

# PRoF Award abstract – Call 2018

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## Perinatal Mental Health Toolkit

### 1. Research Outline

Acronym	PMH-Toolkit
Project name in English	Perinatal Mental Health Toolkit
Pitch (1 sentence)	Developing new tools to improve detection and treatment of pregnancy-related depression and anxiety
Executive summary (max. 10 lines)	<p>Mental problems during the perinatal period are associated with a range of negative consequences such as preterm birth, mother-infant interactional deficits and negative infant developmental outcome. Research indicates that perinatal mental health problems are highly prevalent (20%). In Flanders however, a large majority is currently not being detected nor getting the appropriate treatment.</p> <p>To address this shortage we developed a PMH toolkit that consists of a risk taxation instrument, a screening tool, a guideline, a care pathway and a training pack. The innovative aspects of our project lie in: the integration of mental health care in routine perinatal care, the strong interdisciplinary approach, a potential broad implementation (generic version) and the strong scientific basis and evaluation of the project.</p>

## 2. Cause and context of the research

Pregnancy and the arrival of a new baby signal a time of unparalleled change and hope for the future (Howard et al., 2014). Although pregnancy was once thought of as a time of emotional wellbeing for many women, conferring 'protection' against psychiatric disorders, recent research shows that up to **one in five** women experience mental health problems during the perinatal period (the period spanning pregnancy, childbirth, and the first postnatal year) (Lancet editorial 2017). Systematic reviews conducted in high-income countries have shown that about 10% of pregnant women and 13% of those who have given birth experience depression. In 2008, we participated in a six-country European study (BIDENS) and this study found that in Flanders (n=835), 11.5% of the pregnant women had depressive symptoms. Anxiety disorders in the perinatal period are less studied than depression, but emerging evidence shows that they are as prevalent as depression. A recent meta-analysis indicated that the overall percentage of any anxiety disorder in the perinatal period was 15.2% (Dennis et al., 2017). Although there is quite a large variation in prevalence rates, caused by methodological challenges such as the use of different definitions, assessment tools, timing of assessment and studied population (Segre et al., 2010), there is currently a large consensus in caregivers and researchers that perinatal mental health (PMH) is a substantial global public health problem.

According to Kingston and colleagues (2015), mental health problems represent one of the most common morbidities in pregnancy and the leading cause of mortality during the perinatal period in developed nations. In the UK, between 2012–14, a quarter of all **maternal deaths** between 6 weeks and 1 year after childbirth were related to mental health problems, with suicide being the leading cause of direct maternal death (Lancet editorial 2017). Maternal suicide is the third largest cause of direct maternal death in the first few weeks, but is the leading cause of death when looked at over a year in the period 2013-2015 (MBRRACE-UK release, 2017). In Australia, the incidence of maternal deaths connected with psychosocial problems has a similar prevalence to maternal deaths due to obstetric haemorrhage (Lavender et al., 2016). On top of the substantial individual suffering families face experiencing PMH difficulties, evidence increasingly point towards the tremendous **societal and economic impact** of PMH. A recent report revealing the economic costs (including direct, indirect, and intangible costs) of perinatal mental disorders (in women) to society and public services in the UK showed that long-term costs are estimated to exceed £8 billion for each annual cohort of births (Bauer et al., 2014).

More importantly, there is a substantial amount of evidence (mainly for depression in women) that shows that perinatal ill-health is associated with **a range of negative outcomes**. Perinatal

depression has been associated with spontaneous preterm birth and low birth weight. Maternal depression can be pernicious for infant attachment, and is associated with difficult infant temperament and mother-infant interactional deficits. The most significant findings with respect to infant cognitive, behavioural, psychomotor and language development, and child psychiatric outcome have been researched in studies where depression has been chronic or severe rather than those with more transient depression (Franks et al., 2016; Kingston et al., 2015; Fontein-Kuipers et al., 2014). Moreover, these negative effects of depression are long-term: e.g., teens who were exposed to maternal depression as infants are themselves more likely to be depressed and are at increased risk for externalizing disorders later in life (Segre et al., 2010).

