



The National Maternity Hospital
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UCD School of
Nursing, Midwifery
and Health Systems

Evaluation of the Poppy Clinic – Postnatal Morbidity Service in the National Maternity Hospital

Clinical profiles of women who attend the Poppy clinic and
Women's experiences of the treatment & service received



Nursing & Midwifery
Planning & Development Unit
Dublin South, Kildare and Wicklow

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A Joint Research Network Project

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Preface

This study was undertaken by a sub-group of The Joint Research Network (JRN). The JRN is a partnership between the midwifery and nursing team in University College Dublin and the National Maternity Hospital. The JRN was established in 2007. The aims of the JRN are to:



- Focus research activity around issues of significance in midwifery and nursing practice
- Explore opportunities for joint research funding
- Establish research teams to conduct research
- Foster research networks
- Build the research capacity within the midwifery profession

The Poppy study:

The postnatal period is often referred to as the “Cinderella of childbirth” where care is perceived as being limited, especially for women with morbidities compared to intensive antenatal and intrapartum care. The Clinical Midwife Manager of the Out-Patient Department identified a gap in service for women who experienced a morbidity following pregnancy or birth. There was no dedicated clinic for these women to attend. In acknowledgement of the negative effect’s morbidity has on the quality of a women’s life during the postnatal period the Poppy Clinic (Postnatal Morbidity Clinic) commenced in 2013 to meet these women’s needs. The clinic offers structured care for mothers who suffered a morbidity due to a complication of their pregnancy, labour or birthing experience. Since its introduction the Poppy Clinic in 2013 the care offered continues to evolve and the number of women attending this clinic is increasing. As this clinic is the first of its kind in the Republic of Ireland, the Clinical Midwife lead of the research team highlighted the importance of completing an evaluation of the clinic to ascertain possible improvements needed for the service. This report on the evaluation study of the Poppy Clinic gives an increased understanding of the clinical profile and history of the women attending the clinic and the postnatal treatment and follow up care that was received. The study identified the referral pathways to the Poppy Clinic by healthcare professionals. Additionally, required improvements which are needed to the Poppy Clinic are reported on, to ensure the continued delivery of quality safe care for postnatal mothers. The study has generated new knowledge that may assist in the expansion of relevant postnatal care services nationally.

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Abstract

Background:

In 2013, a postnatal morbidity clinic, called the Poppy clinic, was developed by a senior midwife and consultant obstetrician. The clinic provides a service for women who experience a morbidity in the antenatal, intrapartum or postnatal period. Examples of these include wound breakdown or infection, post-partum haemorrhage, obstetric anal sphincter injury or traumatic birth requiring debriefing. As the clinic continues to grow, the clinical team deemed it imperative to evaluate the clinic to gain feedback on women's experiences of attending the clinic, and ideas from the women who attend the clinic on how the clinic could be improved?

Methods:

A cross sectional mixed-methods study design incorporating a retrospective chart review (n=179) and a survey of all women discharged from the clinic in a 6-month period (n=92). The survey instrument was developed from two questionnaires [(SWOPS – Satisfaction with Outpatient Survey (Keegan and McGee, 2003) and CARE – Consultation and Relational Empathy(Mercer et al., 2004)]which were modified with the authors' permission to include demographic questions, questions pertaining to waiting times and spaces for free-text comments. The survey was validated by an expert panel and a series of cognitive interviews were completed. The survey was sent to all women who were discharged from the clinic over a 6-month period, October 2018-March 2019. Descriptive statistics were conducted on the data using SPSS (version 24). This study received ethical approval from the research site ethics' committee.

Results:

Demographics of women attending the clinic and referral pathways are reported on. The most common reason for attending the clinic was wound complications (46.07%) followed by 3rd/4th degree tears (19.66%). Many women also attend the clinic for debriefing following a difficult birth or complication during the postnatal period. Of the 178 surveys distributed, 92 were returned (52% response rate). The overall rating of the clinic was positive. Some of the reported areas for improvement include waiting times and Knowledge of the women's history prior to the encounter.

Conclusion:

This study reports on the reasons for women attending a postnatal morbidity clinic and the referral pathways in place for referring women to the clinic. The report also presents reason for attending a postnatal morbidity clinic and the type of treatment given to the women. This service replaces the previous inconsistent and fragmented postnatal care for women suffering a morbidity. This service is a much-needed improvement in postnatal maternity care and can be adapted in other maternity units nation-wide. A key outcome from this evaluation of the Poppy clinic is the measures which have been put into place to improve women's experiences of attending the Poppy clinic.



Chapter One: Background and Introduction

1.1 Introduction

The birth of a baby is a special occasion in the lives of all involved and a major life changing event for a woman and her family. For most women childbirth is a positive and fulfilling experience (Halperin *et al.*, 2015; Lavender *et al.*, 1998). But for some women pregnancy and childbirth are associated with suffering and ill health (Halperin *et al.*, 2015; WHO, 2008; Singh and Newburn, 2000). For these women life becomes a challenge, with their pregnancy and birthing experience having a profound negative effect on their postnatal physical and mental well-being (WHO, 2008; Singh and Newburn, 2000). Therefore, the importance of high quality postnatal care cannot be underestimated as it will have a lasting effect on a mother's short and long term health (RCM Royal College of Midwives, 2014). Maternal morbidity is a wide ranging concept that refers to any 'physical or mental illness, or disability directly related to pregnancy and or childbirth, resulting in acute or chronic ill health for women that may affect relationships with their partner, family and newborn baby' (Hardee *et al.*, 2012). This is contrary to the perception that during the postnatal period a woman will be healed both in body and mind, reverting to their pre-pregnancy state (Way, 2012).

The postnatal period ranges from immediately after the birth of a baby

extending for up to 6 weeks or 42 days (Bick, 2017). This period is a critical time for a new mother's recovery, a time of adjustment and transition when her body and mind returns somewhat to a state of pre-pregnancy health (WHO, 2013). The care offered during the postnatal period should include the provision of a supportive environment in which a mother, her newborn and the family can begin their new life journey together (Malouf *et al.*, 2019; Bick, 2017; RCM, 2014). It is an opportunity for parents to develop parenting skills and a time for midwives to promote healthy behaviours for women and their families (Leahy-Warren *et al.*, 2012; Wieggers, 2006). Despite the acknowledgement of the importance of excellent postnatal care, the postnatal period is often referred to as the "Cinderella of childbirth" (Bhavnani and Newburn, 2010). Care is perceived as being limited compared to the intensive antenatal and intra-partum care given by organisations and clinicians (Beake *et al.*, 2010; Bhavnani and Newburn, 2010). Lack of funding and specialist interest into

"Women are not dying (sick) of diseases we can't treat.... They are dying (sick) because societies have yet to make the decision that their lives are worth saving"

Professor Mahmoud Fathalla, Research Advisory Committee Chair, World Health Organisation (Amnesty International, 2016)

postnatal care has a detrimental effect for women who, as a result of pregnancy and childbirth, suffer from a postnatal morbidity.

1.2 Background

There is increasing research available on physical symptoms women experience following childbirth, and the effect that complications, or morbidities, have on a woman's quality of life (Jones *et al.*, 2019; Angelini *et al.*, 2018; Webb *et al.*, 2008). Webb *et al.*'s study reiterates the silent suffering caused by lasting physical health consequences related to childbirth, with several other studies reporting that health professionals are not discussing these issues with women, postnatally (Woolhouse *et al.*, 2014; Kabakian-Khasholian *et al.*, 2014; Brown and Lumley, 1998). Recommendations from Webb *et al.*'s study include the importance of healthcare professionals having a greater understanding of physical health problems, more relevant clinical assessments and the development of individual care pathways for women up to one year following childbirth (Webb *et al.*, 2008). More recently, Prick *et al.* (2015) examined the influencing factors on women's postnatal physical health following a pregnancy or birth complication. Their report supports Webb *et al.*'s (2008) findings that morbidities need to be assessed, treated and managed effectively to greatly enhance the

quality of women's lives. Prior to the development of the Poppy clinic, this literature mirrored the inconsistent approaches to postnatal follow up for mothers who suffered a morbidity following childbirth at the research site – the National Maternity Hospital.

As a midwife manager of a busy antenatal clinic and a background in postnatal care and management within a large urban Irish maternity hospital, the lead clinical researcher observed that there was a lack of formal postnatal follow up for women who suffered morbidity following pregnancy, labour or childbirth. Mothers were discharged home to routine community postnatal services offered by the Public Health Nurses (PHN) and General Practitioners (GP). No structured postnatal follow up was available to the vast majority of 'at risk' women. Following their discharge home, if women had any clinical issue or concerns in the postnatal period, they would have to attend the hospital's emergency department for assessment and management of their morbidities. There was an ad-hoc approach to their care within the organisation, with no specific clinician assuming responsibility for assessing, managing and following up of their morbidity. The lead clinical researcher identified that 25% of all women who attended the hospital's emergency department were postnatal mothers. This

lack of formal postnatal care offered within the hospital reflects Wray's (2012) world-wide findings, that postnatal care receives the least focus from professionals. Additionally, Whapples (2014), in her paper, recommended specific postnatal services be available in maternity hospitals so health care professionals in the community have somewhere specific to refer women who develop a maternal morbidity following their discharge from the hospital.

The emerging picture of inadequate postnatal service for women who experienced a morbidity following pregnancy or childbirth was a gap that needed to be addressed. In view of these findings, a postnatal morbidity clinic was developed, called the Poppy clinic to bridge this service gap. The concept of a postnatal maternal morbidity clinic is a fundamental shift in postnatal care (Lewis, 2013). Prior to this, as outlined by Laliberté *et al.* (2016) in their randomised controlled trial in Canada, healthcare professionals were missing an opportunity to identify and manage health problems that postnatal women may experience that result in a morbidity. Lewis (2013) undertook a study to ascertain women's experience of a postnatal clinic; the participants found it beneficial, as they received support from health professionals and other new mothers.

As this clinic is the first of its kind in Ireland, the research team felt that it was imperative to evaluate its effectiveness and establish services areas that could be further improved. A chart review was conducted to determine a profile of women attending the Poppy clinic. A survey was also carried out to evaluate women's experiences of attending the Poppy Clinic.

1.3 The Poppy Clinic - Postnatal Maternal Morbidity Clinic

The Poppy clinic was developed in 2013 and is held in the outpatient department of the research site. This service is provided by a consultant obstetrician and Advanced Midwife Practitioner (AMP) in Assisted Care. When required, allied health professionals are involved in the woman's care. The remit of the postnatal maternal morbidity clinic, entitled the Poppy clinic, formally assesses, manages, and follows up physical and emotional complications for mothers following childbirth, using a multidisciplinary approach, as required. The introduction of this clinic is in line with best practice in offering quality, safe care. This is in accordance with the National Institute for Health Care and Excellence (NICE) guidelines (2013) who recommends that postnatal service should be expanded to meet the needs of mothers who suffer complications following childbirth. A mothers' needs may be

psychological, social or physical. Additionally, this clinic is in accordance with Ireland's National Maternity Strategy (Department of Health (DoH), 2016) which highlights the importance of identifying and supporting mothers at risk and recommends a multi-disciplinary, integrated approach in line with the needs of the mother.

Caroline Brophy, the AMP, Assisted Care for the Poppy clinic explains how the concept of the clinic arose:

“Over a decade ago, as Clinic Midwifery Manager II of a Postnatal Ward, I was acutely aware of the morbidities that a number of new mothers experience following their labour, delivery and/or the immediate postnatal period. Mothers were discharged home to routine community postnatal services offered by the Public Health Nurse and her General Practitioner. There was an ‘ad-hoc’ approach to any necessary hospital follow up, but no structured postnatal outpatients’ clinic was available to this group of vulnerable women. This gap in service was frustrating for the mothers, but also for midwives and obstetricians who struggled to arrange a follow up appointment with identified clinicians who would be responsible for assessing and managing their morbidity.

More recently in my role as Clinical Midwifery Manager II to the Maternity Outpatient Department the same frustrations persisted. I realised that a large number of new mothers were attending with ongoing complications from the birth. There was a constant struggle to find a clear pathway for these mothers and a gap in consistent and structured care was evident. I began to collect data to help identify the problem and in 2012, over a six month period found that 25% of all women who attend the casualty unit were women who suffered a postnatal morbidity. This supported the anecdotal evidence that there was a problem.

As a result of these frustrations, I thought, why not create a specific postnatal maternal morbidity clinic for these vulnerable, new

mothers. I discussed the matter with the Director of Midwifery and Nursing and suggested developing a specific clinic to address this need. She was very supportive as was the Master of the hospital. They had confidence in my ability to develop & lead out in this new service and gave me the autonomy and support to proceed.

The service required a Consultant Obstetrician, to work with me. Dr Laoise O Brien happily agreed and has been the obstetric lead since the start. Initially, the clinic was named the Postnatal Maternal Morbidity Clinic, but after a few months and some feedback from women I decided that it needed a less frightening, softer name, hence became the Poppy Clinic. It started off very small, but has grown exponentially over the past few years, bridging that initial gap....from little acorns!!”

The Poppy clinic has significantly expanded and developed its services to provide support for women who have had a complicated birth. The clinic allows women to debrief by discussing unexpected or unfavourable events surrounding their birth and this often allays fears about subsequent pregnancies.

Attendance to the Poppy clinic has significantly risen since its initiation. Records reveal that the attendance rate in 2013 was 122, which substantially rose to 621 attendees in 2018 (not including women who were visited by a Poppy clinic midwife/obstetrician outside clinic times) (NMH, 2019).



Chapter Two: Review of the Literature

2.1 Introduction

This chapter presents a review of the literature on current postnatal care, postnatal maternal morbidity, and its effect on a mother's quality of life.

A search of the relevant literature in relation to postnatal morbidity commenced in May 2018. Information was gathered using the search engines CINAHL (Cumulative Index of Nursing and Allied Health Literature), One Search, MEDLINE (Medical Literature Analysis and Retrieval System Online), OVID, Pub Med, Google Scholar and Cochran Library. Textbooks on sociology, midwifery and obstetrics were also explored to gain further background and information available on the subject. Additionally, a review of current policies and statistics both nationally and internationally, was undertaken. Keywords and headings used to search the literature included maternal morbidities - chronic, acute, direct or Indirect, the effect on mother, woman, mother, family; postnatal (post-natal, post-partum) complications, following labour and delivery and current postnatal care.

Several studies were identified from the search. The findings from the literature review are presented using the themes highlighted from the literature; these include postnatal care, maternal morbidity, risk factors, and psychological and physical effects of maternal morbidity.

2.2 Maternal Morbidity

The expectation for women and their families is that the birth of their baby is a happy, fulfilling time (Borg Cunen *et al.*, 2014). New parents expect to be excited, glad, relieved and grateful that the process of pregnancy and birth is over, and their baby has arrived safely (Ayers, 2007). Morbidity is a complication of childbirth, resulting in acute or chronic ill health for women and may affect relationships with their partner, family and new-born baby (Fenech and Thomson, 2014; Hardee *et al.*, 2012). Maternal morbidity is a wide-ranging concept that refers to any physical or mental illness or disability directly related to pregnancy and or childbirth (Koblinsky *et al.*, 2012). Morbidities may not necessarily be life-threatening but may result in a significant impact on the quality of life for the woman (Peeler *et al.*, 2018; Leahy-Warren *et al.*, 2012; Koblinsky *et al.*, 2012).

Between 2000 and 2017, maternal mortality reduced globally by 38% (WHO, 2018). As more women are surviving severe complications in childbirth, there is an increase in postnatal maternal morbidity. WHO estimates that approximately ten million worldwide women suffer some degree of morbidity related to their pregnancy or birth (WHO, 2010). This finding is also reflected in the Irish context where severe, acute maternal morbidity rates increased over five years from 4.44 per 1,000 maternities in 2012 to

6.42 per 1,000 maternities in 2017 - a 45% increase (NPEC, 2018).

Severe maternal morbidities include: major obstetric haemorrhage (the most common morbidity); uterine rupture; eclampsia; renal or liver dysfunction; pulmonary oedema; acute respiratory dysfunction; pulmonary embolism; cardiac arrest; coma; cerebrovascular event; status epilepticus; septicaemia; anaesthetic complications; other morbidities and maternities involving peripartum hysterectomy. Severe acute maternal morbidity is usually acute and unanticipated (Angelini *et al.*, 2018; Furuta *et al.*, 2014). It is defined by the WHO as "a woman who nearly died, but survived a complication during pregnancy, childbirth or within 42 days of pregnancy termination in a health facility" (Pattinson *et al.*, 2009). The Severe Maternal Morbidity Report in Ireland (NPEC, 2018) use a multitude of different terminologies (Obstetric Complications, Maternal Complications, Absolute Maternal Complications, Near-Miss incidences and Severe Acute Maternal Morbidities) to classify the group of acute maternal morbidities which occur during pregnancy and within 42 days post-partum. Examples of Irish national rates of severe, acute maternal morbidities include massive obstetric haemorrhage (3.1 per 1000 maternities), renal or liver dysfunction (0.82 per 1000 maternities) and severe sepsis

(0.21 per 1,000 maternities) (NPEC, 2018). Guidelines are developed, implemented and reviewed using such findings to manage and prevent acute postnatal maternal morbidity (NICE National Institute for Health and Care Excellence, 2006). An example of this is the introduction of a guideline to risk assess women for venous thromboembolism to reduce the risk of maternal mortality and morbidity associated with this complication in pregnancy and the puerperium (RCOG, 2015).

According to Guilmezoglu *et al.* (2004), data on less severe maternal morbidities are under-reported by women themselves or community health care professionals, resulting in decreased awareness, overall. Up to recently, most literature has focused on severe acute maternal morbidities as opposed to the non-life-threatening postnatal morbidities. The recently completed MAMMI study (Maternal health And Maternal Morbidity) (2018), however, has been fundamental in highlighting more common maternal morbidities such as urinary and faecal incontinence, sexual health issues, pelvic girdle pain, mental health problems and nutrition and physical activity. This landmark longitudinal study gathered evidence from women who attended three different maternity units in Ireland about the health problems they have experienced during pregnancy and after childbirth (Daly *et al.*, 2018;

O'Malley *et al.*, 2018). The results of this study highlight the prevalence of these morbidities – most of which are treatable. For women, it is essential to gain an understanding of the event which could give rise to morbidity and the likely effect on their quality of life which will enable them to identify supports and resources available to treat and manage their physical and psychological needs. Despite the adverse effects on mothers and the increasing rates of maternal morbidities both nationally and internationally (NPEC, 2018; WHO, 2010) there is limited specialist postnatal care available. Therefore, it is vital to have a postnatal morbidity clinic where women can be assessed, treated, followed up and, if necessary, referred on to an appropriate health care professional using a multidisciplinary approach. Hence the importance of undertaking this evaluation study of a postnatal morbidity clinic.

2.3 Postnatal care

The postnatal period is a period of transition for a woman's body, her mind and her family (Shaw *et al.*, 2006). Appropriate care during this recovery time is essential for a mother to return to a state of health and well-being (WHO, 2013). Postnatal care includes the provision of a supportive environment in which a mother, her baby and the family can begin their new life together. It is an opportunity for parents

to develop parenting skills and a time to promote healthy behaviour for women and their families (Leahy-Warren *et al.*, 2012; Wieggers, 2006). This is achieved through midwives working in partnership with mothers (Department of Health, 2016; NICE, 2006). An essential aspect of care is the recognition of deviations from the expected norm in the recovery of both the mother and baby (NMBI, 2016; Mason *et al.*, 2001). Care is offered in hospitals, birth centres, in the woman's own home, postnatal clinics and primary health centres (Shaw *et al.*, 2006), by relevant competent healthcare professionals.

Care during the postnatal period should be given equal credence to antenatal and intrapartum care, thus significantly improving the quality of health for the mother, baby and her family (RCM, 2014). Suboptimal postnatal care of a woman who suffers a complication may have a negative domino effect on the mother's health, her baby and family. Long term morbidity can also affect the economic and social circumstances of the couple (Koblinsky *et al.*, 2012).

