.2013.03.005)
- 3.5. **O'Mahen, H.A.**, **Richards, D.**, **Woodford, J.**, Wilkinson, E., McKinley, J., **Taylor, R.S.**, & **Warren, F.** (2014). Netmums: A Phase II Randomized Controlled Trial of a Guided Internet Behavioral Activation Treatment for Postpartum Depression. *Psychological Medicine*, 44, 1675-1689. DOI: [10.1017/S0033291713002092](https://doi.org/10.1017/S0033291713002092)
- 3.6. Wilkinson, E., **O'Mahen, H.A.***, Fearon, P., Halligan, S., King, D., Greenfield, G., & Ramchandani, P.G. (2016). Adapting and testing a brief intervention to reduce maternal anxiety during pregnancy (ACORN): Report of a feasibility randomized controlled trial. *Trials*. 17, 156. DOI: [10.1186/s13063-016-1274-8](https://doi.org/10.1186/s13063-016-1274-8)

4. Details of the impact

Informing National Clinical Guidelines

O'Mahen's research [3.1, 3.2] on perinatal mental health problems (PMH-P) interventions directly informed the 2014 NICE Antenatal and Postnatal Mental Health Guidelines [5.1] in three ways:

- Overarching guidance that psychological treatment should be adapted for perinatal specific concerns and delivered by perinatal competent providers (p.378).

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- Guidelines for using CBT specifically for PND (p. 649).
- Two new recommendations for perinatal facilitated self-help (p.378, 649).

The lead of the guideline development group confirmed that “*This [Exeter] research has made a significant contribution to improving mental health treatment and access to women with PMH problems. These new recommendations in the NICE guidelines would not have been possible without the work produced by Prof O’Mahen.*” [5.4]

O’Mahen’s research also informed the later 2017 Welsh Matrix Guidelines [5.2] which focuses on the need for improved access to perinatal mental health (PMH) services in Wales. O’Mahen’s trials were two of three studies underpinning the “A” research quality recommendation for guided self-help for mild antenatal or postnatal depression and was the singular study supporting the recommendation of Cognitive Behavioural Therapy for antenatal depression [5.2].

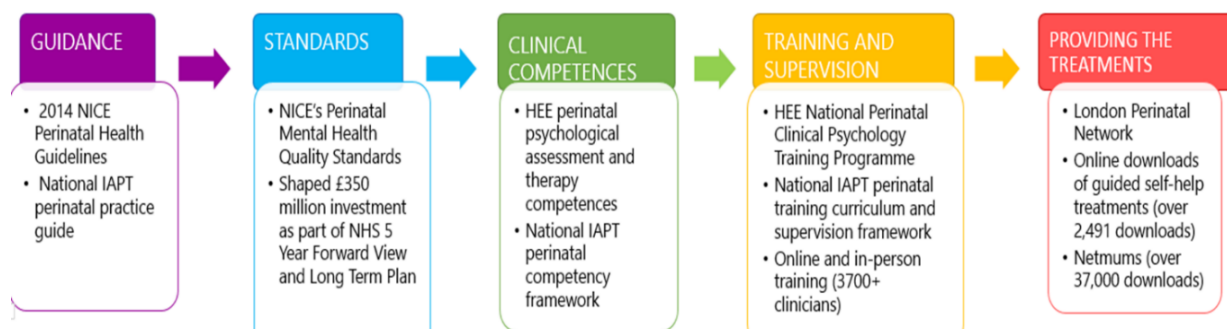


Figure 1: A schematic to illustrate the process of impact generation

Influencing clinical standard-setting in PMH psychological treatment provision in primary and secondary care

O’Mahen’s research on psychological interventions adapted for PMH-P has shaped government policy and guidance and influenced the structure of psychological treatment provision in both primary and secondary mental health care. O’Mahen was one of a small number of specialists that contributed to the development of NICE’s Antenatal and Postnatal Mental Health Quality Standards [5.3]. In her expert role, O’Mahen drew on the 2014 NICE guidelines, as described above, to ensure that prompt access to perinatally adapted psychological interventions was included as one of six key targets that providers of PMH-P care should meet.