Prenatal mental health screening is the first step in early **identification and treatment**. Given epidemiologic evidence that prenatal anxiety and depression are strong predictors of postpartum mental illness (Milgrom et al., 2008), mental health screening and treatment during pregnancy offers an optimal time for early detection and intervention for perinatal mental health problems. Despite recommendations (Austin 2014; NICE 2014; ACOG 2015), mental health screening is not a component of routine prenatal care in Flanders, nor is it in most other countries. Lack of routine prenatal screening is a major public health concern for four key reasons:

- 1) in the absence of routine, standardized screening, up to three quarters of childbearing women meeting DSM criteria for anxiety and depression are not identified and only 1 in 10 women requiring mental health care receives it;
- 2) in qualitative studies, women indicated that they do not initiate discussions with their provider about mental health because of the discomfort and stigma;
- 3) pregnant women are frequently unable to distinguish whether their emotional concerns are part of a normal pregnancy or require attention, and thus are reticent to discuss them with their provider;
- 4) without treatment, symptoms of depression and anxiety can continue into the postpartum and early parenting periods. The longer depression remains untreated, the less favourable the treatment outcomes (Kingston et al., 2015). Therefore, speedy access to support and early treatment is important to improve outcomes for women and their families (RCOG 2017).

Since the majority of PMH problems remain undetected or are only identified in an advanced stage, early routine detection and active referral to care within the perinatal care setting has a large potential. Although there is limited evidence that screening is clinically effective in reducing morbidity, a combined approach consisting of an identification and treatment programme seems to be more effective (Howard et al., 2014). Because of maternal treatment

preferences and potential concerns about foetal and infant health outcomes, non-pharmacological treatment options are particularly important in the perinatal period. Research found that psychosocial and psychological interventions were effective for reducing depression symptoms within the first year postpartum (Dennis et al., 2013). In some situations there is also a clear need for treatment with medication, evidence is emerging that this can be a safe and good treatment option whether or not in combination with psychotherapy.

On October 15th, 2015 the Flemish parliament adopted a resolution to improve early detection and treatment of postnatal depression. In response to this resolution, Minister Vandeurzen commissioned a pilot project that started in September 2016. This project is based on a close collaboration between the Ghent University's Women's Clinic, the Psychiatric Department, the Mother-Baby Units in Ghent and Zoersel and is embedded in a larger steering interdisciplinary committee of partners (cf. 5. Information on the partners).

The main objectives of our project are:

- develop an evidence-based screening tool and assessment protocol for depression and anxiety in the perinatal period;
- develop a care pathway for detection and treatment of perinatal depression and anxiety;

In a first stage, the development of the screening tool and care pathway is done at the Ghent University Hospital in close collaboration with our regional partners. Once our project is rolled out and thoroughly evaluated, we aspire to implement it in others hospitals in as well (cf. future plans).

The project is roughly divided in 4 phases:

- 1) risk factors (including unplanned/unwanted pregnancy, social support, financial stress, housing problems, lifetime violence/abuse, psychological/psychiatric problems, alcohol/drugs/tobacco) for the development of PMH problems framed within a larger context of social disadvantage are assessed during an extended clinical intake by the midwife at around 16 weeks of pregnancy;
- 2) screening for perinatal depression and anxiety around 20 weeks of pregnancy and again at 6 weeks postpartum by the midwife;
- 3) a diagnostic assessment by the psychiatrist/psychologist/family doctor to clinically evaluate the positive screening results and start a treatment if needed;
- 4) a psychotherapy or medicinal treatment (ambulatory, day-clinic, admission to a MBU of psychiatric ward or outreach treatment) tailored to the needs of the patient/client.

## **2. Innovation results achieved**

In summary, we have currently developed the following parts of the PMH-toolkit:

- the risk taxation instrument for the expanded clinical intake at 16 weeks of pregnancy;
- the screening tool used at 20 weeks of pregnancy and at 6 weeks postpartum;
- the extensive guideline (a generic version applicable to other settings and a specific Ghent University Hospital version) on the development and implementation of the risk taxation, screening instrument and care pathway;
- a preliminary version of the care pathway (flow chart);
- a training for perinatal health professionals existing of two modules: one training pack tailored to the specific needs in the Ghent University Hospital and a more general 2-day training on PMH for health professionals).

The execution of our project is based on a phased approach. Up to this moment we have organised the risk taxation training of the midwives and have started the implementation of the first phase at 16 weeks of pregnancy. Currently approximately 70 women have been assessed using the new risk taxation instrument and they are enrolled into the new care pathway. We are preparing the screening training of the midwives, and this will take place in the beginning of March 2018. Simultaneously, we are preparing to start the 20 weeks screening procedure (integration of the screening instrument in the electronic patient file system). In order to facilitate the use and implementation of the tools developed, the lay-out is currently being optimised into a user-friendly version by a professional graphic designer.