2.3.1 Models of Postnatal Care

Within the Irish context, the model of postnatal care available to women varies greatly (NPEC, 2018). The pregnancy care package chosen by mothers influences the postnatal pathway of care (Schmied and Bick, 2014). Pregnancy care options

available to women include public, private, semi-private or community care. Community care includes DOMINO services in select urban areas and self-employed community midwives, all of whom provide postnatal care at home. The limitations of the available models of care in Ireland highlights a significant gap in the service with referring mothers, who have suffered morbidity during pregnancy, labour or childbirth, to specialised postnatal care.

In Ireland, following childbirth, a mother with private health insurance is entitled to stay in a private room at a maternity hospital and also has continuity of care with their obstetric consultant. Their obstetrician visits them on the postnatal ward and performs their six-week postnatal check-up. Mothers can contact their consultant for a review if a complication develops during the first six weeks following birth. This contrasts with women who attend public postnatal maternity care which most women in Ireland avail of (NMH, 2019).

Length of hospital stay during the postnatal period is decreasing in contrast to the increasing caesarean section rate, where mothers require more postnatal care (RCM, 2014). In Ireland, approximately 15% of women have operative vaginal births, and 34% of women are delivered by caesarean section (HSE, 2019). For over a decade, the limited number of postnatal beds within maternity hospitals is a major

influencing factor in determining the length of time a newly delivered mother stays in hospital (McLachlan *et al.*, 2009). The birth rate in Ireland in 2018 was 59,981; this rate has since steadily decreased over the past five years (HSE, 2019). Despite this, IMIS (Irish Maternity Indicator System) has reported an increase in the caesarean section rate by 13.9% in the preceding five years (HSE, 2019). Postnatal care options for women attending the public model of care include hospital care, early transfer home care or discharge from hospital to the Public Health Nurse.

Findings from the literature highlight the differences between postnatal care services nationally and internationally. In New Zealand, mothers are visited by midwives between 5 and 12 times during the first six weeks after birth (Schmied and Bick, 2014). Mothers with co-morbidities or those who have experienced a complication of pregnancy or birth, resulting in morbidity are facilitated with more frequent visits (Ministry of Health, 2012). In the Netherlands, mothers receive up to six visits by a midwife within the first 10-12 days following discharge (Wiegers, 2006). In the UK, the Royal College of Obstetrics & Gynecology advises that quality postnatal care is essential to achieve optimal health for mothers and babies (RCOG, 2011) and the routine length of care offered to women continues

up to 10 days post-birth (RCM Royal College of Midwives, 2014).

The Early Transfer Home Program (ETHP) commenced in Ireland in the early 2000s in several maternity units around the country. The service facilitates new mothers and their baby, who live within a designated catchment area, to be discharged home within 6 to 24 hours after birth (NMH, 2019). Hospital-affiliated community midwives offer care for up to 5 days following birth, which is a disparity to the UK community service of 10 days (RCM, 2013). On the day of discharge from the ETHP scheme, care of the mother and baby is transferred to the local PHN and GP with an individual care pathway identified. Excellent communication for the transition of care is essential, as failure to share relevant information may lead to inadequate assessment and follow up care for the mother and baby (Psaila *et al.*, 2014).

In Ireland, routine care by the PHN involves visiting a postnatal mother and her baby once within 48 hours of discharge from hospital care (Begley *et al.*, 2011). The service is delivered by PHN's who, since 2005, no longer have a requirement to be registered midwives (HSE, 2007). Therefore, women and their babies are being assessed by PHN's who may not have a midwifery qualification and may not recognise deviations from the norm which is essential for adequate postnatal care

(NMBI, 2016). The Royal College of Midwives (2013) have identified that a lack of competent midwives in the community leads to acute and chronic physical and psychological issues for women. The Institute of Community Health Nursing (ICHN) report (HSE, 2007) recommended the urgent introduction of a community midwifery service to deliver care to mothers and babies in Ireland. Despite this, to date, this recommendation has not been enacted in many regions, resulting in an inequitable service to many postnatal women.

The ICHN (HSE, 2007) recognise that failure of strategic planning by key stakeholders within the Irish Health Service has added to the neglect of postnatal care by failing to introduce community midwives into each primary health centre. A review of postnatal care offered by the NHS, in the UK, recommends that midwives should be the lead health care professional in the community for women up to one year following childbirth (Bick *et al.*, 2020a; National Maternity Review, 2016). In conjunction with the Public health nurse visits, a women's GP provides two postnatal visits for the mother and baby. Both visits involve examination of the newborn. The mother should be examined at a 6-week postnatal visit. Discussions should take place about her adjustment to her new life, how she is coping, and opportunities given to the mother to address any

concerns. To further improve postnatal care, the new National Maternity Strategy for Ireland, 2016-2026 (Department of Health, 2016) recommend that women should be reviewed between three- and four-months following birth by a health care professional to assess their physical and psychological well-being. This service is not currently in place in Ireland, and while recommended, there are no current plans to introduce this quality improvement within the near future.

To assess current specialist postnatal care services available in Ireland, the 19 maternity units in the country were contacted by the clinical lead in the current study. Many of the hospitals offer unstructured postnatal care to mothers who require extra postnatal support in addition to routine postnatal care. Only one hospital reported a specific postnatal morbidity clinic which is in line with the UK Quality and Standards of Postnatal Care (NICE, 2013), who recommend that 'at risk' women should receive additional planned and specific postnatal care. Included in this group are women with underlying co-morbidities, complicated pregnancies and births, infections and poor social circumstances.

2.3.2 Attitudes to Postnatal Care by Midwives and Women

The Royal College of Midwives (2013), in a UK survey, investigated 2,349 midwives'

views of the quality of postnatal care offered within their workplace. The findings in their report reflect midwives' beliefs that the care they offer to new mothers and their babies is inadequate and sub-standard. The main concerns highlighted were that organisational requirements influenced 65% of visits offered to mothers; only 20% of visits were determined by the postnatal mother's needs and 42% felt the care offered did not meet the women's clinical needs. Of the midwives surveyed, 20% reported difficulty in finding adequate professional support required for postnatal women who required additional or specialist care. Midwives also reported that adequate time, professional guidance and proper referral pathways for further support were not routinely available for postnatal women (RCM, 2013).

Reflecting on mother's experiences of postnatal care in Norway, Dahlberg *et al.* (2016) found that new mothers were satisfied with midwives' postnatal visits at home, where knowledge was shared, and guidance was provided to an adequate standard. Their qualitative findings concluded that women value the opportunity to discuss their birth experience as they feel vulnerable in the early postnatal period. Supporting the importance of adequate postnatal visits, the NICE (2006) recommends that each woman should have at least three visits in her home by a skilled, competent

practitioner, therefore offering high-quality care. More recently, the World Health Organisation (WHO) updated their recommendations in terms of postnatal contacts with a healthcare professional and now recommend an extra postnatal check between days seven and fourteen (WHO, 2014). Contrary to this, a study by Bhavnani and Newburn (2010) highlighted concerns with postnatal care. They conducted a questionnaire on 1,000 first time mothers, who reflected on the care they received during the postnatal period. Findings revealed that there were an inadequate number of midwives to provide consistent, well planned and appropriate care. To date, no Irish study has been published related to examining women's experience of postnatal care - particularly women with morbidities.

2.4 Contributing Factors which Increase Risk of Maternal Morbidity

The importance of identifying 'at risk' women who may develop postnatal morbidity is vital to enable healthcare professionals to put pathways in place to identify and reduce this risk (Lindquist *et al.*, 2015). From reviewing the literature, several factors increase the risk of women experiencing a morbidity. Maternal age is a significant contributory factor. Women who are 34 years of age or older have an increased risk of having a maternal

morbidity (Lindquist *et al.*, 2015; Waterstone *et al.*, 2001). This is worrying as the average age of pregnant women is increasing (CSO, 2017). In Ireland, the average age of first-time mothers has steadily increased from 25.3 years in 1970 to 31.1 years in 2017 (CSO, 2017). Consequently, women in Ireland have a higher risk of increased maternal morbidity due to their age.

Women with a pre-existing medical condition referred to as co-morbidity, such as epilepsy are 2.62 times more likely to suffer pregnancy-related morbidity (Lutomski *et al.*, 2012). Any medical intervention, such as an assisted operative birth, even if conducted in the interest of mother and baby, can result in increased levels of postnatal psychological distress (Snowdon *et al.*, 2012). Another causative factor which leads to morbidity is obesity, which is increasing worldwide (Cantwell *et al.*, 2011). There is currently no national data on maternal obesity in Ireland. The obesity rate among mothers at the research site was 12.4% in 2017 (NMH, 2018), which is significantly lower than another maternity unit in Dublin of 18.9% for the same period (Reynolds *et al.*, 2019). Obesity in pregnancy significantly increases gestational diabetes, pre-eclampsia, wound infection and post-partum haemorrhage (Reynolds *et al.*, 2013).

Socioeconomic status is also a risk factor. Women from lower socioeconomic groups are 1.22 times more likely to experience a degree of maternal morbidity, irrespective of other risk factors (Lindquist *et al.*, 2015). Lindquist *et al.* (2015) reported these findings in a UK national case study of maternal morbidity, which included socioeconomic status. A limitation of this study identified that not all socioeconomic data were available for inclusion in the report. The lack of reporting of chronic morbidities and their effect on the quality of women's lives was associated with women who were socially deprived and poorly educated compared with women from more affluent and educated societies (Louis *et al.*, 2015). A descriptive study carried out by Assarag *et al.* (2013) in health districts in Morocco looked at information on maternal morbidity obtained by doctors versus morbidity which was self-reported by women. The research included women from all age groups and women from all socioeconomic groups. One finding identified that self-reported morbidities at six weeks postnatal were by educated women in employment, who gave birth at a private institution. A limitation of this study was the inaccuracy of information obtained through the large non-attendance of women of whom 28% were from the lower socioeconomic group. The significant non-attendance to appointments, from this vulnerable group of women, supports the

view that more research in this area is required.

Women from minority ethnic groups are also at an increased risk of morbidity and mortality due to language barriers, cultural differences and unfamiliar health services (Knight, 2019; Duckitt and Harrington, 2005). Lack of understanding by health professionals to specific cultural needs increases maternal morbidity (Tobin *et al.*, 2014). This finding is further supported by the anti-immigrant culture and policies developing in countries worldwide, with reduced access to services and failure to understand culture and vulnerability by both parties (Van den Akker and van Roosmalen, 2016). Evidence suggests that poor communication, caused by language differences, from health professionals throughout pregnancy and labour contributes to an increased risk of postnatal morbidity. This has been particularly highlighted in situations involving high-risk pregnancies and pregnancies which encounter emergencies (Hinton *et al.*, 2014; Snowdon *et al.*, 2012).

Midwives and obstetricians are vital in terms of identifying women at risk of developing maternal morbidity and implementing a care pathway for them, which is inclusive of quality postnatal care.

2.5 Consequences of Maternal Morbidity

The causes of maternal morbidity are complex and are a result of both direct and indirect factors. Therefore, it is imperative that clinicians and health care planners working in women's health place maternal morbidity on all agendas, highlighting the incidences and effects (Say *et al.*, 2009).

In parallel with severe morbidity, less life-threatening and chronic maternal morbidity must be recognised when developing healthcare policies (Zafar *et al.*, 2015).

2.5.1 Defining Maternal Morbidity

From reviewing the literature, chronic maternal morbidity following childbirth is challenging to define, identify and monitor. At the beginning of this century, chronic maternal morbidity was not acknowledged as significant by healthcare professionals (MacArthur *et al.*, 2002). It is, however, imperative that a definition of chronic illness be applied to ensure the safe delivery of maternal and infant health care services. Therefore, the concept of chronic maternal morbidity needs to be understood. Bury (1991) defines chronic illness as 'a long term and perhaps permanent, event in a person's life', which 'represents an assault not only on the person's physical self, but also the person's sense of identity, calling into doubt the person's self-worth'.

Healthcare professionals, however, give little credence to chronic, or 'non-severe' postnatal morbidities (Cooklin *et al.*, 2015; Koblinsky *et al.*, 2012; Herron-Marx *et al.*, 2007), leading Firoz *et al.* (2013) to concede that there is lack of a standard definition for chronic maternal morbidity. When women were questioned about their views on their postnatal well-being, they believed that healthcare workers focused on the wellness of the new-born baby to the detriment of woman's post-birth health (Rouhi *et al.*, 2019; Beake *et al.*, 2005). Findings by Rouhi *et al.* (2011) support this and report that only 45% of women receive any education on postnatal health problems. Participants reported healthcare professional's dismissal of their concerns, with some women stating that they were made to feel like they could not cope with pain (Rouhi *et al.*, 2011). In the event of a woman experiencing a pregnancy-related complication, the information should be given to the woman at the time of discharge informing them of potential long term physical problems associated with the specific complication and whom to contact if concerned (Cooklin *et al.*, 2015; Williams *et al.*, 2007).

Long-term physical and psychological effects following childbirth are only recently being recognised as chronic morbidities for women. The acknowledgement of the effects of chronic maternal morbidity on the quality of life of a woman supports the

development of pathways by health professionals in hospitals and communities to support women and their families. This relatively new acknowledgement and understanding by healthcare professionals has resulted in a changing culture within healthcare. An example of the support for this change in culture is the MAMMI study mentioned earlier – the multicentre collaborative research project was undertaken by Trinity College, Dublin, the Rotunda Hospital, The Coombe Women's Hospital, and University Hospital Galway in Ireland (O'Malley *et al.*, 2018). As a result of the findings of the study, a free online course was developed to help women take care of their physical and mental health after the birth of their child – www.futurelearn.com.

To date, many studies on chronic morbidities affecting women following childbirth have focused on mental health, debriefing opportunities and post-traumatic stress disorders (Zafar *et al.*, 2015; Pearson *et al.*, 2013; Jones *et al.*, 2013; Leahy-Warren *et al.*, 2012). This is reflected in an Australian study into postnatal depression in women at one year following childbirth which coincidentally captured significant physical morbidity symptoms experienced by women at three months postnatal (Woolhouse *et al.*, 2014). More recently, an association between depression and hypertensive disorders was found (Strapasson *et al.*, 2018).

Awareness of the effect of chronic physical morbidities on women's lives is now being recognised, but the incidence and effect of maternal morbidities are underreported worldwide (Hardee *et al.*, 2012). Whapples (2014), in her exploration of women's experience post vaginal birth, identified that embarrassment and the acceptance of morbidity following childbirth was considered by the participants as a normal consequence of birth. These may contribute to the under-reporting and hence under-recognition of chronic maternal morbidity. Williams *et al.* (2007) recommended that if there was an increase in self-reporting by mothers and a reduction of women's sensitivity and embarrassment, this could assist chronic postnatal morbidities and their effects to become part of public health and social awareness. They suggest the need for further research into women's experience of postnatal morbidity as this could result in the development of appropriate services for specific needs.

2.6 Maternal Physical Symptoms Associated With Postnatal Morbidity

The physical consequences of childbirth can be divided into many subsections: acute or chronic symptoms, infection, pain, fatigue and change and damage to bodily functions, all of which affect a mother's health and well-being, influencing her

quality of life (Gon *et al.*, 2018; Stephansson *et al.*, 2016; Way, 2012). To adequately assess chronic physical morbidity in postnatal women, it is vital also to assess their pre-pregnancy status. Yeniel and Petri (2014) and Durnea *et al.* (2014) discuss the importance of collecting information on the quality of a woman's sexual health and urinary function at their first antenatal visit. This data can be used as a baseline to measure a woman's postnatal wellness when assessing a reported sexual and urinary morbidity.

2.6.1. Perineal Morbidity

Postnatal perineal morbidity is defined as damage to the perineum and pelvic floor during childbirth (Williams *et al.*, 2007). Obstetric Anal Sphincter Injury (OASI) is a rare but severe consequence of vaginal birth, causing damage to the anal sphincter muscles (Waldenström and Ekéus, 2017). The research site reported 80% perineal trauma rate for those women who had spontaneous vaginal births and 98.6% perineal trauma rate for the percentage of women having an operative vaginal birth (NMH, 2019). Perineal trauma results in the short-term or long-term effects on women. Reported long term effects of any perineal trauma are chronic pain, urinary incontinence, anal and faecal incontinence, dyspareunia, relationship breakdown and depression (Steen and Diaz, 2018; Priddis *et al.*, 2013; East *et al.*,

2012). Up to 85% of women following childbirth will suffer a degree of perineal trauma, ranging from perineal and clitoral tears and grazes to 4th-degree tears, including muscle and nerve damage.

Williams *et al.*s (2007) findings highlight that 87% of women reported some type of perineal morbidity 12 months post vaginal delivery. The morbidities reported in their study were 14.9% faecal incontinence, 80% urinary problems and 30.3% dyspareunia. The mode of delivery, length of the second stage of labour and infants born over 4kg are reported in the literature as the major risk factors for OASI (McPherson *et al.*, 2014; Baghurst and Antoniou, 2012; Revicky *et al.*, 2010).

2.6.2. Anal and Faecal Incontinence

Anal and faecal incontinence results from damage to the anal sphincter muscle at the time of birth. Macleod *et al.* (2013) report incidences were varied between 0.6% and 6%. In addition to these symptoms, women have reported feelings of embarrassment and social isolation (Priddis *et al.*, 2013; Olsson *et al.*, 2011; Fialkow *et al.*, 2003). For many women, the effect of faecal incontinence remains "hidden away" alongside many other chronic complications of childbirth (Rasmussen and Ringsberg, 2010; Ayers, 2007; Brown and Lumley, 1998). This highlights the need for postnatal clinics to create an environment which enables women to

report such morbidity without feeling embarrassment or shame. Questioning women about faecal incontinence should be part of routine postnatal care.

2.6.3 Urinary Incontinence

The cause of postnatal urinary incontinence is not an exact science. The belief is that it is related to nerve injury and the normal physiological, structural changes related to pregnancy (Chaliha, 2009). A study by Glazener *et al.* (2014) of 747 postnatal mothers in the UK concluded that 80% of their participants suffered from urinary incontinence at three months postnatal. Chang *et al.* (2011) reported that women who received an episiotomy had a higher degree of urinary incontinence. Like women with faecal incontinence, women disclosed that they were too embarrassed to report this to a health care professional (Chang *et al.*, 2011).

2.6.4 Pain

Pain following birth is usually caused by perineal trauma, uterine contractions and breast-related issues (Chang *et al.*, 2011). Additional causes of postnatal pain are caesarean section wounds, back pain, dysuria and haemorrhoids (Cooklin *et al.*, 2015; Woolhouse *et al.*, 2014). Pain can affect sitting, mobilising, driving, urinating and defecating, mobility and ability to care for self or new-born, as well as insomnia and infection (East *et al.*, 2012). Up to 90%

of women who have a vaginal birth experience perineal pain (East *et al.*, 2012). Pain can additionally result in physical exhaustion, reduced coping abilities and increased risks of poor psychological health (East *et al.*, 2012; Chang *et al.*, 2011).

Woolhouse *et al.* (2012) researched common postnatal morbidities in women during the first 18 months post-partum. Their study included over 1000 women who delivered in Melbourne, Australia. When asked about postnatal complications, the pain was reported as one of the most common morbidities experienced by women at three months postnatal. The leading associated causes of pain included: caesarean section pain (56% of women who had a caesarean section); perineal pain (43% of women who had a vaginal birth); and back pain (72% - at least once). The study reflects medium-term non-life-threatening morbidities and highlights the need for postnatal follow up past the routine 6-week check-up.

2.7 Sexual Health

Sexual morbidity occurs when a woman experiences a degree of negativity regarding her sexual health following childbirth. Sexual health is defined as 'a state of physical, emotional, mental and social well-being related to sexuality; it is not merely the absence of disease, dysfunctional infirmity' (WHO, 2002).

Dyspareunia (painful intercourse) is the most common cause of sexual ill-health for women in the post-partum period (Yenial & Petri, 2014).

Body image has a large part to play in sexual relationships, and many women are affected negatively about their own body image after childbirth (Olsson *et al.*, 2005), with women reporting feeling less attractive. McDonald and Brown (2013) questioned over 1000 Australian women on their resumption of sexual intercourse following childbirth. Their findings reported that 65% resumed sexual intercourse by eight weeks following delivery, 78% by three months and 94% by six months post-partum. The majority of women waited until after their six-week postnatal check before resuming sexual activity. Other influencing factors on commencement of sexual activity were fear after perineal trauma, type of birth, age, tiredness or not currently in a relationship.