Both the quality care standards and 2014 NICE guidelines inform the pathways to mental health care for perinatal parents in the UK and the government has recognised this as a priority area. Faced with considerable national disparities in the provision of care to perinatal parents, the UK government invested £365 million in the 5 Year Forward View (2016) and £1,015 billion in the Long-Term Plan (2019) to ensure parents in the UK received NICE guideline-concordant care for PMHP. NHS England projects 66,000 perinatal women will access perinatal community mental health teams each year (25% of women with PMHP problems). In addition, Improving Access to Psychological Therapies (IAPT) aims to treat 87,750 (25%) of mothers and fathers with PMH problems per annum.

O’Mahen’s work also then contributed to a wide-scale national transformation in the provision of perinatal specific psychological treatment. From her work, 980 therapists and 2,100 perinatal practitioners (80% already established and 100% of new psychologists) [5.7, 5.9, 5.10] have been trained in delivering evidence based perinatal treatment including Exeter-developed psychological interventions [3.3, 3.4, 3.5, 3.6], which offer cost-effective treatment for the NHS, treating over an estimated 61,163 people.

Shaping Clinical Competences Frameworks

Exeter headed the development of the national psychological clinical standards of practice and co-wrote the Health Education England (HEE) perinatal psychological assessment and

therapy competencies [5.5]. O'Mahen led on NHS England and IAPT funded (£50,000) awards to develop a national IAPT perinatal competency framework, and national perinatal practice guide for IAPT practitioners [5.6]. These frameworks draw directly on O'Mahen's research specifying how to adapt the content and delivery of treatments for PMH problems (e.g., PND, anxiety). The frameworks support identifying staff competency and training needs and set a foundation on which to develop training curriculum content. The PMH training lead for London stated that "...Prof. O'Mahen's research on interventions for perinatal depression highlight the specific content and delivery adaptations needed to ensure the effective provision of mental health treatments during the perinatal period. As such, her research has made a significant contribution to the competences and training underpinning the competent delivery of evidence based mental health treatment to perinatal mothers..." [5.10]

Creating a national training program for all new UK perinatal psychologists

With colleagues from the University of Liverpool, IAPT, the British Psychological Association Perinatal Faculty and Exeter, O'Mahen led the development and implementation of national training programmes in primary and secondary care with content developed from her research. She has now trained a national multidisciplinary cohort of psychological practitioners, clinical psychologists, psychiatrists, midwives, and health visitors.

O'Mahen's training for perinatal clinicians has included a HEE national training program for all new UK perinatal psychologists in the NHS England expanded perinatal community mental health teams, which she led on with staff at Exeter and colleagues from the University of Liverpool. The course is highly rated (mean=8/10) on developing perinatal-relevant skills. This program has been recommissioned for additional psychologists (n=140) in 2020/2021 and 2021/2022. Assuming a 20-year career course, this training will influence the care of up to 1,320,000 perinatal women. "Prof. O'Mahen, ...has led on the delivery of the national training program for perinatal psychologists, [which was] based on evidence-based interventions, drawn from perinatal trials in the 2014 NICE Antenatal and Postnatal Guidelines, which included Prof. O'Mahen's research." [5.10]

O'Mahen developed and delivered perinatal-bespoke training for IAPT primary care mental health providers, drawing heavily on the facilitated self-help materials O'Mahen trialled with Netmums. [5.8] *As a service, we have found that the adaptations we now make (after your training and booklets) have made a huge difference in the positive feedback we get from new mums and pregnant women... and have made a difference in their clinical improvement and continued positive mental health".* [5.7]

This training has been far reaching, including:

- 650 IAPT clinicians from 66 services (50% of all services nationally, including 33 perinatal leads from each of the 33 IAPT services in London, treating up to 1400 women/each over career) who cascade training to their service which "...has been very helpful for all the IAPT Services treating mothers with PMH problems and their children, especially as it can be catered to their needs and personal goals." [5.9] Feedback from this highly rated training (mean=4/5) indicated clinician attendees are using the training and booklets with a positive impact on women.
- O'Mahen's perinatal self-help materials have been downloaded over 2,491 times, 648 by IAPT/primary care therapists.