Our project is innovative for several reasons. **First**, structural screening for PMH is not a routine practise in Flanders. Structurally embedded routine screening programs have great potential in identifying currently undetected women with PMH problems. Moreover, we have chosen to embed our innovative screening program into routine perinatal care. One of the threats associated with screening programs for PMH is that women with identified PMH problems are simply referred to mental health care, but a substantial amount of women do not actually get any treatment. Routine screening, coupled with clinical resources to patients and providers for prompt onsite referral and consultation for mental health care for women who screen positive, results in relatively high levels of linkage to evaluation, diagnosis, and treatment (Venkantesh et al., 2016). Effective screening programs integrate screening into routine perinatal care, involve primary obstetric providers in the care plan, have a formal referral process, and have a prompt onsite psychologic/psychiatric evaluation at the same location as the obstetric care. This is also the approach we include in our project. Screening in combination with a well-embedded care pathway to guide women to the help they require, will maximize the likelihood that women actually get the help they need. Clear care pathways including an explicit task division, will improve collaboration and communication between

different providers on all different levels involved. The integration of the screening programme into the current electronic patient file systems with pop-up reminders and cues on how to respond, will increase the applicability into the daily routine and is a realistic adaptation to the current health care system.

**Second**, our project was initiated by an interdisciplinary taskforce of health professionals (cf. 5. Information on the partners) that were confronted with increasing PMH needs of patients/clients in the Ghent University Hospital and the MBU's. The taskforce started meeting regularly in 2013 to find new ways in addressing these specific needs and organise care and collaboration more efficiently. Due to the fact that PMH problems relate per definition to physical as well as mental health aspects, our project is fundamentally based on interdisciplinary viewpoints and collaboration that go beyond fragmented care systems. This is why we designate the family doctor as the central caregiver in our approach. He/she is the ideal caregiver to coordinate both in- and out of hospital care for the women and her family during and beyond the perinatal period.

**Third**, a crucial aspect in our approach is the ambition that our project will have a profound impact on how perinatal care is conceptualised and organised in our own setting and elsewhere. We can already observe a shift in the attitude of the involved perinatal caregivers in the sense that the attention for wellbeing and mental health in the clinic is increasing. The fact that the psychiatrist and psychologist are physically present in the perinatal clinic, has also a profound effect on the interaction between caregivers. Formal as well as informal communication between caregivers of both disciplines supports a more shared care for women (and their families). We foresee that the progress that will be made in the coming years will take the integration of physical and mental health care even a step further. The implementation of the PHM toolkit in an experimental setting, such as the Ghent University Hospital, might inspire or stimulate other Flemish/Belgian hospitals to take a step in the same direction. We have already been approached by several other hospitals who are also interested in implementing the PHM toolkit and we are planning the following steps in rolling out the PMH toolkit in other Flemish hospitals. Therefore, we have developed a detailed (generic version of the) guideline to support implementation in other settings and will offer our support to guide other colleagues/hospitals through the process.

**Fourth**, a thorough scientific process and result evaluation, including necessary adaptations to the toolkit based on this evaluation, are an essential condition to guarantee a toolkit of the highest quality. We will involve patients, caregivers and researchers in this evaluation process to make sure we have the necessary data on all levels involved. Moreover, scientific evidence for PMH is quite scarce and data specifically for Flanders is lacking. Mapping the prevalence rates of PMH problems, developing an evidence-based screening-tool and evaluating new ways to support women to get the treatment they need are all innovative aspects with a clear added value for the current evidence base and health care system.

**Fifth**, investing in the PMH toolkit will most probably result in a high return on investment. A recent report revealing the economic costs (including direct, indirect, and intangible costs) of perinatal mental disorders (in women) to society and public services in the UK showed that long-term costs are estimated to exceed £8 billion for each annual cohort of births, implying a cost of £10,000 per birth and 60% of these costs are linked to the negative consequences of the parental mental health problems on the development of the child (Bauer et al., 2014). Primary prevention through sensitisation, early detection and adequate treatment through the implementation of the toolkit and training of caregivers can prevent many problems in the current and in the next generations.

If we were to win the PRoF-award, we would like to use the money to develop a professional sensitisation movie on PMH. The film would be aimed at a large audience of women and men of childbearing age and would aim to transcend the stigma surrounding PMH, open up the discussion and stimulate childbearing families to find help. It would frame the problem briefly in a creative way and provide a point of reference for 'normal' and 'abnormal' emotional/psychological changes in the perinatal period. This movie is the ideal tool to bring real-life experiences and provide tips and tricks in a constructive and positive way. The film would also be very useful during lectures for students and trainings for health professionals.