Layton (2013) questioned 80 first time mothers in a Welsh hospital about the effects of perineal trauma on their sexual health. 25% of women experienced dyspareunia, and 8% of women experienced long term pain for the first six months following delivery. A limitation of this study was the small numbers involved, and it did not include information on whether the women had suffered dyspareunia before or during pregnancy. A significant finding in a UK study in 2000

(Barrett *et al.*, 2000) was that only 15% of women who had a postnatal sexual problem reported this problem to a healthcare professional. Two decades later, parents are still finding it difficult to broach this subject with a healthcare professional and recommend that clinicians take the initiative not only to warn women and their partners about the possible changes in their sexual health before childbirth but also question them on their sexual health postnatally (Stavdal *et al.*, 2019). Unfortunately, lack of time and lack of knowledge have been reported as barriers to adequate provision of postnatal counselling about sex (Olsson *et al.*, 2011).

2.8 Psychological Effect

2.8.1 Mental Health Disorders

Though the focus of this literature review is on the physical morbidities experienced by mothers, it is essential to acknowledge the effect morbidity has on mental health.

Physical morbidity experienced by women is recognised as an important contribution to postnatal depression (Dunn *et al.*, 2015; MacArthur *et al.*, 2002; Brown and Lumley, 2000). Physical symptoms such as severe fatigue, chronic back pain, perineal and pelvic pain and urinary incontinence increase a woman's risk of developing postnatal depression (Woolhouse *et al.*, 2014). Conversely, women who suffer postnatal depression are reported to be

less capable of seeking health care support for a physical morbidity (Minkovitz *et al.*, 2005). Up to 16.1% of postnatal mothers can show symptoms of depression twelve months post-birth (Woolhouse *et al.*, 2012). Assarag *et al.* (2013), in their research on maternal postnatal morbidity in Marrakech, Morocco, supported the view that postnatal mental health is not only a first world problem. Their paper highlighted that 10% of women reviewed during postnatal visits reported a degree of psychological and mental distress.

Other health problems contribute to mental health issues. For example, women who suffer a 2nd-degree perineal tear or more severe have a higher risk of depression from one-month post-partum until at least three months post-partum, according to Dunn *et al.* (2015).

Post-Traumatic Stress Disorder (PTSD) is another aspect of mental health reported as morbidity experienced by women in the months following birth. Fenech and Thomson (2014) used a meta-synthesis study to examine the effect of a traumatic birth experience on maternal psychological well-being. They reviewed thirteen papers from four different countries looking at post-traumatic stress and concluded that traumatic birth could cause psychological distress and PTSD in women. Themes emerged which were identified as leading contributors to psychological distress following childbirth.

These included: upset, frightened, out of control, painful memories, unable to cope and to think about their negative experience. Thoughts of subsequent pregnancies caused panic and distress. For some women in Fenech and Thomson's (2014) Review, the traumatic childbirth experience and subsequent psychological distress took over their life.

With the knowledge of the effects that physical morbidities can have on a mother's mental health, healthcare professionals must be aware of early signs of mental stress. Laurent *et al.* (2013) recommend that strategies be developed to recognise and manage physical morbidity in the postnatal period to help reduce it as a contributory factor to mental distress.

2.8.2 Returning to 'Normal'

Even without diagnosed psychological disorders, many women find it challenging to come to terms with their new postnatal bodies and find it difficult when their somewhat unrealistic expectation that their bodies will return to 'normal' are not met (Priddis *et al.*, 2013; Way, 2012; Rasmussen and Ringsberg, 2010; Olsson *et al.*, 2005). There is a misconception that childbirth and breastfeeding should not leave visible traces, according to participating mothers in Olsson *et al.*'s (2005) focus group. Several qualitative studies have provided

insight into women's thoughts about themselves and their bodies after birth. The women in Olsson *et al.*'s (2005) study highlighted their preconceived commercial ideals that there should be no visible alterations of the body created by pregnancy, birth and breastfeeding and that these are a negative aspect of childbearing, rather than a form of development. Some women felt less attractive, with smaller breasts and vaginas not as tight as before and some even mentioning plastic surgery as a possible solution to unwanted body changes.

Similarly, participants in Way's (2012) study expected to 'return to normality' almost immediately after birth. Several women discussed the issues that they had with their perineum. The perineum, which used to be an area which was reliable and taken for granted, was now an area described as being known to them because of the difficulties the women were experiencing (Way, 2012). Rasmussen and Ringsberg (2010) interviewed nine women who suffered from faecal incontinence secondary to anal sphincter damage following vaginal birth. These women reported feelings of shame, embarrassment, marginalisation and social isolation. They also reported feelings of not being listened to and feeling unsupported by healthcare professionals. They felt they were on an 'everlasting fight' to be normal.

They all disclosed that they feared their partners might find them unattractive. A more recent qualitative study by Priddis *et al.* (2014) reported similar findings in terms of women who suffer both faecal and urinary incontinence. Women described themselves as "dirty" and "hideous". Again, the perception that the issue of toileting should not be discussed left women feeling isolated. Priddis *et al.* described these findings as "*the starkest fracturing of the fairytale not only of motherhood but also of womanhood*" (pp. 39).

2.9. Social Effects

2.9.1. Maternal, Paternal and Infant Relationships

Pregnancy and childbirth can affect a couple's relationship, specifically in terms of sex and intimacy (Stavdal *et al.*, 2019; Woolhouse *et al.*, 2012). This is a normal time of transition for a couple following the birth of their baby. Nicholls and Ayers (2007) in their research study involving six couples after a traumatic birth reported concerns expressed by couples about the effect of childbirth on their relationship. Couples expressed concerns about difficulties in their physical and sexual relationships, fearing that intimacy would bring back memories of the traumatic birth. Women had a fear of pain during sexual intercourse, while men were anxious not to cause further hurt to their partner. Communication issues also developed

within relationships with both partners expressing fear about discussing the experience and the reaction that might entail. Sharing the care of their new baby, household chores, and understanding of the life/work balance had a positive effect on relationships. Other couples acknowledged that failure to recognise these critical attributes to their relationship caused friction, helplessness and abandonment by both sides (Nicholls and Ayers, 2007).

Morbidity experienced by women around the time of pregnancy, labour and birth can have a negative effect on a mother-child relationship (Elmir *et al.*, 2012). Acute severe morbidity following childbirth resulting in the separation of mother and baby for a significant time, e.g. transfer of a mother to theatre or baby to the neonatal unit, led to feelings of guilt and emotional distress and an interruption to the bonding process. These feelings can result in a mother's struggle to provide care for and feed her new-born baby, emphasising an inadequacy in her role as a mother (Elmir *et al.*, 2012). Mothers highlighted that regular information about her baby and a photo were all beneficial to increased bonding even when separated (Engström and Lindberg, 2012).

Maternal depression during the antenatal and postnatal period can increase the risk of health and social issues for their children (Plant *et al.*, 2015). Children of mothers

who experience postnatal depression are at an increased risk of receiving poor attention during these formative years resulting in insecure attachment issues as a child develops (Campbell *et al.*, 2004).

2.9.3. Socioeconomic Effect of Maternal Morbidity

The socioeconomic effect of maternal morbidity is twofold. Firstly, the social and educational status of a new mother can significantly increase the effect of postnatal morbidity on the woman and can affect her ability to seek professional care, as discussed earlier in this chapter. Morbidity also influences the economic and social status of the country. An example of this is maternal depression, which can extend to the next generation, affecting a child's physical and mental health resulting in behavioural issues and reduced academic achievement (Wachs *et al.*, 2009). The report reflects the potential consequence of the economic and social standing for the next generation. Chronic maternal morbidity, either physical or psychological, can also affect the economic status of women and their families (Koblinsky *et al.*, 2012).

2.10 Postnatal Care

Identifying and treating postnatal physical health problems is essential to a mother's quality of life, thus improving her emotional and physiological well-being (Angelini *et al.*, 2018; Webb *et al.*, 2008). Cooklin *et al.*

(2015), in their review of over 200 first time mothers in Australia, support the current research that women do suffer a multitude of physical health problems during the post-partum period. They conclude that continued research is required to identify, treat and manage postnatal physical health problems in line with the antenatal and intrapartum care.

For Irish postnatal mothers, there is limited professional support available. Both hospital and community care are restricted by limited staff and facilities. The research site typically caters for postnatal women's needs up to day five postnatally. In an audit of women's postnatal infections conducted by a member of the early transfer home team at the research site (Fox, 2011), 35% of women who developed a wound infection develop it beyond the five-day time frame. Apart from infections, women have reported feeling 'bewildered' leaving the hospital after the birth of their baby (Ockleford *et al.*, 2013).

Staff levels in postnatal facilities have been highlighted as being inadequate and unsafe for several years (Munro, 2015; Ockleford *et al.*, 2013). Indeed, the Irish Department of Health (DoH) admits to the staffing shortages in their National Maternity Strategy (DoH, 2016). Ockleford *et al.* (2013) stressed the extra attention needed to prepare women for going home. Priddis *et al.* (2014) had similar findings, with some of their

participants reporting their postnatal pain as unexpected and were not sure whether their levels of pain were reasonable or not. Some women described feeling abandoned in terms of the communication received about potential postnatal symptoms that may develop after discharge (Priddis *et al.*, 2014). Before the Poppy clinic was set up, Fox (2011), developed a 'wound care information leaflet' for women leaving hospital in response to the wound breakdown and wound infection rate. However, at the time, no formal referral system to a postnatal clinic was available should infection be identified.

2.11 Conclusion

As a result of the reduction in maternal mortality rates and increasing high-risk pregnancies, maternal morbidity is at the forefront in current obstetric and maternity care. A growing body of literature has revealed that in recent years severe, acute morbidities are recognised and managed by clinicians, worldwide. However, there have been limited studies on the silent struggles chronic morbidity has for many women, which significantly affects their quality of life. Health care professionals are becoming more aware of the adverse effect physical morbidity has on the life of a new mother and her family. There is a dearth in the literature, however, in relation to the experiences of postnatal care received by

women who have physical morbidity resulting from pregnancy, labour or birth (Thomson and Garrett, 2019; Wray, 2012).

A change in culture is required to bring to the forefront the importance of specific, safe quality care, to meet the individual needs of each postnatal mother. One aspect involved in this change process is the introduction of a specific postnatal clinic dedicated to women who suffer maternal morbidity within an urban Irish maternity hospital. There is limited literature about women's experiences in Ireland of attending a postnatal morbidity clinic. The National Maternity Strategy 2016-2026 recommends the provision of opportunities for service user feedback and engagement.



Chapter Three: Methods

3.1 Introduction

This chapter outlines the study's aim, the research methods selected for this study and explains their appropriateness to achieving the aims and objectives outlined in section 3.2. The data analysis and the details of ethical approval are also outlined in this chapter.

3.2 Study Aims and Objectives

Aims

To complete an evaluation of the Poppy Clinic in the National Maternity Hospital (NMH).

Objectives

- Identify referral pathways to the clinic by different healthcare professionals
- Ascertain reasons for referral to the clinic
- Ascertain postnatal follow up that is required
- Report on the need for improvements to the Poppy clinic
- Develop recommendations to assist in guideline and referral pathway development for the Poppy clinic
- Develop recommendations to improve quality safe care for postnatal mothers attending the clinic.

3.3 Study Design

This is a mixed-methods sequential cohort study design. The study was conducted in two phases and included a retrospective

chart review conducted using a study specific template designed by the research team to capture relevant data from the women who attended the Poppy clinic or availed of the Poppy clinic service outside Poppy clinic hours (walk-ins), over a six month period - October 2018-March 2019. In phase 2 of the study a survey instrument was developed from two questionnaires [(SWOPS – Satisfaction with Outpatient Survey (Keegan and McGee, 2003) and CARE – Consultation and Relational Empathy (Mercer et al., 2004)] which were modified with the authors' permission to include demographic questions, questions pertaining to waiting times and spaces for free-text comments. The survey was completed by women who were discharged from the clinic over the same six-month period.

3.4 Ethical Considerations

This research project was carried out in accordance with the 'Ethical Conduct in Research Professional Guideline' (NMBI, 2014). The study was conducted using the principles set out in the Code of Ethics according to the Declaration of Helsinki 1964. Ethical approval was granted by the Ethics Research Committee in the research site.

3.5 Phase 1: Retrospective Chart Review

The retrospective chart review included 100 variables. Data from each woman's medical record was gathered under the following headings:

- 1 Demographic information
- 2 Social history
- 3 Medical history
- 4 Surgical history
- 5 Mental health history
- 6 Obstetric history
- 7 Pregnancy details
- 8 Labour and birth details
- 9 Postnatal history
- 10 Poppy clinic referral pathways
- 11 Poppy clinic treatment

3.5.1 Aims

The aim of the chart review was to report on the clinical profile of the women attending the Poppy clinic, including their reasons for attending the clinic and the treatment they received.

3.5.2 Inclusion Criteria

All women who were discharged from the clinic between October 2018 and March 2019 were considered for inclusion.

3.5.3 Exclusion Criteria

Women who suffered a pregnancy loss or neonatal death were excluded from the study.

3.5.4 Statistical Analysis

Descriptive statistics was undertaken on the nominal and categorical data, using SPSS (version 24). Following this, inferential statistics were undertaken on ordinal data.

3.6 Phase 2: Survey

3.6.1 Aims

The aims of phase two was to capture women's experiences of attending the Poppy clinic and document their recommendations for improvements in the service using a survey.

3.6.2 Survey Design

A cross-sectional survey was completed. The survey instrument contained two modified questionnaires (detailed below). This survey was further developed by adding in demographic information and spaces for the women to write free-text comments about their experience of attending the Poppy clinic.

The survey was designed to be self-completed by women who had attended, and been discharged by, the Poppy clinic. The survey used for this study was composed of 46 items. Women were asked about the referral pathways to the clinic, previous medical and obstetric history and their rating of different aspects of the care they received at the clinic. Additionally, they were asked how long they waited to be seen and how long they were with the doctor/midwife looking after them. The free-text comments which were sought included any improvements which could be made to improve the clinic and any other comments they would like to add.

Several elements were considered by the research team while exploring the most appropriate tool to use:

1. The chosen tool should be previously validated and have test-retest reliability.
2. A specific measure instead of general measure should be used: this allowed the team to evaluate specific aspects of service delivery, such as explanations of treatments, rather than just an overall rating of the clinic, providing valuable information for service improvement.
3. A mixture of objective questions (e.g. time waiting) and evaluation questions, (i.e. satisfaction with information received) would allow the team to assess aspects of the 'service' (waiting times, treatment) and aspects of the 'patient' (expectations and values).
4. The wording of the questions could impact the responses, according to Saldivar *et al.* (2019). Disagreement of negative-toned questions can be found to be stronger than agreement with positive-toned questions (Saldivar *et al.*, 2019). This was considered when choosing a tool.
5. The team wanted to avoid excessively lengthy tools (i.e. user friendly).
6. Keegan and Magee (2003) and Crow *et al.* (2002) recommended ensuring surveys are easy to understand, clearly numbered and in chronological order (e.g. Medical history, birth, clinic).
7. Apart from the tool itself, the team considered the most appropriate survey platform to use (i.e. Paper or online) as this can also impact the

response rates (Saldivar *et al.*, 2019).

After extensive research and deliberation, it was decided for the Irish maternity sector, a survey using two validated tools would fulfil all the criteria necessary to gather all information needed. The team also decided to use two data collection platforms - a written postal survey and an online survey and both options were given to all respondents. In a recent study of response rates, survey answers and characteristics of responders did not differ between postal and online responders, strengthening our decision to use both platforms (Fowler *et al.*, 2019). Additionally, there is evidence to suggest that age is a determining factor in peoples preferences in terms of platform, with older people preferring postal methods (Schöpf *et al.*, 2019; Bulkley *et al.*, 2016). As the women in the current study were all childbearing age, online platforms were deemed essential to improve the response rate. The questions remained the same in both platforms.

Satisfaction with OutPatient Survey (SWOPS)

The SWOP measure was developed by Orla Keegan in the Royal College of Surgeons, Ireland. Open permission was granted, by the author, upon publication of the SWOP guide, to use and amend the SWOP measure, without the need to seek further permission from the authors.

SWOPS (Keegan and McGee, 2003) aims to assess the quality of day care and outpatient care from a patients' perspective.

This measure is a 14 item scale using various tick box options for answering, such as 'yes, definitely', 'yes, to some extent' and 'no', or 'he/she knew enough', 'he/she knew somewhat but not enough', 'he/she knew little or nothing' and 'don't know/can't say'. This measure has a section for comments at the end. Internal reliability of the full scale is high (alpha coefficient of 0.84).

SWOPS was validated for the use in Irish hospitals by the Health Services Research Centre in the RCSI (Keegan and McGee, 2003). This tool was chosen as it fit the aforementioned criteria.

Consultation And Relational Empathy (CARE) Survey

The CARE measure was developed by Stewart Mercer and his team in the UK. Permission was granted by Mr. Mercer to use this scale. CARE (Mercer *et al.*, 2004) aims to evaluate the quality of consultations in terms of the 'human' aspects of medical care.

This is the first known use of the measure in the Irish maternity context. This measure is a 10-item scale using a 6-point Likert scale, with an open-ended question at the end for comments. Internal reliability of the

CARE measure is high (Cronbach alpha 0.92).

Due to the similarity between some of the questions in the CARE measure and some of the questions in the SWOP measure, this team removed five of the questions in the SWOP measure and used the remaining nine.

3.6.3 Survey Validation

Survey validation was carried out using a series of steps to validate the two standard questionnaires for applicability to Irish Maternity Healthcare.

Step 1: Consultation with the expert panel, including academics with qualitative and quantitative research expertise and key clinical staff.

Step 2: Cognitive interviews for the validation (for use in Ireland) and piloting of two standard published questionnaires: [Consultation and Relational Empathy (CARE) and nine out of the original fourteen questions from the Satisfaction with Outpatient Services (SWOP)]. These questionnaires were amalgamated into one survey, with additional demographic questions, called the 'Poppy Clinic Evaluation form'.

The objectives of the cognitive interviews were:

(i) To assess the adequacy of the question instructions

(ii) To establish clarity of question content, working sequence

(iii) To estimate the time required to complete the questionnaire verbally and in writing

The cognitive interviews were completed by 4 service users, one member of the professional development department, one staff midwife in the out-patient department, one student midwife with no knowledge of the Poppy clinic and one clinical skills facilitator. A mixture of written and online surveys was completed by the cognitive interview participants. Once all eight cognitive interviews were completed, the feedback was used to amend the survey slightly to make it more user friendly and the average time taken to complete the survey was then added to the information sheet in order to give the women an idea of the time it would take to complete the survey.

Once the survey was validated step two of the study was to evaluate the clinic, using the newly validated tool.

3.6.4 Sampling

Convenience sampling was used to recruit participants. All women who were discharged from the clinic between October 2018 and March 2019 were invited to participate.

3.6.5 Study Recruitment

All women who attended the clinic in the aforementioned timeframe were contacted by post and invited to complete an enclosed survey. Participants were requested to return the survey (appendix 1) within 28 days of receipt. A detailed information leaflet (appendix 2) was enclosed with the survey. Additionally, a link to an online version of the survey was included in the information leaflet.

To encourage a high response rate in the current study, the Research Midwife undertook a three-phase recruitment procedure. The initial paper survey was posted along with the information leaflet and a return envelope. Two weeks later, a reminder text message was sent. The text message included a link to the online survey and a gentle reminder that the postal survey could also be returned. Two weeks later again, a final reminder was sent by text message, again including the link to the online survey and explaining the average length of time it takes to complete. It was decided by the research team that even though surveys which are physically handed to women by staff have a higher response rate (Keegan and McGee, 2003), increased staff workload was a barrier to this method.

3.6.6 Informed Consent

Consent was assumed if the survey is completed and returned.

3.6.7 Confidentiality

The survey was anonymous - both the written and the online version. No identifiable information was included in the questions.

3.6.8 Statistical Analysis

Descriptive statistics was undertaken on the nominal and categorical data, using SPSS (version 24). Following this, inferential statistics were undertaken on ordinal data.

Qualitative data received from the open-ended questions analysed, to compliment the quantitative data received.