Nationally, over 60% of IAPT services have used the perinatal guided self-help materials or received training based on O'Mahen's research, treating up to 3,800 women/year.

Informing the development and production of a successful online self-help programme and face-to-face treatments

The Head of Support at Netmums stated in 2020 [5.8]: "We were pleased to work with Prof. O'Mahen to offer one of the first online CBT courses for postnatal depression, raising

considerable awareness of postnatal depression and supporting women to overcome their symptoms. Since its inception, over 37,000 women have benefitted."

Further expanding the reach of O'Mahen's perinatal "Netmums" intervention, Exeter, with a grant from FutureLearn, developed an online training programme for the mCBT aimed at healthcare professionals. Over 237,537 people joined the 3-week course in 2019-2020 *This course has given me the tools I need to implement treatment with my patients."* This innovative form of teaching is meeting a clear gap in accessible, online training, providing clinicians with the skills to support perinatal women."

International Reach

The impact of O'Mahen's research has now had international reach. In recognition of the success of the Netmums course, it has been adapted in the United States, and Japan, where it is offered in two major area hospitals providing care for over 10,000 mothers in the Tokyo/Yokohama areas. Others have also referenced this course in their own development of postnatal online courses in Spain, the Netherlands, and Canada. [5.8] Further, all perinatal psychologists in Gothenberg, Sweden now offer the antenatal anxiety intervention O'Mahen and colleagues developed.

The resulting impact is O'Mahen's PMH-P research and interventions continue to inform & shape clinical guidelines and practice, and provide affordable and accessible mental health care for women with PMH-P both in the UK and internationally.

5. Sources to corroborate the impact

- 5.1. National Institute for Health and Care Excellence (NICE). (2020). Antenatal and postnatal mental health: clinical management and service guidance (Clinical guideline [CG192]). <https://bit.ly/3stphET> *Clinical guidelines regarding recognising, assessing and treating mental health problems in women who are planning on becoming pregnant, currently are pregnant, or have had a baby or been pregnant in the past year (see pages 123, 368).*
- 5.2. All Wales PMH Steering Group and Community of Practice. (2017). Matrics Cymru: The EvidenceTables. <https://bit.ly/31CVMot> (see pages 29, 30).
- 5.3. National Institute for Health and Care Excellence (NICE). (2016). Antenatal and postnatal mental health (Quality standard [QS115]). <https://bit.ly/2P4PDyJ> *Quality standard guideline regarding recognising, assessing and treating mental health problems in women who are planning on becoming pregnant, during or after pregnancy (up to a year after childbirth) as well as the organisation of mental health services for women during and after pregnancy.*
- 5.4. Letter of testimony from Lead of Guideline Development Groups.
- 5.5. NHS. (2018). The Competency Framework for Professionals working with Women who have Mental Health Problems in the Perinatal Period. <https://bit.ly/3w44GZP> *Guidelines of best practice for all staff who work with women and their families in the perinatal period and throughout every stage of perinatal care (e.g., preconception to one year after birth) to ensure staff are confident and suitably skilled to identify need and deliver care to women who have mental health problems during the perinatal period.*
- 5.6. University of Exeter, Psychology (2019). Perinatal mental health. <https://bit.ly/3ctkRIE> (Unique page views = 2,936) *Exeter's site where links to materials are provided aimed at helping people who are experiencing low mood and anxiety during pregnancy and the postnatal period (e.g., booklets for clients and for supporters and therapists). The NHSEI and IAPT approved perinatal competency guideline will be linked from this site pending in-progress NHSEI publication approval of the document.*
- 5.7. Letter of testimony from clinician.
- 5.8. Letter of testimony from Head of Support for Netmums.com; link to the FutureLearn training programme: <https://bit.ly/3spR8po>.
- 5.9. Letter of testimony from PMH Training and Service Development Lead & London Perinatal Mental Health Network Coordinator, London Perinatal Network.
- 5.10. Letter of testimony from Delivery Lead, Perinatal Mental Health, Health Education England.