### **3. Link to the PRoF values**

#### **1. Awareness**

Awareness is an important first step in our project. PMH is a topic that is highly influenced by stigma and taboo. The PMH toolkit actively contributes to raising awareness by integrating screening for PMH in routine obstetrical care, hence it becomes part of 'normal' perinatal care. We also invest a lot of energy in training health care workers in addressing this topic. When professionals feel at ease and confident to address this topic, they will most probably identify problems at an earlier stage and be able to refer them to the appropriate treatment.

The lack of awareness is one of the reasons why we would like to invest the money associated with the PRoF-award in the development of a sensitization movie. We strongly believe this could have a major impact on awareness for PMH problems in childbearing couples as well as in health care workers.

#### **2. Comfort**

The period spanning pregnancy and childbirth is a time of vulnerability and increased demands on different levels (e.g. time, financial resources). The integration of PMH in the routine

perinatal care will maximise the accessibility and comfort with one clinic where all care is centralised. Our stepped care and tailored approach based on the needs of the patient/client and her family, will have a high chance of finding a solution that is as comfortable as possible.

### 3. Safety

Safety in the context of PMH is linked to several aspects. First, our PMH toolkit is designed to detect suicidality as soon as possible. The care pathway has clear guidelines and protocols that need to be followed when a risk for suicide has been identified. Safety of the mother and the child are key elements, especially since research has recently showed that in the UK 25% of maternal mortality is linked to suicide (Lancet editorial 2017). Moreover, infanticide is unfortunately still a risk that is linked to PMH. Sensitizing the broad public and providing PMH caregivers more tools and increase their confidence in addressing PMH, are essential weapons in the battle against maternal morbidity. Second, detection and treatment of PMH problems during pregnancy can prevent the development of problems in the postpartum period and even in the following generations. Our holistic approach of identifying risk factors early in pregnancy might increase safety and prevent psychological and physical morbidity in childbearing families.

### 4. Privacy

Linked with the intimacy surrounding pregnancy and childbirth, the Ghent University Hospital has been investing for several years in creating a homely environment in the Women's Clinic as research has shown that these aspects increase wellbeing and satisfaction with care. Privacy is a crucial aspect in this matter. Screening for and addressing sensitive issues such as PMH can only be done in circumstances where enough privacy can be guaranteed. The physical and logical organisation of the consultation area's offer a lot of privacy so that PMH matters can be discussed in privacy. The guideline and protocols contain clear agreements on what and how things should be written down in the electronic medical files and in the handheld notes. Health caregivers have a professional secret and how this matter should be addressed in the context of potential safety compromising PMH situations, is an important part of the training and guidance we provide to the PMH caregivers.

### 5. Loneliness

In our individualised Western society, pregnancy and childbirth are experiences that mainly concern the nuclear family. The role of the extended family is quite limited in most situations. Typically, women stay at home after birth and are the primary caregiver in the first weeks. Fathers often go back to work after 2 weeks of leave. When a woman has a limited social network or is the only one with a young baby at a certain time, she could feel very lonely and isolated in a major transition period in her life. Research has shown that social support is

crucial in this stage of life and can have a preventive impact on the development of PMH problems. The risk taxation phase in the PMH toolkit includes a lot of attention for these aspects and can help women to find support (e.g. mother groups, buddy-system etc.). Screening all women for PMH will also normalise PMH problems and might stimulate women to find help or support when they realise that they are not the only ones suffering of struggling.

## 6. Non-stigmatizing

The stigma surrounding mental health is well-documented. When pregnancy and childbirth are added to the equation, stigma is magnified along with self-doubt and guilt. Timely education about the warning signs and prevalence of perinatal mood and anxiety disorders helps to reduce stigma, empower women and their families to seek help, and provide information that a woman needs to advocate for herself or others (Kendig et al., 2017). There are several ways of contributing to the reduction of stigma that are implemented in our project. First, including screening for PMH problems in routine obstetric care is a very strong message and intrinsically raises awareness of these conditions (in providers as well as in patients). Second, women do not have to go to the psychiatry department to get the help they need. The psychiatrist and psychologist work in the Women's Clinic, in the perinatal consultation areas as well as in the delivery and maternity wards. Third, we have chosen to adopt a screening-approach where everyone will be screened. We have deliberately not chosen to go for a case-finding approach based on elevated risk-profiles to avoid stigma and increase detection rates. The awareness for stigma and how to overcome and address these matters are topics that receive a lot of attention the training of the professionals.