Chapter Four: Results

4.1 Retrospective Chart Review Results

A retrospective chart review of maternity charts was conducted for a total of 179 women who had been discharged from the Poppy clinic, over a six-month period between October 2018 and March 2019. This chapter presents the quantitative findings from the retrospective chart review in the first phase of the study. The chapter will include details of the demographic characteristics of the women who attended the clinic during the study period, as well as information on their medical, obstetric and

social history. Reasons for referral to the clinic, the referral pathway to the clinic and the treatment offered are also presented.

4.1.1 Demographic Information

The demographic characteristics for the women are shown in table 4.0, figure 4.0 and figure 4.1. In a small number of variables data is missing. In some cases, this is due to the women attending the clinic not having received their antenatal or intrapartum care at the research site. In other cases, data was not recorded. Actual number of cases is written beside the variable name if it differs from the total sample number of 179.

Table 4.0: Demographic characteristics of sample (n=179)

Variable	n (%)
Maternal age	
Years [Mean (SD)]	33 (4.5)
Marital status (n=174)	
Married	118 (67.8)
Co-habiting	5 (2.9)
Single	45 (25.9)
Relationship	4 (2.3)
Other	2 (1.1)
Nationality (n=172)	
White Irish	140 (80.9)
Irish traveller	3 (1.7)
Other white background	11 (6.4)
Black Irish	5 (2.9)
Black African	4 (2.3)
Asian Chinese	2 (1.2)
Other Asian background	7 (4.0)
Other/mixed	1 (0.6)
Employment status (n=171)	
Employed	153 (89.5)
Not employed	5 (2.9)
Home duties	13 (7.6)
Care package (172)	
Public clinic	126 (73.3)
Semi-private	36 (20.9)
Private	2 (1.2)
Domino scheme	8 (4.7)

In total, 67.8% of the women attending the Poppy clinic were married. Four out of five (80.9%) were Caucasian Irish with the remainder a mixture of several different nationalities. A significant majority of the women (89.5%) were in employment. In total, 73.3% of the women attended the public clinics. Just less than half of the women who attended the Poppy clinic were aged greater than 35 years (49.4%). This is 4% higher than the general population of women who attended NMH for their birth in 2018 (NMH, 2019). The total percentage of women in the overweight or obese range was 37.4% (n=61). This does not differ from the general population of women attending the research site.

Table 4.1: Social and medical history of sample (n=179)

Variable	%
Smoking history (n=123)	
Smoker	6 (4.9)
non smoker	117 (95.1)
Alcohol consumption during pregnancy (n=116)	
None	116 (100)
History of illicit drug use (n=98)	
None	90 (100)
Allergies (n=175)	
Yes	28 (16)
No	147 (84)
Previous medical problems (n=171)	
Yes	98 (57.3)
No	73 (42.7)
Previous surgeries (n=172)	
Yes	106 (61.6)
No	66 (38.4)
History of mental health problems (n=171)	
Yes	25 (14.6%)
No	146 (85.4)
History of infectious disease (n=169)	
Yes	8 (4.7)
No	161 (95.3)
Current medication (n=163)	
None	23 (14.1)
Pregnancy vitamins	105 (64.4)
Other medication and/or vitamins	35 (21.5)

4.1.2 Social and medical history

No women disclosed alcohol consumption during pregnancy or any history of illicit drug abuse. The majority of the women were non-smokers (95.1%). Sixteen percent of the women recorded having allergies. The largest proportion of these allergies were affiliated to penicillin, which made up 30% of the allergies recorded. Over half of the sample had a previous medical condition prior to the current pregnancy. The highest recorded medical condition was hypothyroidism, with 7% of the women with medical problems

recording this condition, followed by polycystic ovarian syndrome (5%). Nearly 2/3 of the women had undergone surgery in the past. Nearly 15% (14.6%) of the women had a history of one or more mental health issues. Just less than 5% had a history of an infectious disease. Just over 14% of the women were not taking any medications at the time of their booking visit. Nearly 2/3 of the women (65.4%) were taking pregnancy vitamins at the time of booking, while one in five women (21.5%) were taking other medications, with or without pregnancy vitamins.

Table 4.2: Obstetric history of sample (179)

Variable	n (%)
Previous spontaneous vaginal birth (n=174)	
0	140 (80.5)
1	25 (14.4)
2	6 (3.4)
3+	3 (1.7)
Previous caesarean section (n=175)	
0	152 (86.9)
1	21 (12)
2	2 (1.1)
Previous operative vaginal birth (n=173)	
0	166 (96)
1	7 (4)
Previous miscarriages (n=175)	
0	125 (71.4)
1	37 (21.1)
2	12 (6.9)
3+	1 (0.6)
Previous pregnancy complications (58)	
Yes	25 (43.1)
No	33 (56.9)

4.1.3 Obstetric history

Of the women attending the clinic, 68% attended after the birth of their first child,

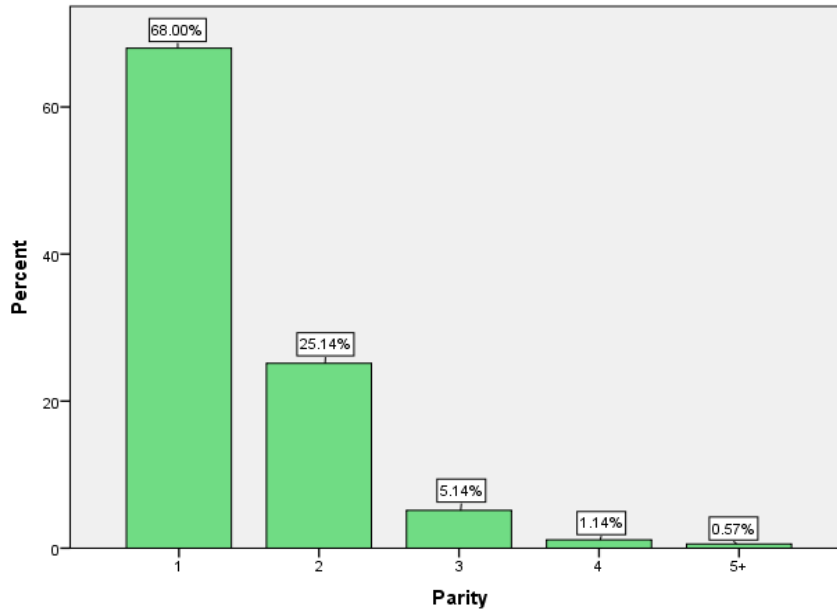


Figure 4.0: Parity (n=175)

with 25% of them attending after the birth of their second child, with just 6.85% of the women attending after the birth of their third or subsequent children (see figure 4.0). Just over 13.1% had undergone a previous caesarean section, with only 4% having undergone an operative vaginal delivery in the past. Nearly 30% of the women in the sample had suffered one or more miscarriages prior to the most recent pregnancy. Of the women who had more than one child, 43.1% had a complication during their previous pregnancy. The most common complications were 3rd or 4th degree tears, pre-eclampsia, premature rupture of membranes and wound infection.

4.1.4 Pregnancy history

Most of the women attending the clinic had no complications during their pregnancy,

Table 4.3: pregnancy history of sample (n=174)

Variable	n (%)
Conception (n=155)	
Spontaneous	143 (92.3)
Assisted	12 (7.7)
Pregnancy complications	
None	123 (70.7)
Gestational diabetes mellitus	4 (2.3)
Pre eclampsia	8 (4.6)
Pregnancy induced hypertension	2 (1.1)
Obsetric cholestasis	1 (0.6)
Placenta previa	2 (1.1)
Placenta accreta	1 (0.6)
Premature rupture of membranes	1 (0.6)
Antepartum haemorrhage	3 (1.7)
Other	29 (16.7)
Gestation at booking (n=157)	
Less than 10 weeks	8 (5.1)
10+1 - 12 weeks	21 (13.4)
12+1-14 weeks	102 (65)
14+1-16 weeks	15 (9.6)
More than 16 weeks	11 (7)
Iron intake during pregnancy (n=152)	
None	60 (39.5)
Oral	74 (48.7)
IV	3 (2)
Blood transfusion	15 (9.9)

Table 4.4 Haemoglobin levels

Variable	Number	Mean	Median	Std. dev	Min	Max
Hb at booking	170	12.64	12.65	1.003	9.7	15.4
Hb Latest antenatal	168	10.39	10.5	1.808	6	15.7
Hb Postnatal	125	9.88	9.8	1.817	6.4	15.7

Table 4.5: Labour history of sample (n=176)

Variable	n (%)
Gestation at delivery	
weeks [mean (SD)]	38+6 (5.8)
Labour onset (n=172)	
Spontaneous	84 (48.8)
Induced – prostaglandin	29 (16.9)
Induced - rupture of membranes	14 (8.1)
Induced – oxytocin	14 (8.1)
Induced – balloon	1 (0.6)
No labour - caesarean section	30 (17.4)
Length of labour - total (n=124)	
Minutes [mean (SD)]	344 (197)
Use of Oxytocin (n=135)	
None	59 (43.7)
Yes - induction	33 (24.4)
Yes - augmentation 1st stage	29 (21.5)
Yes - augmentation 2nd stage	14 (10.4)
Primary pain management (n=136)	
None	12 (8.8)
Labour hopscotch	7 (5.1)
Epidural	101 (74.3)
Entonox	12 (8.8)
Other/mixed	4 (2.9)
Centimetres dilated at time of epidural insertion (n=94)	
0cm	21 (22.3)
1cm	51 (54.3)
2-5cm	15 (16)
5-9cm	6 (7.4)
10cm	2 (2.1)
Rupture of membranes (n=139)	
Spontaneous	63 (45.3)
Artificial	76 (54.7)
CM dilated at time of rupture of membranes (n=145)	
0cm	99 (68.3)
1cm	27 (18.6)
2-10cm	19 (13.2)

with just less than 30% of the sample having any complications. Just less than 2/3rd (65%) of the women attended their booking visit at the standard 12-14-week period, with more than 1/6th (16.6%) of the women attending for their booking visit after 14 weeks gestation.

The haemoglobin (Hb) levels taken at different intervals are presented in table 4.4. Haemoglobin is the iron-containing oxygen-transport metalloprotein in the red blood cells. Low oxygen levels caused by anaemia (low Hb levels) can halt or slow the wound healing stages, which leaves women more susceptible to complications such as wound infection. Normal Hb levels for pregnant women is above 11 grams per decilitre. The first levels were tested upon booking. The second levels presented were the most recent levels taken prior to birth. For 125 of the women, Hb was also tested postnatally. The Hb levels for all three timeframes are presented in figure 4.4 above. The levels taken at booking versus later in the pregnancy were relatively similar. Only 5.3% of the women had haemoglobin levels less than 11g/dl at booking and 12.4% of the levels tested later in pregnancy reached levels below 11mmol. Of the 125 women tested

postnatally, however, 70.4% had Hb levels below 11g.dl. Nearly half (n=74) of the women took oral iron supplements during their pregnancy, while nearly 10% of the women attending the clinic had received a blood transfusion after birth.

4.1.5 Labour and birth details

Table 4.5 presents labour details of the sample of women who attended the Poppy clinic. The gestation of births ranged from 25+2 weeks gestation to 42+2 weeks gestation. Nearly half (n=84) of the labours commenced spontaneously, with 33.7% of women undergoing induction, compared to 29.8% of the NMH population (NMH, 2018). The total length of the labour ranged from 8minutes to 13hours 32minutes. Over 17% of the women in this sample had a primary caesarean section (caesarean section prior to labour). In terms of pain

management, 74.3% (n=101) of the women had an epidural. More than ¾ of the epidurals (76.7%) were sited when the women had a cervical dilation of between 0cm and 1cm. Forty-seven of the women used more than one method of pain relief. When adding up the total usage of the different methods of pain relief (primary method and secondary method), entonox was used by a total of 35 women (25.7%) and the labour hopscotch framework* was used by 24 women (17.6%).

Table 4.6 presents details about the second stage of labour and birth of the sample. The total number of women who reached the second stage of labour is 123 out of the 179 charts reviewed. The delivery type is presented in figure 4.1, above. One third (37.3%) of the women had a spontaneous vaginal birth. This is

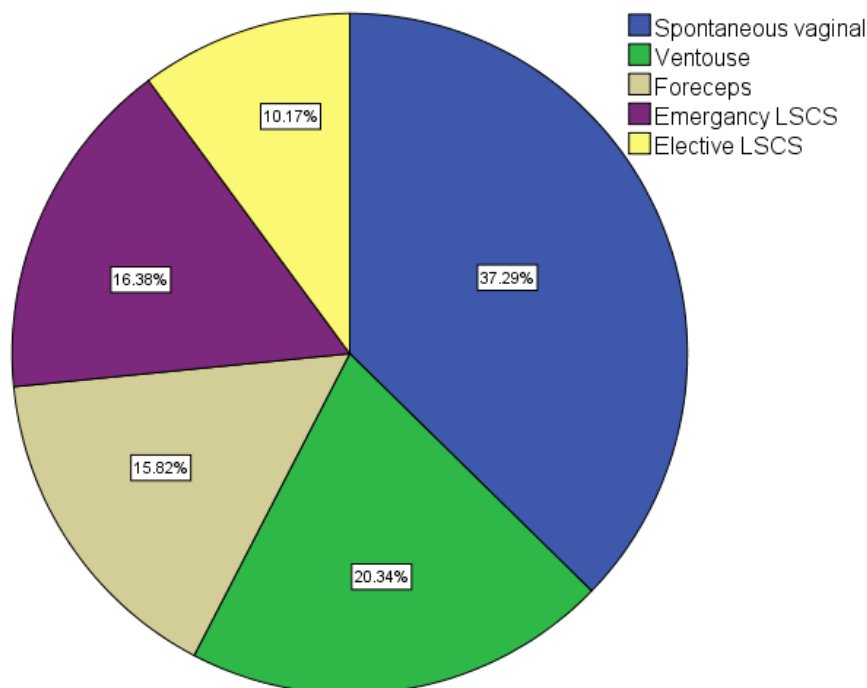


Figure 4.1 Birth type

*Labour Hopscotch is a framework developed by a midwife in the NMH, to support both normal physiological birth and evidence-based midwifery practice. The framework incorporates a series of steps/movements to encourage optimal fetal positioning and movement in labour.

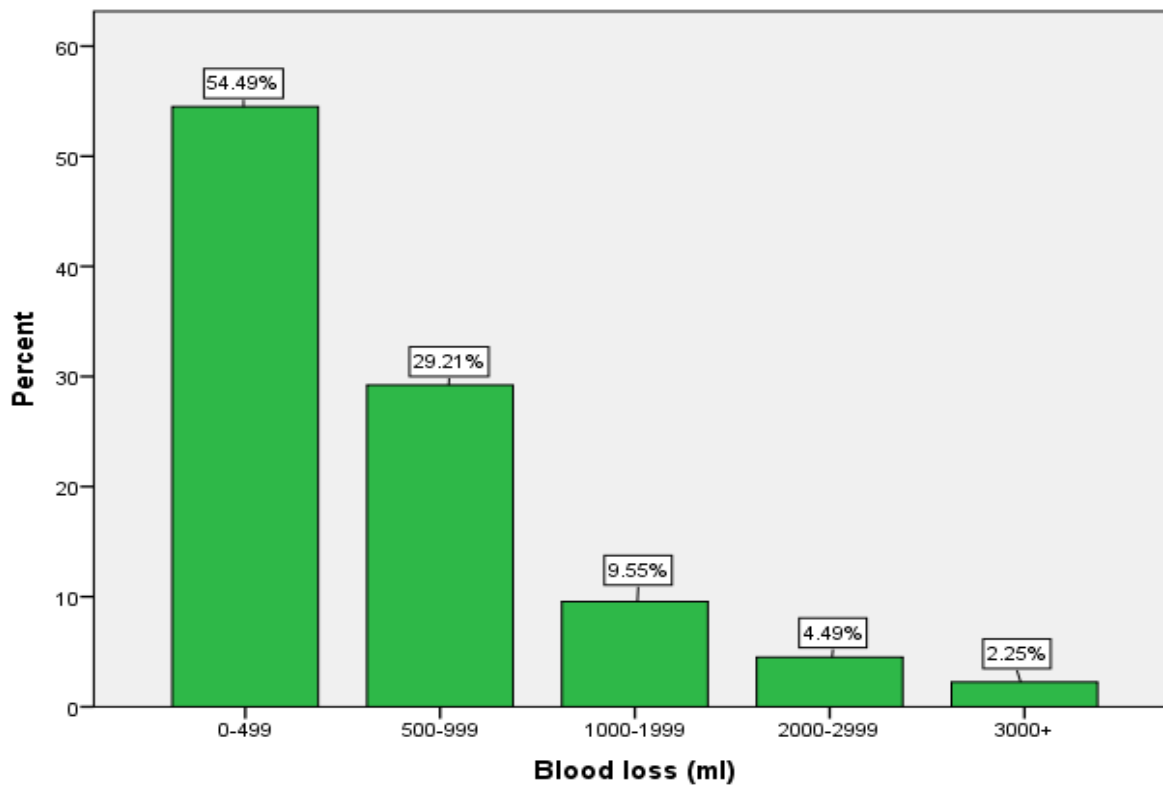


Figure 4.2 Estimated Blood Loss of sample (n=178)

significantly lower than the NMH population where 57% of women had a spontaneous vaginal birth in 2018 (NMH, 2019). The caesarean section rate was 27.5% compared to 28.9% for the NMH population (NMH, 2019). The operative vaginal birth rate was 36.16%. This is significantly higher than the research sites 2018 rate of 13.7% (NMH, 2019).

4.1.6 Estimated Blood Loss

The estimated blood loss (at delivery plus any additional blood loss during the immediate postnatal period) for the women attending the Poppy clinic was significantly higher than the NMH population (NMH, 2019). In total, 45.51% (n=81) of all women attending the clinic had a blood loss over

500ml, which is classified as a postpartum haemorrhage (PPH) (see figure 4.2, above). Major postpartum haemorrhage was recorded for 16.29% (n=29) of the women attending the Poppy clinic, which is classified by IMIS as a blood loss of over 1litre (HSE, 2019). The mean estimated blood loss for this sample of women was 695ml, with one woman having an estimated blood loss of 6000ml (6liters).

4.1.7 Infant Outcomes

Most of the infants were born an average weight (between 2.5kg-4kg), however 9.2% were born weighing under 2.5kg with 20.1% born weighing over 4kg. Less than 15% of the infants born had an Apgar score at one minute of less than 9 and less than

5% had Apgar scores of less than 9 at five minutes old. Nearly one in five infants were transferred to the special care baby unit after birth. There was a drop off from exclusive breastfeeding between initiation and discharge of 8.4% (See table 4.6).