## 7. Intergenerational

Pregnancy and the arrival of a new baby signal a time of unparalleled change and hope for the future (Howard et al., 2014). It is a profound time of transition for women, men and their families where a myriad of social, psychological, behavioural, environmental and biological determinants shape the pregnancy and postpartum course. This stressful life event may increase the vulnerability to psychological distress and the onset/relapse of psychiatric disorders for both parents (Gentile et al., 2017). Moreover, there is quite a substantial amount of evidence (mainly for depression in women) that shows that PMH problems are associated with a range of negative outcomes such as spontaneous preterm birth and low birth weight, mother-infant interactional deficits, infant cognitive, behavioural, psychomotor and language development, and child psychiatric outcome. These negative effects of depression are long-term: e.g., teens who were exposed to maternal depression as infants are themselves more likely to be depressed and are at increased risk for externalizing disorders later in life (Segre et al., 2010; Franks et al., 2016; Kingston et al., 2015; Fontein-Kuipers et al., 2014). However, when PMH is identified and treated (preferably in an early stage), significant improvement in

the physical and mental health of mothers and babies can be made and this is exactly why we have implemented the PMH toolkit. The essence of our PMH project is based on the objective to prevent the intergenerational transmission of psychological/psychiatric problems and its consequences.

#### 8. Flexibility

Hospital stays in the context of normal childbirth are getting shorter, even more so in Belgium since Minister De Block has launched her initiatives in this context. As a consequence, there is a shift from a hospital-based care system to a system with a growing focus on primary care. Childbearing families should be able to choose their providers and combinations of different levels of care are in the process of being streamlined. Our PMH toolkit is developed with this flexible approach in mind. That is why the family doctor is the central caregiver in our approach. He/she is the ideal caregiver to coordinate both in- and out of hospital care for the women and her family during and beyond the perinatal period. Communication flows, access to electronic medical files and collaboration between all caregivers involved are aspects that need further attention.

Another aspect of flexibility in the PMH toolkit is the division of the guideline in a generic form that should be applicable to all Flemish perinatal care settings and a specific Ghent University Hospital version containing details on how we have organised the care in this setting. This approach enlarges the chance that it will be implemented in a variety of care-settings.

## 4. Applicable IPR rules

There is no patent pending for the PMH toolkit. The PMH toolkit is based on an open source philosophy with the objective to be accessible for a large public of health care workers. Open source copyright rules are applicable to the PMH toolkit.

## 5. Information on the partners

The founders and leaders of this project are prof. dr. Gilbert Lemmens (psychiatrist) and prof. dr. Kristien Roelens (obstetrician/gynaecologist). They both have been very actively involved since the very beginning of the project (2013) and their expertise reflects the interdisciplinary approach of this project.

Ms. Rita Van Damme (psychologist) and dr. An-Sofie Van Parys (midwife and sexologist) are the coordinators of the project since 2016.

Prof. Lemmens, prof. Roelens, Ms. Van Damme and dr. Van Parys are the core project team and collaborate closely with an interdisciplinary 'perinatal mental health' steering group which consists of:

- Dr. Vogels (psychiatrist of the Mother Baby Unit based in St.Denijs-westrem)
- Mr. Bauters (coordinator of the Mother Baby Unit, based in St.Denijs-westrem)
- Dr. Timmermans, dr. Steenacker and dr. Ghyselen (family doctors from two community health centres or 'wijkgezondheidscentra' in Ghent)
- Ms. Mortier and Lootens (public health nurses/midwives from K&G which provides care to pregnant women in vulnerable situations in the Ghent University Hospital)
- Ms. Buyle (midwife and head of the perinatal clinic)
- Ms. Trog (midwife and head of the maternity and delivery ward)
- Ms. Anneleen Van Malderen (social worker)
- Ms. Hanne Devos (coordinator of the 'expertise centrum kraamzorg' East-Flanders)
- Dr. Celia Van Zandweghe (child psychiatrist and specialist infant mental health)
- Prof dr Koen Smets (neonatologist)

The core project team also collaborates with their counterparts of the pilot project in the Mother-Baby-Unit in Zoersel, more specifically with Helga Peeters (psychologist) and Marij Leenaerts (coordinator Mother-Baby-Unit Zoersel).

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