Table 4.6: Infant outcomes from sample (n=174)

Variable	n (%)
Weight	
Grams [Mean (SD)]	3457 (810)
Minimum weight	535
Maximum weight	5100
Apgar Scores	
1 minute - median	9
5 minutes - median	9
Infant transferred to	
Postnatal ward	141 (80.1)
Special care baby unit	34 (19.3)
Home	1 (0.6)
Feeding type initiation (n=162)	
Breast	108 (66.7)
Artificial	40 (24.7)
Mixed	14 (8.6)
Feeding type on discharge (n=162)	
Breast	98 (58.3)
Artificial	47 (28)
Mixed	22 (13.1)

4.1.7 The Poppy Clinic: Referral Pathways and Treatment

Figures 4.3, 4.4 and 4.5 present the healthcare professional who referred the women to the Poppy clinic, where the women were referred from and when they

were referred. More than half of the women were referred by an obstetric registrar (52.02%). Over 55% of the women were referred from the postnatal ward at the time of discharge. Approximately 27% of the women were referred from the emergency

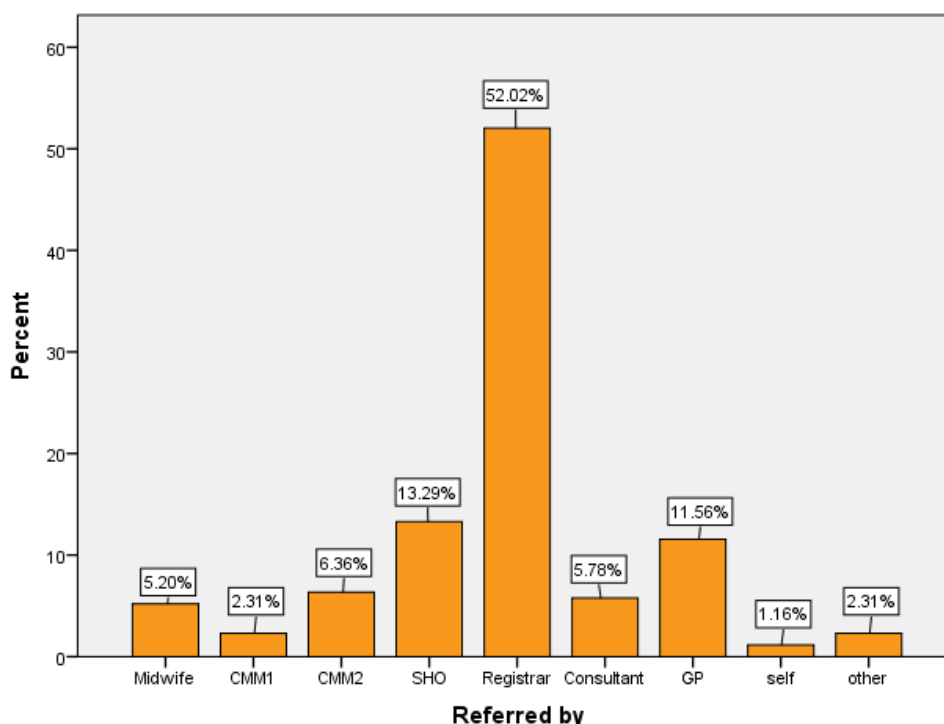


Figure 4.3 Referred by Whom

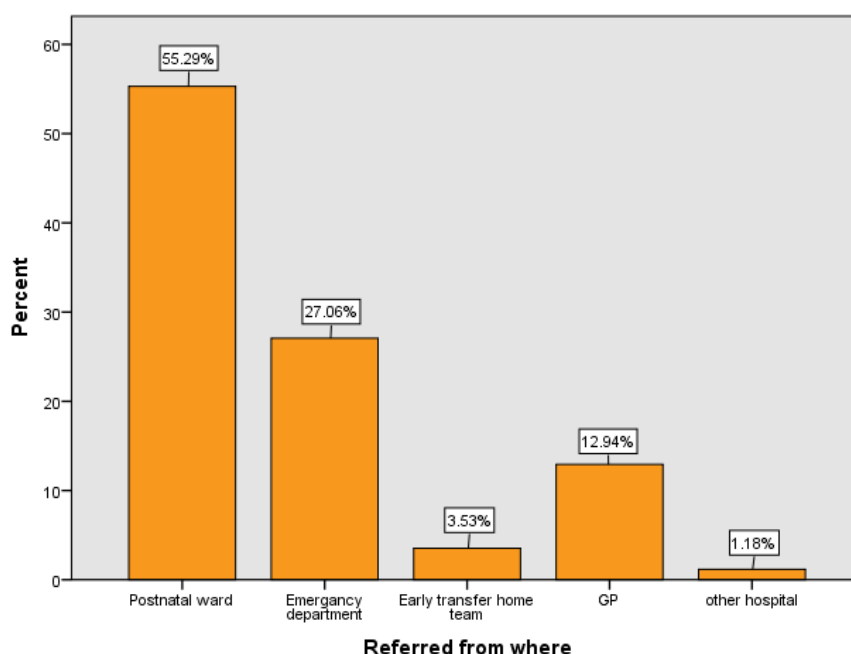


Figure 4.4 Referred from Where

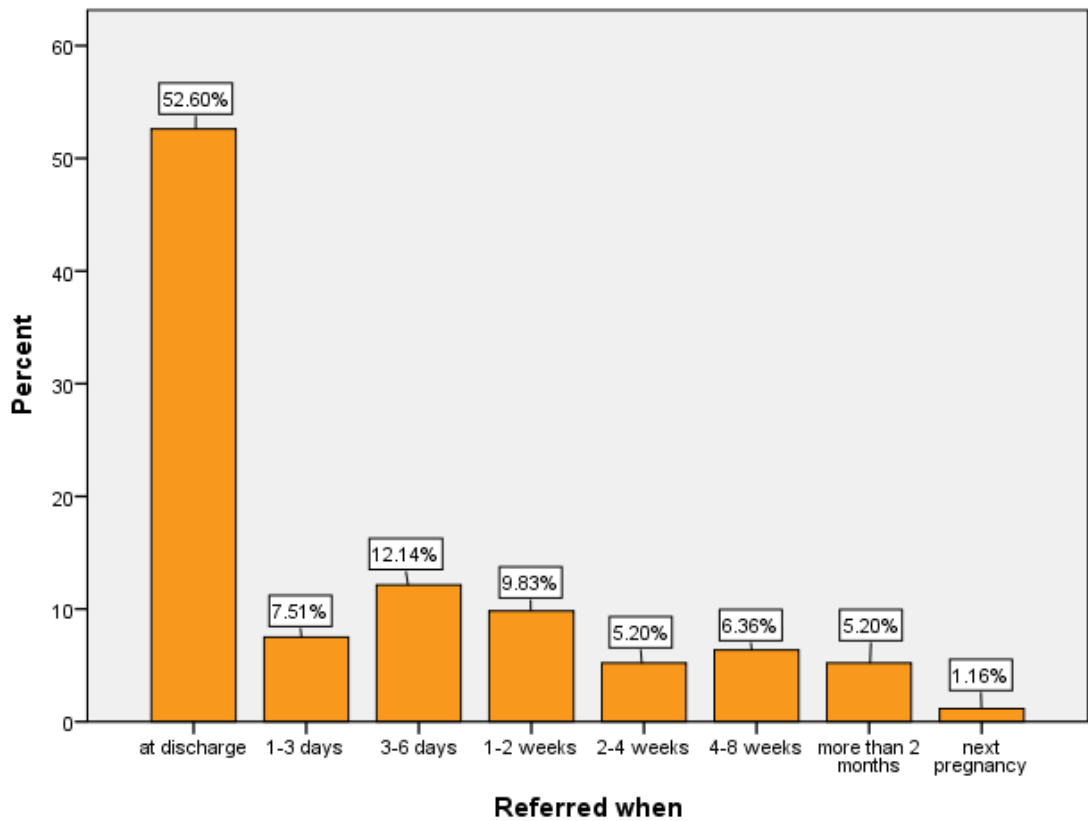


Figure 4.5 Referred When

department where the women would have presented with a problem after returning home. As well as booked appointments in the Poppy clinic, some women are seen by the Poppy clinic team outside of clinic times. Just over 1/3rd (34.83%) of women received treatment or physical assessment either outside the clinic only (in areas such as the postnatal ward or emergency department) or outside the clinic then referred to the clinic for further follow up during clinic times. Figures 4.6 and 4.7 present the length of time after discharge women were seen and the clinician who provided the treatment/assessment.

In total, 83.1% (n=64) of the women who received treatment outside of clinic times

were seen in the emergency department, and over half (n=42) of these women were seen by the senior house officer on duty. Nearly 20% (n=15) of the women received treatment or assessment by a midwife only (see table 4.7).

Table 4.7: Location and clinician for women seen outside clinic times (n=77)

Variable	n (%)
Outside clinic seen where	
Outpatient department	8 (10.4)
Emergency department	64 (83.1)
Other	5 (6.5)
Outside clinic seen by whom	
CMM2, outpatient department	10 (13.2)
Other midwife	5 (6.6)
NCHD	42 (55.3)
Registrar	12 (15.8)
Consultant	7 (9.2)

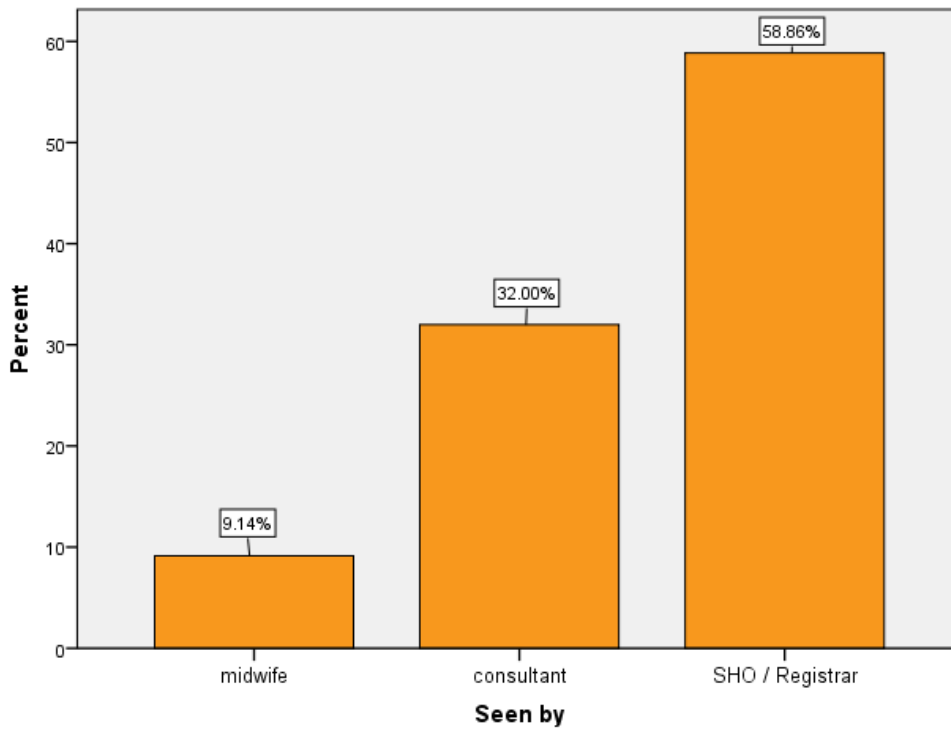


Figure 4.6 Women seen by Whom

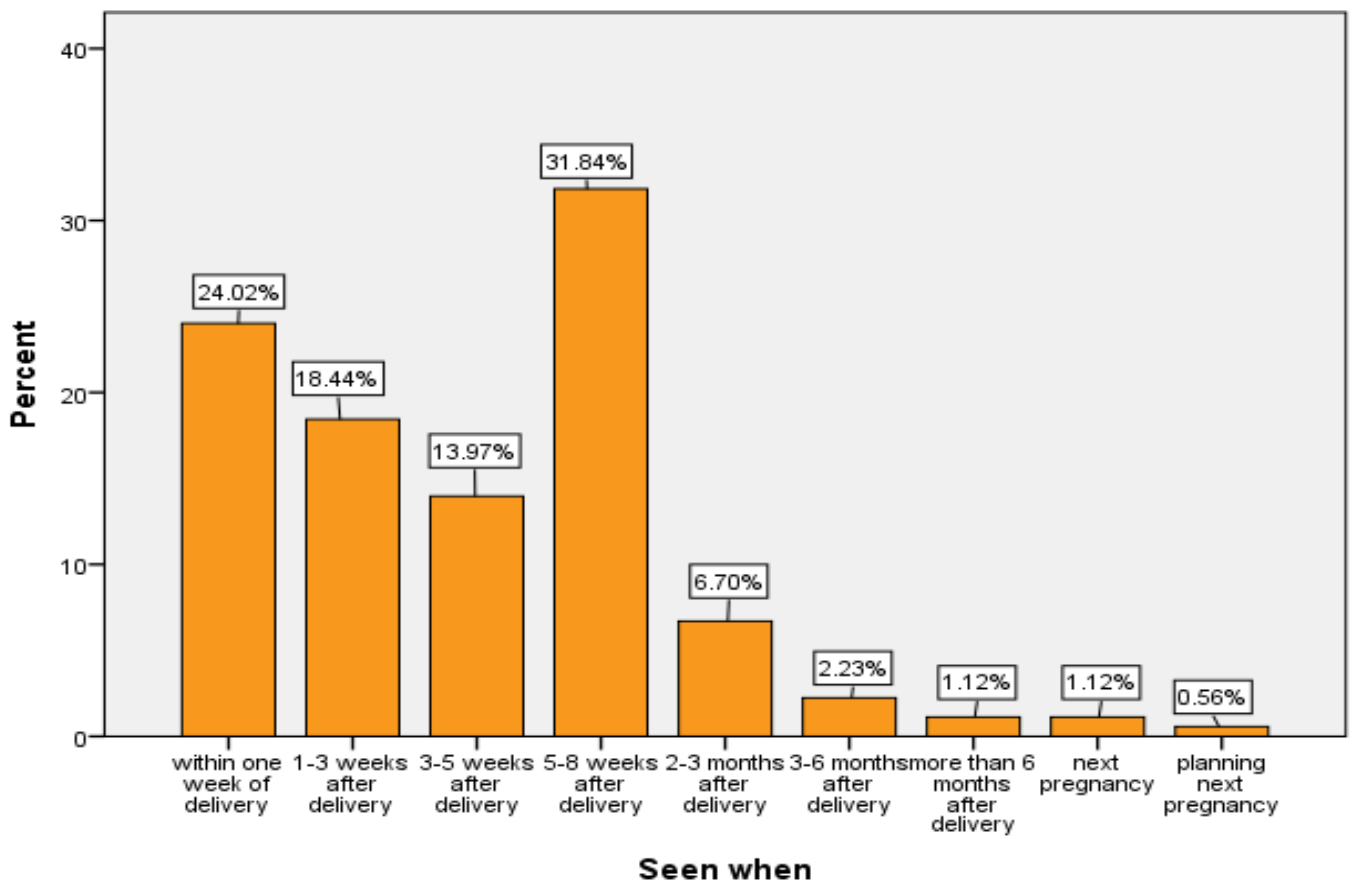


Figure 4.7 Women seen When

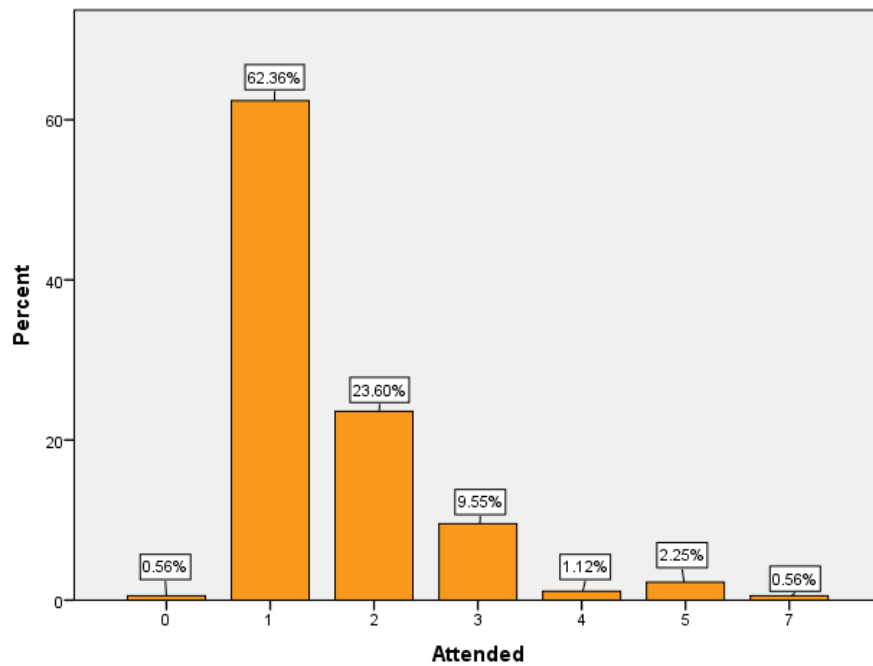


Figure 4.8 Number of Times Attended the Clinic

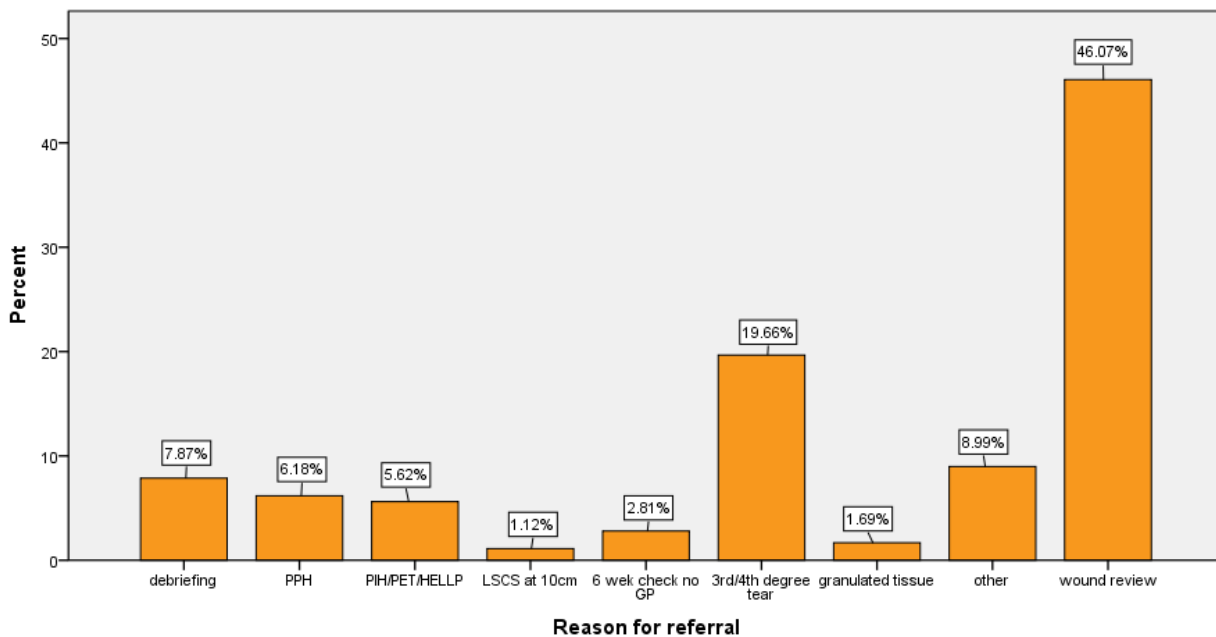


Figure 4.9 Reason for Referral

The reasons for referral to the Poppy clinic are presented in figure 4.9. The most common reason for referral was wound review, with 46.07% (n=82) being referred for this reason. This includes women who suffered wound infection or wound

breakdown of perineal or abdominal wounds. All women who suffer from 3rd or 4th degree tears are referred to the Poppy clinic prior to attending the perineal clinic (OASI clinic). This is due to the long waiting times for the perineal clinic. Visiting the

Poppy clinic 6 weeks post-birth affords the clinicians an opportunity to assess the healing and prioritise woman for perineal clinic appointments who are symptomatic of the injury. Nearly 25% of the Poppy clinic attendees were referred for a 3rd or 4th degree tear review. A further 6% experienced a 3rd or 4th degree tear but also experienced a further, primary reason for referral to the Poppy clinic, such as a postpartum haemorrhage or wound infection (9%). Additionally, 32 women (18%) had more than one reason for referral. For example, six women were being referred for debriefing as well as their

primary reason. Four women suffered a post-partum haemorrhage (PPH) in addition to their primary reason for referral.

Treatment offered to women varied and is presented in table 4.10. One quarter of the women simply needed a physical assessment, with no further treatment needed. The women who had suffered a 3rd or 4th degree tear were referred onto the perineal clinic. These women were recorded under the 'planning' section of figure 4.12. A small number of women (5.58%) were referred to other specialist areas in the research site and to other hospitals.

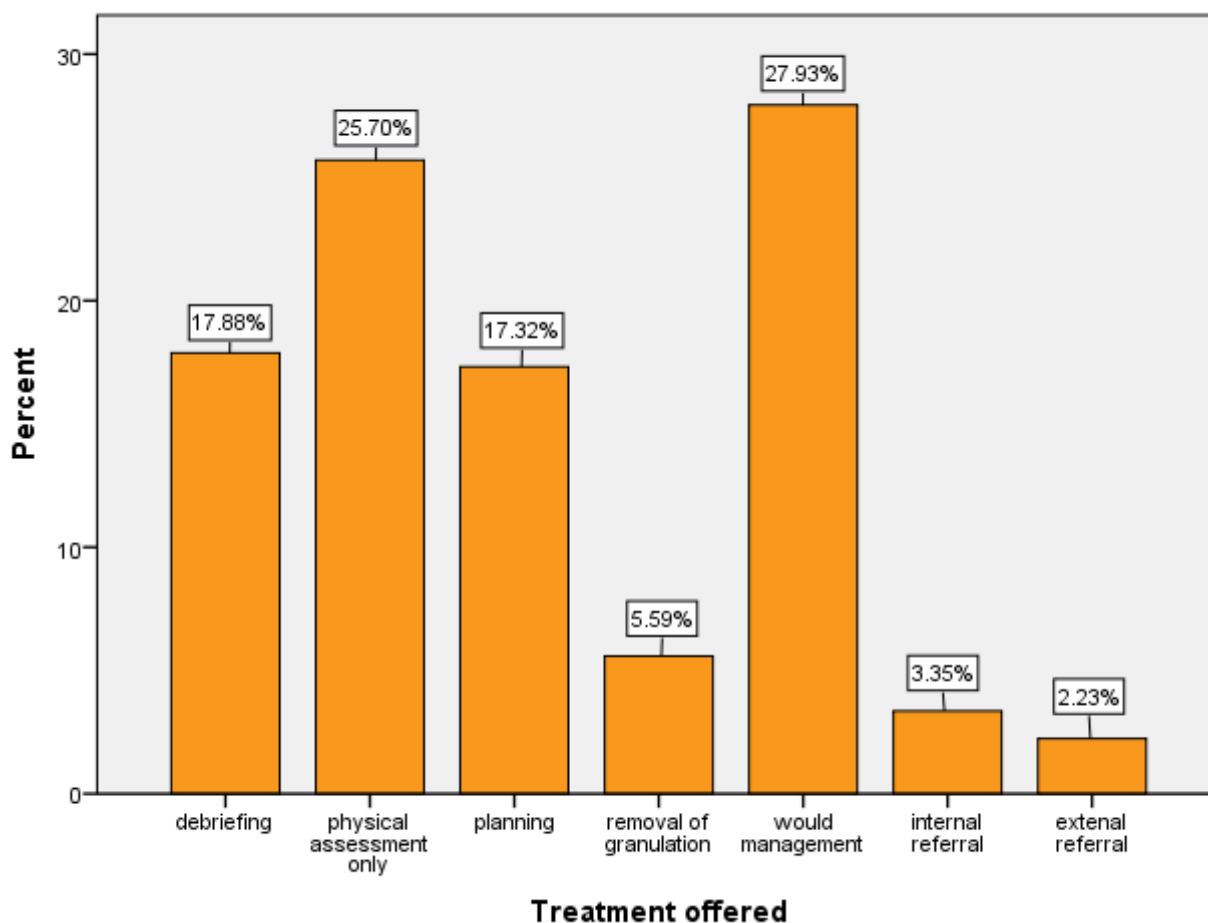


Figure 4.10 Treatment Offered

Just less than one quarter of the women (24%) who attended the Poppy clinic were seen within one week of birth. Around 1/5th (18.4%) of the women were seen between one and three weeks after birth. The largest percentage of women were seen between five- and eight-weeks post-birth (31.4%). These included all women who suffered a 3rd or 4th degree tear. A small percentage of women were seen during their next pregnancy (1.1%) or while planning their next pregnancy (0.6%).

Upon discharge from the Poppy clinic, the majority of women (65.2%) were discharged back the care of their GP (general practitioner). Another 1/3rd of the women (32%) were referred to another specialist (including the perineal clinic). A small number of women were discharged home (1.7%) and to their public health nurse (0.6%).

4.1.8 Referral for Wound Review

Due to the number of women referred for wound review (46%), analysis was conducted to assess relationships between wound review referrals and the following variables: estimated blood loss, BMI, age, delivery type and postnatal Hb.

Given that the one case of a 6000ml blood loss was an outlier, this case was removed for this further analysis. A chi-square test for independence (with Yates' Continuity Correction) indicated a significant

association between being referred for wound review and delivery type, X^2 ($n=176$) = .252, $p = .025$, $\phi = .252$

A Mann-Whitney U Test revealed no significant difference in the estimated blood loss between women referred for wound review ($Md = 400ml$, $n = 74$) versus women who were referred for other reasons ($Md = 450ml$, $n = 90$), $U=2.876$, $z = -1.507$, $p=.132$.

A chi-square test for independence (using Pearson's Chi-Square) indicated no significant association between being referred for wound review and BMI of over 30 and under 30, X^2 (1, $n=165$) = .006, $p = 1.0$, $\phi = .938$.

An independent-samples t-test was conducted to compare age with women referred for wound review ($M=34$, $SD=4.95$) and women not referred for wound review ($M=34$, $SD=3.89$) [t (174) = 0.46, $p = .96$, two-tailed]. There was no significant difference in age between these two groups.

An independent-samples t-test was conducted to compare length of active second stage of labour (for those women who had a spontaneous or operative vaginal delivery only) between women referred for perineal wound review ($M = 48min$, $SD = 30$) and women who were referred for other reasons ($M=36min$, $SD = 33$); [t (123) = 2.2, $p = .029$, two-tailed].

Women who were referred for wound review had significantly higher length of active second stage of labour compared to the women who were referred for other reasons.

4.1.9 Women Referred with an Estimated Blood Loss over 500ml

Due to the significant numbers of women attending the Poppy clinic who had a blood loss greater than 500mls, further analysis was conducted to assess relationships between blood loss and age, BMI, delivery type, length of second stage of labour and antenatal Hb.

Given that the one case of a 6000ml blood loss was an outlier, this case was removed. A Mann-Whitney U Test revealed no significant difference in the estimated blood loss between women aged under 35 (Md = 450ml, n = 80) and women ages 35 and over (Md = 400ml, n = 84), $U=3.525$, $z=.545$, $p=.586$.

An independent-samples t-test was conducted to compare estimated blood loss with BMI under 30 (M = 671ml, SD = 640ml) and women with a BMI of 30 and above (M = 630ml, SD = 500ml, $t(36) = 1.23$, $p = .344$, two-tailed). There was no significant difference in blood loss between women who have a BMI under 30 and women who have a BMI 30 and over.

The relationship between estimated blood loss and the most recent antenatal Hb prior

to birth using Pearson product-moment correlation co-efficient was calculated. There was no correlation between the two variables, $r = .046$, $n = 165$, $p > .05$.

4.1.10 Clinic Non-attenders

There was a 16% (n=64) non-attendance rate for the Poppy clinic, meaning that 16% of the women who were due to attend their appointment did not. Of the 64 women who did not attend appointments, 24 had already been assessed/treated by the Poppy clinic. Women are often given follow-up appointments after treatment and are told that if they feel better, they need not attend. Of the remainder of the non-attenders, 15.6% of the women received private care. It can be assumed that instead of attending the Poppy clinic, these women were cared for by their obstetric consultant who provided their care during the antenatal and intrapartum period, as these women have access to their consultant up to six-weeks postnatally. There was no difference in demographic backgrounds for those women who did and did not attend their appointments. Marital status, age, ethnicity and employment status were all similar in both groups.

4.2 Survey Findings

4.2.1 Demographic Information

Table 4.8: Demographic characteristics of sample (n=92)

Variable	n (%)
Maternal age	
Years [Mean (SD)]	35 (4.3)
Marital status (n=90)	
Married	69 (76.7)
Co-habiting	7 (7.8)
Single	1 (1.1)
Separated/divorced	9 (10)
Widowed	4 (4.2)
Highest education (n=90)	
Secondary school	3 (3.3)
Trade/technical	8 (8.9)
University	77 (85.6)
Other	2 (2.2)
Care package (87)	
Public clinic	41 (47.1)
Semi private	34 (39.1)
Private	1 (1.1)
Domino scheme	11 (12.6)

Of the 176 surveys distributed, 92 were returned by the Poppy clinic attendees, which signifies a response rate of 52.27%. Of the surveys returned, 58 of them were through the online survey, and 34 of them were returned by post.

The mean age of the women who responded to the survey was 35 years. Just over 76% of the women were married with 10% of the women stating that they were separated/divorced. In total, 85.6% had a university education. Of the women who responded to the survey, 11 (12.6%) reported that they were attendees of the Domino midwifery scheme. However, according to the chart review, only eight

Table 4.9: Health and pregnancy conditions of sample (n=92)

Variable	n (%)
Physical health (n=87)	
Excellent/very good	57 (65.5)
Good/fair	26 (29.8)
Poor/very poor	8 (9.1)
Mental health (n=86)	
Excellent/very good	52 (60.5)
Good/fair	31 (36)
Poor/very poor	3 (3.3)
On medication/regular monitoring (n=87)	
Yes	17 (19.5)
No	70 (80.5)
Pregnancy conditions	
None	56 (62.2)
Other	10 (11.1)
Pre-eclampsia	6 (6.7)
Mental health issues	6 (6.7)
Placenta praevia/placenta accreta	5 (5.6)
Pregnancy induced hypertension	3 (3.3)
Gestational diabetes	3 (3.3)
Obstetric cholestasis	1 (1.1)

Table 4.10 Birth history of sample (n=92)

Variable	n (%)
Type of birth (n=87)	
Spontaneous vaginal birth	40 (46)
Instrumental birth	24 (27.6)
Caesarean section	23 (24)
Caesarean section (n=23)	
Elective	4 (17.3)
Emergency	19 (82.6)
Weight of baby (n=87)	
Less than 3kg	14 (14.6)
3-3.5kg	21 (21.1)
3.6-4kg	32 (33.3)
More than 4kg	20 (23)
Gestation at birth (n=86)	
Less than 37 weeks	10 (11.4)
37-40 weeks	36 (41.9)
More than 40 weeks	40 (41.7)

women were recorded as being attendees of the Domino scheme. A possible explanation for this is that some women booked into the public scheme initially and then moved over to the Domino scheme

after their initial booking visit to the hospital and this was not captured in the chart review. Only 47.1% of the public clinic attendees completed the survey. This contrasts with the average number of public attendees who attend the clinic (73.3%). Most of the semi-private clinic attendees completed the survey (34 out of the 36 women included in the chart review). In other words, far more women attending the semi-private and Domino clinics completed the survey compared to the women who attended the public clinic.

The women were asked to rate their own physical and mental health, during pregnancy, on a 6-point Likert scale, ('excellent', 'very good', 'good', 'fair', 'poor', 'very poor'). In terms of physical health, 65.5% of the women rated themselves as having excellent or very good health, with only 9.1% of women rating their physical health poor or very poor. In total, 60.5% rated their mental health as excellent or very good. However only 3.3% rated their mental health as poor or very poor. Less than 1/3rd of women reported pregnancy related conditions, such as presented in table 4.9. Table 4.10 presents the birth details of the women who completed the survey.

4.2.2 Rating of the Poppy Clinic

The women were asked a number of questions about their experience of the care they received by the midwife or doctor

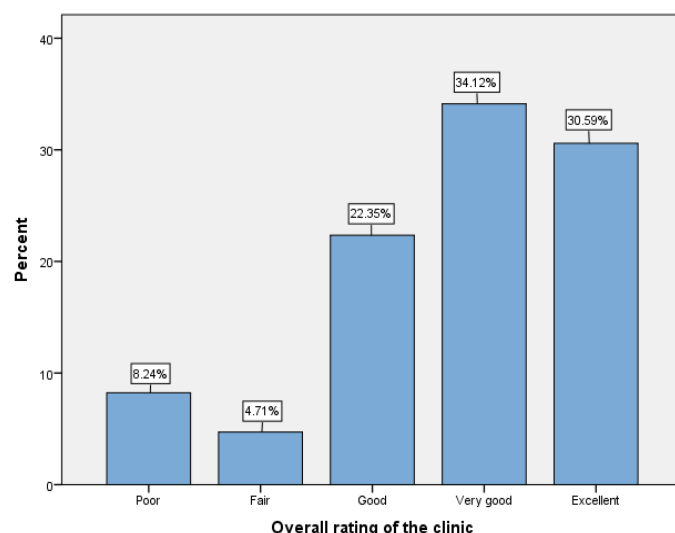


Figure 4.11 Overall rating of the Poppy Clinic

looking after them at the Poppy clinic, using a 6-point Likert scale ('poor', 'very poor', 'good', 'very good', 'excellent', 'does not apply'). Ten questions pertained to different aspects of their care, namely: making the woman feel at ease; letting the woman tell her story; really listening; being interested in the whole person; fully understanding the woman's concerns; showing care and compassion; being positive; explaining things clearly; helping the woman to take control of her care and making a plan of action. A further question using the same Likert scale was an overall rating of the clinic. The responses to each individual question are presented in table 4.11. Further analysis was undertaken with these questions, to remove the 'does not apply' responses from the analysis. For the women with whom the questions did apply, approximately 2/3rd responded with 'very good' or 'excellent' to the various questions (between 61.9% and 70.6%). However,

Table 4.11 Women’s ratings of their experience of attending the Poppy Clinic

Question (number of responses)	Rating n (%)					
	Poor	Fair	Good	Very good	Excellent	Does not apply
Making you feel at ease (n=85)	5 (5.9)	7 (8.2)	13 (15.3)	19 (22.4)	41 (48.2)	0 (0)
Letting you tell your 'story' (n=85)	7 (8.2)	7 (8.2)	15 (17.6)	22 (25.9)	33 (38.8)	1 (1.2)
Really listening (n=84)	6 (7.1)	11 (13.1)	13 (15.5)	28 (33.3)	26 (31)	0 (0)
Being interested in you as a person (n=83)	9 (10.8)	10 (12)	12 (14.5)	29 (34.9)	22 (26.5)	1 (1.2)
Fully understanding your concerns (n=85)	8 (9.4)	7 (8.2)	17 (20)	24 (28.2)	28 (32.9)	1 (1.2)
Showing care and compassion (n=84)	5 (6)	8 (9.5)	15 (17.9)	26 (31)	30 (35.7)	0 (0)
Being positive (n=84)	4 (4.8)	7 (8.3)	16 (19)	25 (29.8)	32 (38.1)	0 (0)
Explaining things clearly (n=85)	6 (7.1)	8 (9.4)	15 (17.6)	30 (35.3)	26 (30.6)	0 (0)
Helping you to take control (n=83)	5 (6)	11 (13.3)	17 (20.5)	17 (20.5)	19 (22.9)	14 (16.9)
Making a plan of action with you (n=85)	7 (8.2)	11 (12.9)	21 (24.7)	17 (20)	15 (17.6)	14 (16.5)

only 45% and 52.9% respectively reported ‘very good’ or ‘excellent’ care in terms of ‘helping them to take control’ and ‘making a plan of action’. For these questions, 25.4% and 22.8% of women rated this aspect of care ‘poor’ or ‘fair’, respectively. For the other eight questions, the women rated their care ‘poor’ or ‘fair’ between 12% and 16.5% of the time.

The clinic was rated ‘excellent’ or ‘very good’ overall by 64.7% of the respondents, with 12.9% rating the clinic ‘poor’ or ‘very poor’ (see figure 4.11).

More specific questions were asked in the survey about the women’s experience in the Poppy clinic. Four questions included a 3-point Likert scale (‘definitely’, ‘somewhat’, ‘no’). These questions pertained to having enough time to discuss the problem; whether the mother had confidence in the doctor/midwife; being

involved in the decision making of their treatment; and knowing what was going to happen next. One question added a fourth option to the Likert scale, namely ‘does not apply’. This question asked the women whether an explanation was given for the reasons for the recommended treatment. One question asked whether the midwife/doctor looking after her was aware of her history. This question had a 4-point Likert scale (‘knew enough’, ‘knew some but not enough’, ‘knew little or nothing’, and ‘can’t say’). Finally, one question asked the women whether all their questions were answered. This question included a 5-point Likert scale (‘definitely’, ‘somewhat’, ‘no’, ‘did not need to ask’, ‘did not get the opportunity to ask’). The answers to these questions are presented in table 4.13.

Further analysis was also undertaken with these questions, to remove the ‘does not apply’ and ‘did not need to ask’ responses

Table 4.12 Women’s experiences of their clinician

Question (number of responses)	Rating				
	Yes, definitely	Yes, Somewhat	No n (%)	Does not apply	Did not need to ask No opportunity to ask
Did you have enough time to discuss your problem with the doctor/midwife? (n=84)	42 (50)	38 (45.2)	4 (4.8)		
Did your doctor/midwife explain the reasons for any treatment or action in a way that you could understand? (n=84)	46 (54.8)	21 (25)	6 (7.1)	11 (31.1)	
If you had an important question to ask the doctor/midwife, did you get answers that you could understand? (n=84)	44 (52.4)	24 (28.6)	7 (8.3)		8 (9.5) 1 (1.2)
Did you have confidence in the doctor/midwife examining and treating you? (n=82)	62 (75.6)	14 (17.1)	6 (7.3)		
Were you involved as much as you wanted to be in the decisions made about your care and treatment? (n=82)	47 (57.3)	28 (34.1)	7 (8.5)		
When you left the clinic did you know what was going to happen next and when? (n=81)	45 (55.6)	23 (28.4)	13 (16)		
Question (number of responses)	Rating				
	Knew enough	Knew some but not enough	Knew little or nothing	Cannot say	
	n (%)				
Did the doctor/midwife seem aware of your medical/pregnancy/birth history (n=85)	45 (52.9)	23 (27.1)	14 (16.5)	3 (3.5)	

from the analysis. A significant majority of the women (95.2%) reported ‘definitely’, or ‘somewhat’, having enough time to discuss their problem. Of the women who received treatment and answered the question

about receiving an explanation about the treatment received (n=73), 91.8% reported ‘definitely’, or ‘somewhat’, receiving an explanation about the treatment. Of the women who had questions for their

midwife/doctor, a significant majority (89.5%) of them ‘definitely’, or ‘somewhat’, had their questions answered, with the remaining 10.5% reporting that they either “did not get the opportunity to ask the questions” or they “did not have their questions answered”. A significant majority (92.7%) of the respondents reported confidence in the midwife/doctor looking after them. Just less than half of the women in the survey (47.1%) stated that the midwife/doctor looking after them did not know enough about their history when arriving to the appointment. Over 90% of the women reported feeling ‘definite’ or ‘somewhat’ of an involvement in the clinical decisions made about their care. In total, 55.56% of the women definitely knew what was going to happen next, with 28.4% knowing something about what was going to happen next with their plan of care and 16% of women not knowing at all what was going to happen next in terms of their

Table 4.13: Survey response for reason for referral (n=83)

Variable	n (%)
Wound review	28 (33.7)
3rd degree tear	18 (21.7)
Postpartum haemorrhage	9 (10.8)
Perineal pain/dyspareunia	4 (4.8)
Debriefing	3 (3.6)
Granulated tissue	2 (2.4)
In next pregnancy	2 (2.4)
IUGR/Premature birth	1 (1.2)
6 week check - no GP	1 (1.2)
Other/unsure	10 (12)

treatment.

4.2.3 Poppy Clinic Visits

The women were also asked who referred them to the Poppy clinic. Fourteen percent of the women were unsure as to who referred them. The reasons for referral, according to the survey respondents is presented below, in table 4.13. Only 83 out of the 92 survey respondents answered this question and 6% of the women were unsure as to why they were referred to the clinic. The remaining reasons for referral were similar to the reasons reported in the chart review, except for perineal pain / dyspareunia, which was not noted as an option in the woman’s referral written by the clinician in any of the cases but was noted as the reason for referral by 4.8% of the women in the survey.

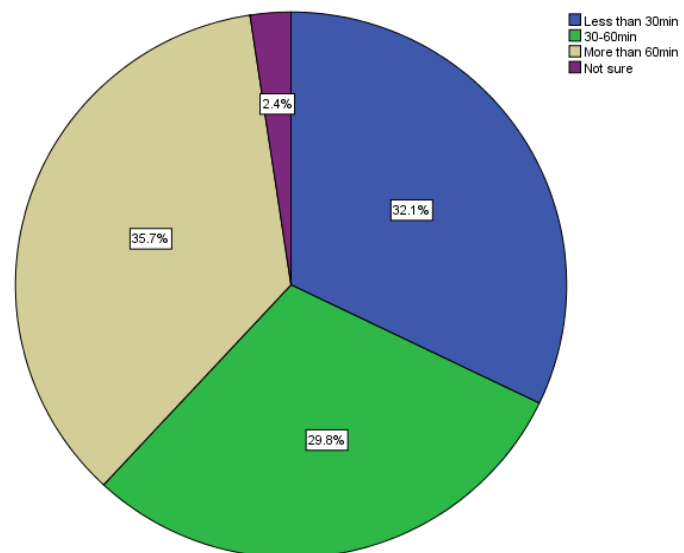


Figure 4.12 Time spent waiting

When asked about how long the woman had to wait to be seen, just less than 1/3rd (32.1%) of the women reported waiting less than 30 minutes, while over 1/3rd of women

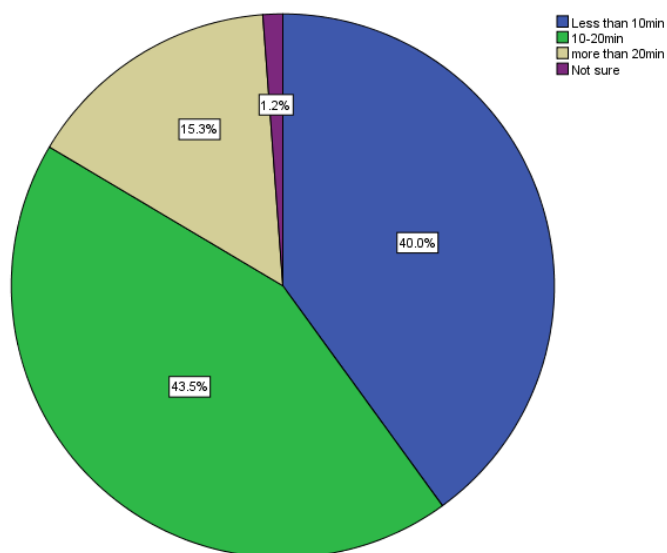


Figure 4.13 Time spent in visit with doctor / midwife

reported waiting longer than one hour for their appointment (see figure 4.12 below).

When asked about the time spent in their visit, with the midwife/doctor, 40% of women spent less than 10minutes in the appointment, with 15.3% of the women spending more than 20minutes in the appointment (see figure 4.13 below)

4.2.4 Open-ended Questions

The final two questions in the survey gave the women an opportunity to make comments. Question 19 read: “Are there any areas where you feel we could make improvements?” Of the 92 surveys received, 67 people left a free-text comment in this section. The final question read: “Please use the following section for any comments you would like to make”. Of the 92 surveys received, 39 people left a comment in this section. All comments were amalgamated, and themes were

created from these 106 comments received (In some cases, comments pertained to two themes. In these cases, the comments were placed into both themes). Please see themes, including number of comments made in each theme, in figure 4.14, below. The largest percentage of the comments consisted of positive feedback.

Service

Some of the comments were relatively general, complementing the Poppy clinic and its staff on a good service.

*“Overall, excellent treatment and services. With 5*midwives in the whole hospital.”*

“I could not fault anything with the poppy clinic they were all amazing and so understanding”

Several women used the opportunity to thank the members of the Poppy clinic for their service.

“Everything was good. Thank you for the service”

“I was very happy with the care - thank you to all the team”

A small number of comments were made regarding the lack of continuity of staff. Two women mentioned that they were seen by different staff at a different visit. One woman would have preferred to have the same staff at the Poppy clinic that looked

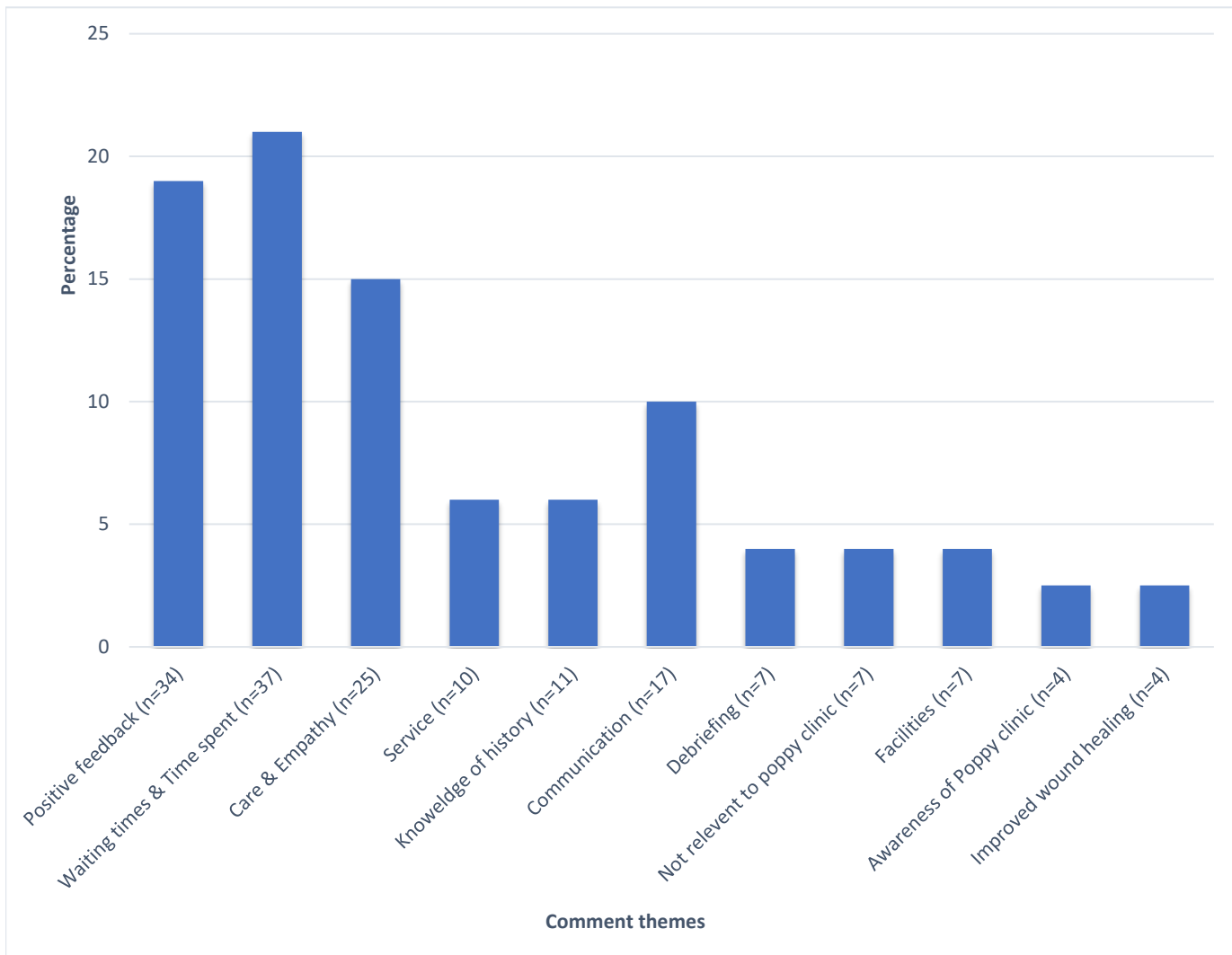


Figure 4.14: Free-text comment themes

after during her antenatal and intrapartum period.

“I got a different doctor also most weeks, bar one doctor I had twice who was really good and sent me upstairs for ultrasound etc.”

“Incredible service – very approachable staff. Would have liked community midwife present but totally understand they are so busy”

Care and Empathy

Care received and empathy shown to the women attending the clinic was a theme which was developed from the free-text comments. Several women displayed enormous gratitude for care received.

“The doctor and consultant I met at this appt could not have been more helpful and it really helped me with my emotions...I had a very positive experience at the Poppy clinic and that was down to fantastic staff”

“Overall the clinic was well run and very respectful”

Individual staff members were mentioned by name by some women, acknowledging the exceptional support and empathy they received.

“For 3 out of my 4 visits to the Poppy Clinic so far I have seen (Midwife Manager), she has been the most caring and kind person throughout this whole experience, I was in so much pain and was so scared on my first visit as I didn’t know what was wrong and her

patience and kindness were out of this world, she reassured me and then my partner about everything. I can't say enough good things about her, her bedside manner is amazing and she explains everything so clearly"

"Saw (consultant) Excellent treatment"

A few women referred specifically to being listened to by the staff at the Poppy clinic.

Two women remarked positively about feeling listened to, whereas two other women requested that staff listen more.

"The doctor I met in the Poppy clinic was the first person who I felt listened to me. He gave me so much time and I just wish I had gotten his name"

"Let the patient tell their story. Understand your background first and know details about the labour/birth"

There were, however, some negative comments regarding care received. Some of the comments referred to reduced empathy, with others referring to the clinician not being thorough enough.

"I feel doctors should be more compassionate and refrain from comparing any one woman to another after the birth of a child as it is hard enough to deal with without being made feel small & insignificant"

"My 2nd visit was much better when I met the consultant. On the 1st visit the trainee doctor only wanted to check my 3rd degree tear and not full injury. I had to ask as there was complications, then I needed more procedures. If I didn't ask, I would have left in more pain"

Knowledge of Patient History/Reason for Referral

Some women displayed disappointment when the clinician looking after them was unaware of their history or reason for their visit before entering the room. Frustration

was noted in some of the comments in this theme.

"Double check notes on personal issues raised in previous appointments before seeing the patient...I was asked at every appointment if I'd tried sex yet but had previously explained I was going through a separation"

"I don't think the doctor I saw knew what I was there for (it didn't seem to have anything to do with my experience of Hellp)"

Some statements were made to the contrary, with women remarking their satisfaction with the knowledge that the clinicians had about their experiences.

"When I saw the doctor she was very nice and explained my issue clearly"

"First visit to the clinic I was only waiting about 10-15 minutes and met Doctor who knew my history – very efficient"

Debriefing

Some of the respondents remarked that they would have liked a more detailed debrief from the staff members involved in their care during their birth. Although they appreciated the discussions with the Poppy clinic staff about their experiences, they felt that attempting to have a full debriefing session with staff not involved in the birth/incident which led them to the Poppy clinic was perhaps not as helpful as debriefing with staff involved.

"I'm not sure how to explain it. On the one hand the blood loss and the forceps delivery were somewhat traumatic. And they do play on my mind. But everything worked out grand. I have my beautiful healthy boy and I have recovered. So I did not have issues of immediacy that I wanted to raise. However, I still would like to know more about what

happened. What did my son being in distress mean? How much danger was he in and what could have happened if it was not acted on? How did the bleed occur? Could it have been anticipated... So to sum up, everything I asked was answered but there is something missing. I do want more information but do not know really how I'd ask for it without sounding a bit nuts and paranoid"

"The doctor that I saw had not been involved in my care at any stage. He was very helpful, great at explaining what had happened, didn't rush me at all and I found the appointment very helpful. However in terms of providing me with information so that I could understand what had happened at delivery and afterwards, he was just working from notes. There was one area (difficulty breathing towards the end of the operating theatre) that I would have liked to understand as it was quite frightening at the time - but it wasn't covered in the notes so the doctor in the Poppy Clinic couldn't tell me any more about it"

One respondent who received debriefing at the Poppy clinic did find that the debriefing she received helpful.

"I found the labour debrief invaluable and think it should be more widely used / offered / made known that service is available"

Improved wound healing

Several women specifically mentioned the improvements they felt physically because of the care received at the Poppy clinic, as indicated in the following comments.

"On my first visit to the Poppy Clinic, I treated straight away with a small procedure. The doctor listened to my story carefully and understood what I was told previously mustn't be working and really made sure she found the problem and sorted it for me. 2 days after the procedure my pain was gone and I finally felt like myself again which made a huge difference to my mood as well. This was 3 months after my baby was born that the pain finally stopped"

"Overall this clinic was a huge help to me and I'm really grateful to all the midwives and the

doctors there for not letting me go until I healed"

Waiting times and time spent in appointment

The appointments felt rushed by some women, whereas some women found the visits thorough and pointed explicitly stated they did not feel rushed at all.

"Doctor was thorough and went through my issue. She gave me the time I needed and was empathetic and understanding "

"The wait times were ok but never at the scheduled time and I did feel like the exam was quite quick and perhaps would have liked it to have been at a slower pace but overall I felt very well cared for"

Some confusion was noted by some women regarding the reason for the appointment, appointment times, which doctor they were going to see and where to go for the appointment within the hospital.

"I was scheduled to see a particular doctor but ended up seeing a different one. There was no explanation of why I was not seeing the doctor I had the appointment with"

"I wasn't aware the poppy clinic was only for mothers as it didn't state this in the letter of appointment I received. Better explanation and communication needed."

Waiting times were a significant issue for many survey respondents, with 30 comments involving women waiting for a long time to be seen by a clinician. Several women highlighted that the same appointment times are given to several women, increasing the waiting time, as per the quotations below.

“Waiting time. Some confusion with appointments”

“On my first visit I waited 4 hours to be seen. I was in pain, emotional and very worried about having my tiny new-born out with me in a hospital for such a lengthy amount of time. It was as if everyone was told to be there at the same time and I was just last on a long list. It really upset me and was my first and only negative experience of my maternity care”

Some women mentioned the impact of waiting for an extended period on caring for their new infant.

“Waiting time as it would be easier to juggle childcare / bring partner if clinic ran on time but I understand given the nature it is subject to delays and didn't feel rushed in appointment so it is positive”

“Extremely long wait the day I was there. (2-3hours). I was expressing at the time for my baby who was in Crumlin. So, I was in a lot of pain in a waiting room of new babies”

Communication and records

For some women, an explanation of what to expect, in terms of pain and healing, was not explained. Also, what steps to take if they are concerned was highlighted by the women as lacking.

“If you develop future problems, I was not made aware what supports were available”

“Explaining what to expect (I got this from google) and what the patient needs to do if things don't improve”

Additionally, there were a few issues noted regarding referrals, communication between departments and even communication within the layout of the outpatient department, and whom to go to for what reason.

“At reception I was told to take a urine sample bottle but I was not informed about who to give it to. The set up was all a bit haphazard. The nurses who took the sample were friendly and helpful though”

“Midwife & doctors names need to be written down & passed to patient esp. for referrals. I met so many lovely midwives & doctors during my 6 days admitted to the NMH but when there was an issue I could not remember names of who did what or who referred me which lead to long delays as the referral wasn't processed correctly so no-one knew my case”

Some women had issues with their records not being up to date on the electronic record system. Further, it was requested that medical records be made freely available for women.

“Improving the medical records. Keeping them up to date”

“On the system I had not yet given birth even though I was 8 weeks post birth. I had delivered @41 weeks”

Facilities

Some women found it extremely difficult to negotiate buggies through the small corridors and into the doors of the small examination rooms. Additionally, the lack of facilities available for breastfeeding mothers in the waiting room was remarked upon. Other items suggested for a postnatal clinic were drinking water, baby changing table, bottle warmer and possibly a play area for siblings.

“Most patients attending clinic are mothers. The consultation rooms and access to them is too narrow to bring a buggy in. This is not great as it leads to stress trying to get the baby in to the room with you or to take them out of the buggy”

“The premises are unsuitable for eg. The examination room was too small to fit a buggy and more women couldn’t lift a car seat so I carried my baby in my arms. A bouncer suitable for a newborn in the examination room would be good. No baby changing facilities in the waiting area. Most patients had to change their babies on the benches”

A further issue was that of the uncomfortable wooden benches that the women had to sit on while waiting. This discomfort was a cause of pain for one woman.

“The seating was very uncomfortable – especially when sore below”

Lack of knowledge of the Poppy Clinic by PHN’s and GP’s

Awareness of the Poppy clinic was noted to be lacking. Furthermore, how to attend the clinic or go through the referral process if an appointment was not made at discharge appeared to confuse a small number of women. Lack of awareness among public health nurses was highlighted.

“There was confusion around how quickly I could get an appointment in the clinic and so had to present in casualty. It might be helpful to have a bit more info on the website about who can attend the clinic and how to get an appointment”

“I have mentioned the Poppy Clinic in my local mother and baby group and nobody there - either mothers or public health nurses - has ever heard of it, so I think it would be really beneficial if there were posters / on screen information about it in the ante-natal appointment waiting rooms so that people know the service is there”

4.3 Conclusion

Overall, the demographics of the women attending the Poppy clinic were similar to that of the general population of the research site. There were differences in birth type compared to the general population. Furthermore, a significant number of women with operative vaginal births, large blood losses and low postnatal haemoglobins attended the clinic. Women’s overall rating of the clinic was high for approximately 2/3rd of the women who attended the clinic. Significant areas for improvement were highlighted in the survey. The biggest issue voiced by the women was the waiting times, followed by some clinician’s lack of knowledge of patient history and the limited hospital facilities. The question which received the highest ‘excellent’ rating was making the woman feel at ease.



Chapter Five: Discussion

5.1 Introduction

This study aimed to identify the referral pathways to the Poppy clinic – an outpatient postnatal morbidity clinic - and gain a greater understanding of the clinical profile and history of the women attending the clinic and the postnatal follow up that was required. Furthermore, the study aimed to identify improvements to the service offered at present. This study was conducted using a mixed-methods sequential cohort design. It was conducted in two phases. A retrospective chart review was conducted to identify the clinical profile of the women attending the Poppy clinic, including how they were referred to the clinic, their reasons for attending and the treatment they received. Secondly, a survey was completed by the women attending the Poppy Clinic to capture their experiences of attending the clinic and ascertain recommendations for improvements. In total, 92 women who were discharged from the Poppy clinic, in a 6-month time period, evaluated the service they received at the clinic, a response rate of over 52%. It is anticipated that the findings from this study will enhance women's experiences of attending the Poppy clinic, futuristically. Apart from allowing women to voice their concerns and make valuable recommendations for improvements to the service, this is the first time an evaluation of the women's experiences of the Poppy clinic has been

conducted, providing the team with crucial information on the clinical profiles of the attendees, the most common reasons for referral and the outcomes of the visits.

5.2 The Value of the Poppy Clinic

This study provides evidence of the value and necessity of a postnatal morbidity clinic in the National Maternity Hospital. It offers vital information for the development of such a clinic in other maternity hospitals nation-wide. The Poppy clinic provides a specialist clinic for GP's and public health nurses to refer women to, who have experienced postnatal morbidity and who, previously, did not have an expert clinic with which to refer women. Additionally, within the hospital, women who identify as needing extra care and treatment as a result of their pregnancy or birth now have a streamlined care pathway to the Poppy clinic so that these women are followed through efficiently by relevant clinicians. Prior to the initiation of this morbidity clinic, care was fragmented and women suffered in silence, postnatally, in the community. Women can now be referred to, and treated by, experts in this field. The Poppy clinic provides the long-required link between the community (community midwives, General Practitioners (GP's) and Public Health Nurses (PHN's)) and the hospital where women can receive continuity of care in the site they were

cared for during their pregnancy and birth. Women can receive support and no longer suffer in silence, where subjects like sexual health and incontinence can be discussed in a safe space, and the women can be supported. Women can also prepare for their next pregnancy with all their previously unanswered questions answered.

5.3 Clinical Characteristics of Women Attending the Poppy Clinic

Many of the demographic characteristics of the women attending the clinic, such as BMI and social and medical history, did not differ from the general population of women at the research site. Of particular significance, however, was that over 68% of the women attending the clinic were primiparous women, compared to 42% of the general population of the research site (NMH, 2019), meaning that being a first-time mother is a risk factor for requiring treatment at the Poppy clinic. This is not a surprising finding, as primiparous women are more likely to experience more interventions, such as operative vaginal birth (NMH, 2019). The mode of birth for the cohort of women who attended the Poppy clinic was also different from the general population in the research site (NMH, 2019). Although the caesarean section rate is similar, only 37% of women attending the clinic had a spontaneous

vaginal birth. Given the purpose of the clinic, this was also an expected finding, and that mode of birth, such as operative vaginal birth is associated with increased risk of postnatal morbidities (Mohandas and B, 2017). It must be noted that women are more likely to suffer from psychological morbidity during the early postnatal period after having their first baby (Hanlon and Beckmann, 2015). This increases the vulnerability of these women attending the clinic, 68% of whom are first time mothers, strengthening the importance of postnatal debriefing/listening services in the clinic.

Demographic Characteristics

There were a few observations which can be made from the demographic details of the women attending the Poppy clinic, when comparing them to that of all of the women who attend the hospital. The average age of women who attended the clinic during the study period was 33 years old, compared to 31, which was the average age of women attending the research site in 2018. Additionally, more women who had epidurals attended the clinic compared to the NMH population in 2018 (74.3% compared to 52% of the population). This could be due to the higher numbers of women attending who were first-time mothers as more first-time mothers' avail of epidurals than mothers having their second or subsequent babies. However, the risks associated with an epidural cannot be ruled out.

Analgesia

Nearly $\frac{3}{4}$ of women who attended the Poppy clinic had an epidural (74.3%). Epidural increases the length of the second stage of labour (Shmueli *et al.*, 2018). Furthermore, epidural increases the risk of an operative vaginal birth (Lucovnik *et al.*, 2018; Hung *et al.*, 2015). This risk increases the longer a woman is exposed to epidural analgesia (Garcia-Lausin *et al.*, 2019). This highlights the need for a change in practice through developing/updating clinical guidelines, improved training for doctors and midwives and the increase in the availability of continuity of care to support women to manage pain with reduced need for invasive analgesia such as epidural (Garcia-Lausin *et al.*, 2019).

Anemia

Over 70% of the women had a Hb level less than 11g/dl, postnatally, which is classed as anaemia in pregnancy (RCOG, 2015). Anaemia has been reported to increase the risk of caesarean section wound dehiscence and infection (Mehvish *et al.*, 2017). There is a shortage of literature reporting postnatal Hb levels internationally, and the research site does not routinely test Hb levels postnatally unless clinically indicated. However, one study was found which reported Hb levels of women at their six-week postnatal check, as well as assessing other maternal

morbidities (Mohandas and B, 2017). The authors reported that 29.3% of their participating women were anaemic. It is difficult to compare this outright, however, as the Hb levels of the women in the current study were taken before discharge within days of birth, compared to 6 weeks postnatally in Mohandas and B.'s study. A total of 45% of the women who attended the Poppy clinic had a post-partum haemorrhage (blood loss of over 500ml from the genital tract (RCOG, 2015)). Unsurprisingly, the women who experienced a post-partum haemorrhage would experience a low Hb level as a result. However, over 12% of the clinic attendees had anaemia before birth. Having anaemia antenatally is a risk factor for also having it postnatally (Harsha Kumar *et al.*, 2014). This data adds to a vast volume of literature supporting the need for interventions to improve Hb levels of women during the antenatal period to better cope with the haematological impact of blood loss during birth (Eshag and Lindow, 2018; Hari Ghimire and Ghimire, 2013). Unfortunately, as attested by Eshag and Lindow (2018), in their review on iron deficiency anaemia during pregnancy and the postnatal period, compliance is notoriously poor with oral iron supplementation in the antenatal period and even more so postnatally, due to the change in women's lifestyle.

Wounds

Wound review was the reason for referral in almost half (46.07%) of the women who attended the Poppy clinic. Wound review included women who had an abdominal or perineal wound infection, breakdown or pain. Wound infection was reported in 6.2% of Mohandas and B.'s (2017) participants 6 weeks post-birth, reinforcing the need to develop postnatal morbidity clinics nation-wide to identify and treat infections promptly. Additionally, the current study highlights the importance of the role of the midwife in educating women about the signs of infection and, indeed, the importance of following guidance regarding prevention of wound infection. Caesarean births and existing medical or obstetric co-morbidities are significantly associated with an increased risk of early re-admission or emergency department visit for this issue (Leonard *et al.*, 2020). The incidence of postnatal wound infection has been reported to be between 0.7% and 16% in women who have an operative vaginal birth (Mohamed-Ahmed *et al.*, 2019). Post-partum wound infections usually reach their peak between 6-7 days post-birth (Mohamed-Ahmed *et al.*, 2019). Most women have been discharged from hospital or community midwifery services in Ireland before six days post-birth, stressing the importance of the streamlined pathway to the Poppy clinic to identify and treat women reporting symptoms of

infection swiftly. Understanding the effects of increased blood loss during birth and the consequences of low Hb levels give clinicians an opportunity to identify women at higher risk of wound infection and breakdown and subsequently the possible need for referral to the Poppy clinic.

5.4 Referral Pathways

According to NICE (National Institute for Health and Care Excellence, 2006), postnatal contacts should be provided in accordance with the principles of individualised care. It is the responsibility of healthcare providers to draw up care plans and identify appropriate healthcare professionals to continue providing care, according to the woman's changing needs. For the past number of years, the Poppy clinic has become a vital resource for women who require individualised care. It was identified, however, that some women are referred to the Poppy clinic when they would have been best suited cared for by more specialised services, such as maternal medicine or pre-term surveillance clinics. Equally, some women are referred to the Poppy clinic who could have been efficiently cared for in the community, reducing the need to attend the Poppy clinic. One of the themes within the findings of the survey was that of awareness of the Poppy clinic in the community. We are aware, however, that if all GP's and PHN's in Dublin were aware of

the clinic, the demand for the service would far exceed the availability of the service. To combat this issue, the principles of Sláintecare are recommended – extending care into the community. Sláintecare is a ten-year programme developed by the Irish government to transform Ireland’s health and social care services. The Sláintecare vision is to achieve a universal single-tier health and social care system where everyone has equal access to services based on need. For this to succeed, education is vital – training of staff on the postnatal ward, education of women before discharge from the hospital, postnatally, and further informing PHN’s and GP’s in the community.

In response to the increased awareness of, and attendance to, the clinic, and as a result of the findings of this study, a new care pathway has been developed (see figure 5.0, below).

Referral Pathway

The Poppy Clinic Postnatal Maternal Morbidity Clinic

Poppy Clinic is for mothers who suffered a medical, surgical or obstetrical complication as a result of their pregnancy, labour or delivery

Referral Criteria (Not Exclusive)

- 1) Wound Review- Abdominal and Perineal
- 2) Wound Infection, Dehiscence
- 3) Wound Dressing Removal Clinic
- 4) 3rd and 4th Degree Tear at 6 Weeks Postnatal
- 5) Debriefing
- 6) 6 Week Check up for Socially Complex Cases

Referred by

Internal Referrals

Midwife, Obstetrician, Allied Health Professionals (Perineal Mental Health, Social Worker, Physiotherapists, Dieticians)

External Referrals

GPs, Public Health Nurses, Maternity Hospitals

Routine Appointments

Arranged by units prior to discharge
Letter given to patient

Urgent Appointment

OPD Monday-Friday 11-12 Midday with AMP

Routine Referrals

- All routine referrals are made to the Poppy Clinic in OPD by the ward team
- The Clinic Code is LOBPN- Friday afternoon clinic
- Appointment letter is given to the woman-by hand, email or post

Non-Routine, Urgent Referrals

Pathway for all postnatal mothers who require an urgent appointment outside formal Poppy Clinic times

URGENT-Within 2 weeks

Contact Caroline Brophy (AMP):

- Bleep 211- Monday to Friday
- Email: caroline.brophy@nmh.ie (cc: annduggan@nmh.ie)
- Send attached Referral Form to Poppy Clinic OPD

Figure 5.0 Poppy Clinic Referral Pathway

5.5 Education

Informing Further Education of Clinicians and Health Care Workers

The new knowledge presented in this report can inform additional education of midwives and doctors in maternity units, and among our community partners, regarding the types and severities of postnatal morbidities. It is recommended that the findings of this report are integrated into midwifery and obstetric educational programmes. The Poppy clinic provides the opportunity to put theory into practice with the supervision and mentorship provided to medical, midwifery and PHN students. Non-consultant hospital doctors gain extensive and crucial knowledge from experts in the Poppy clinic, of morbidities associated with birth and pregnancy and this knowledge will be brought with them to future posts within and outside the research site, enhancing the health of women in the community. In addition, midwifery, PHN and GP trainees attend the clinics as part of their clinical training, further improving their knowledge, thus improving care in these sectors.

This report adds to GP and PHN's existing knowledge about the importance of swift identification of women who require treatment or assessment at the Poppy clinic. Furthermore, it is hoped that identification of those at higher risk for postnatal morbidity will, in turn, assist in the

reduction of risk, the management of care, and the provision of consistent, precise information to women. Primary caregivers, in Bick *et al.*s (2020b) qualitative study in the UK, acknowledge the need for better communication, planning and co-ordination of care across the various health settings. The new referral pathway developed will benefit our community partners in the referral of women to the clinic.

Informing staff of the importance of individual care plans is imperative, as well as providing our community partners with enough information about women's antenatal and intrapartum history for these community professionals to identify additional treatment or assessment needs. As the findings highlight a greater awareness of the silent suffering of women, this report emphasises the importance of GP's and PHN's questioning women about their sexual health, mood, and possible incontinence. This will provide women with the autonomy to improve their health, postnatally. Furthermore, this report adds to the argument for community midwifery care, in order to identify and refer women swiftly, reducing suffering by women who may be experiencing a postnatal morbidity.

Maternal Education

Education of women, prior to postnatal discharge, is also crucial. As per NICE guidelines, women should receive timely,

relevant and consistent information to enable them to promote their own health (NICE, 2006). Women will require knowledge about what to expect in the postnatal period. Knowing what's normal, what needs assessment, the importance of iron supplementation postnatally, and how to reduce the chances of infection will empower women to take ownership of their health, postnatally. Additionally, opening up the conversation with women about sexual health, incontinence, mental health, and other traditionally 'taboo' topics normalises the subject and encourages women to seek help where necessary.

5.6 Evaluating the Poppy Clinic – Giving Women a Voice

In privileging women's voices and focusing on their concerns, the findings from this study highlighted that women value the relational aspects of the care they receive, i.e. being listened to – answering their previously unanswered questions. Inviting the women in this study to give feedback on aspects of 'service' and 'patient' gave women a space to voice their concerns, as recommended by O'Brien *et al.* (2018). Notwithstanding that the majority of mothers were happy with their care, some highlighted areas that could improve. Overall, nearly two-thirds of women in the study rated the Poppy clinic 'very good' or 'excellent', with 13% of women evaluating the clinic 'poor' or 'fair'.

Women's Voices – Treatment and Care Received

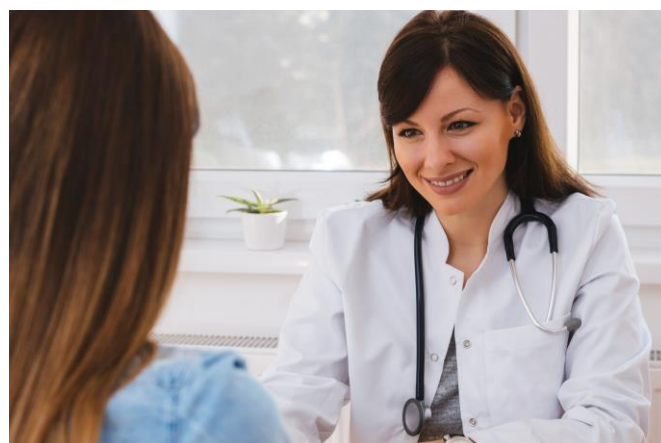
With nearly 50% of all women who attended the clinic needing wound review for perineal or abdominal wounds, evaluation of the treatment they received was a key aspect to this study. In total, 33% of women who attended the clinic received some form of treatment for wounds. Some 25% of women required clinical assessment only. In other words, they had a previous issue/complication and were referred to the clinic to be assessed, to ensure they were healing well and ended up requiring no further treatment. Some women (6%) were referred to other specialists for treatment, and others (17%) required further planning, such as a small procedure. Feedback given by women, in the free-text comments, on the treatment they received was positive, and several remarks were made in terms of the high-quality service they received at the Poppy clinic. Indeed, care, improved healing and pain reduction were significant themes in the free-text comments. The physical assessment or treatment at the Poppy clinic service was only one aspect of care that women found important, however, in terms of the overall experience. Some women identified the pressures that exist in the system and highlighted that organisational (facilities and waiting times) and relational issues, such as communication (knowledge of patient

history), negatively affected some of their experience of attending the Poppy clinic.

Women's Voices - Communication

Women value encounters with healthcare providers who display humanistic qualities, such as showing empathy, taking time to listen and showing encouragement (Munch *et al.*, 2020). Research has highlighted that communication after birth receives less positive feedback from women than communication before and during birth (Norwich Evening News, 2020; Bick *et al.*, 2020a; Ockleford *et al.*, 2013). In the current study, between 60-65% of women rated aspects of relational care, such as 'listening', 'showing care and compassion', 'being positive', and 'fully understanding concerns', as excellent or good. Some aspects of relational care received a poor or fair rating by approximately 19-23% of women, such as 'explain things clearly' (19%), 'making a plan of action' (21%) and 'being interested in the whole person' (23%). The team acknowledges that these aspects of relational care need to improve, and steps are being taken in the education of staff to increase awareness of women's needs and wishes, particularly around these specific elements of communication. The open-ended comments allowed the women to explore their care in more detail and, despite some of the above findings, these comments were predominantly positive with significant gratitude displayed in several comments about the relational

aspects of the women's care. Some women mentioned specific staff members by name, detailing their positive encounters with these staff members. Building trusting relationships based on mutual respect with the women who attend the clinic, as well as at any other point of a woman's antenatal, intrapartum and postnatal care, is crucial (Menage *et al.*, 2020; Newman, 2019). Unfortunately, the fragmented nature of maternity services in Ireland reduces continuity of carer (Yoshida and Sandall, 2013), which creates a challenge to building trusting relationships, and, therefore, open communication. Furthermore, other challenges are evident in studies reporting that women value 'being liked' by maternity care providers and don't want to 'appear difficult' (Munch *et al.*, 2020; Kozhimannil *et al.*, 2015). This is concerning as these findings indicate that the barriers to improving communication may lie both within the healthcare system and within women themselves who attend the clinics.



Women's Voices – Debriefing

Debriefing forms a more formal aspect of the communication which is undertaken at the Poppy clinic and is an integral aspect of the service provided to women. The research site offers a separate, official, debriefing service which is being provided to women following shoulder dystocia or any other traumatic or complicated birth (NMH, 2019). The Poppy clinic offers debriefing opportunities to women who have not been referred for formal debriefing or who are attending the clinic for other reasons and value the opportunity to debrief during the visit. Women can be referred by GP's or PHN's weeks or months after birth who require debriefing. The mothers and their partners may desire to know why their birth was traumatic and have their experience discussed in a compassionate, safe setting, facilitating further recovery. Many women experience post-traumatic stress as a result of giving birth (Baxter, 2019).

Additionally, women who receive more medical interventions during birth have an increasingly negative perception of their birth (Selkirk *et al.*, 2006). With the nature of the Poppy clinic and its attendees, more women who attend the Poppy clinic experience an operative vaginal birth than the general population of at the research site (36.16% versus 13.7%). It is therefore recommended that postnatal 'listening services' are more routinely offered to

women who experience a complicated or traumatic birth so that they can gain a better understanding of their experience while allowing them to share their birth stories (Baxter, 2019). 'Listening services' have been recommended by Skibniewski-Woods (2011) as preferable to a formal debriefing service in her review, and she strongly suggests that this type of communication constitutes an emotionally supportive activity. There is a plan to expand the postnatal debriefing/listening services in the Poppy clinic.

Women's Voices - Waiting Times and Facilities

Excessive waiting time to be seen in the Poppy clinic, through the non-use of specific timed appointments, was the foremost reason for a mother's negative experience of the service. Women highlighted the importance of improving this aspect of the clinic with several women describing physical discomfort and lack of facilities to look after themselves and their babies during these long waiting times. A comparison between waiting times and patient satisfaction were not reported on in this study due to the limited available sample. Waiting times have been negatively associated with reported patient satisfaction in a Chinese survey study (Xie and Or, 2017). The issue of facilities, or lack thereof, within the outpatient department, is a challenging one at the current location of the research site, as it

was built in 1894 to cater for an annual birth rate of 3000, which has subsequently grown to approximately 9000 per annum. It is anticipated that the plans of the new hospital should have improved facilities in the waiting area and clinical areas and will include a Patient Management System, automating and managing the appointment schedule. Women discussed the importance of having proper facilities, for example, more comfortable chairs in the waiting area, water drinking facilities, somewhere to change babies' nappies and a private space for breastfeeding mothers. In the current hospital, most of these recommendations are difficult to facilitate. However, it is envisioned that, with the improvement of waiting times by restructuring the appointment system for the clinic, there will be less need for improved facilities in the waiting area as the women will be seen more promptly.

Women's Voices – Appointments and Inter-departmental Communication

In the current study, it seemed that women, in general, value clear, precise communication in all areas of the care they receive, from appointment letters to signage within the hospital itself, to aid in seamless service delivery. The findings of the study highlighted some confusion women experienced in terms of not having adequate knowledge about the appointment they were attending, who the

appointment was intended for (mother or baby) and the purpose of the appointment. Women stressed the importance of clearly stating the purpose of the visit, as well as improvement in streamlining of appointment times. Women further noted the importance of having their medical records kept up to date. Nine months before data collection, a new computerised medical record system had been initiated in the research site. Admittedly, several staff members were still getting used to the new system, which could account for some administration errors or omissions. There is a dearth of literature to compare the satisfaction or dissatisfaction of clinic attendees in terms of appointment letters.

5.7 Evaluation in Healthcare

Evaluation in healthcare services provided has become a priority globally. In 2017, the government of Ireland presented the aforementioned Sláintecare. The primary aim of Sláintecare is to improve the patient experience. As a result of the Sláintecare report, an Implementation Strategy was published in 2018 (Government of Ireland, 2018). One of the four goals of the Strategy is to provide high quality, accessible and safe care that meets the needs of the population. Stakeholder (patient) engagement is a priority of the Strategy, to identify the needs of women in the design and delivery of a high-quality health service, driven by necessity rather than

financial ability. As patient opinion becomes more imperative in the healthcare improvement process both nationally and internationally (Manzoor *et al.*, 2019), the Poppy clinic evaluation is ideally placed to honour the Sláintecare principals of patient engagement in guiding the improvement of the service provided at the clinic.

Patient satisfaction surveys form a vital part of the approach to include patients in the planning and development of healthcare (Keegan and McGee, 2003). Several questionnaires have been developed to evaluate patient experience and satisfaction (Stephens *et al.*, 2020; Vanti *et al.*, 2013; Lally *et al.*, 2013; De Brún *et al.*, 2002). Despite this, there is no universal 'gold standard' tool (Vanti *et al.*, 2013). Furthermore, most surveys are designed specifically for individual studies, which creates challenges in terms of comparability, validity and reliability (Keegan and McGee, 2003). Choosing the most appropriate patient satisfaction tool, therefore, is an essential aspect of any study of this type. The SWOPS tool has been used in the Irish context and was specific to outpatient services. Furthermore, the SWOPS tool has displayed high reliability (Keegan and McGee, 2003). The survey has been recently used to assess an Irish urogynaecology service (O'Leary *et al.*, 2019) but had not been used in the maternity context before this study. The

CARE survey tool was added to capture the patient's feelings of empathy and patient-centeredness within the clinical encounter. The CARE survey was developed in Scotland and has to date been used in the areas of primary care in the UK (Mercer *et al.*, 2004), Hong Kong (Fung *et al.*, 2009), Sweden (Ahlforn *et al.*, 2017) and the USA (Mayer *et al.*, 2016) and several other primary care practices internationally, as well as sexual health nurse consultations in Scotland (Bikker *et al.*, 2017). The CARE survey also has high internal face validity and reliability.

Survey Response Rates

High response rates to surveys should be a priority for planning any patient satisfaction study, with Keegan and Magee (2003) recommending that a small sample size with a high response rate is more representative than a low response rate of a larger sample size. Response rates vary widely among healthcare surveys. Some evidence reports higher response rates for postal surveys compared to online surveys (Harrison *et al.*, 2019; Lindemann, 2019; Bulkley *et al.*, 2016). There was a significant response rate, in the current study, of 52.27% - higher than expected. It is difficult to compare this rate outright, even among other CARE and SWOPS surveys, as many studies do not report response rates, just the numbers of respondents in the study (Bikker *et al.*, 2017; Fung *et al.*, 2009).

Additionally, context (acute, public hospitals versus general practitioners) and recruitment methods differ, as well as survey delivery platforms. It is difficult to determine optimal response rates as researchers, and statistical experts advise different rates based on the information mentioned above. Lindemann (2019) asserts that there is no agreed-upon minimum acceptable response rate. Still, in 2019, based on their analysis of all their surveys conducted, they reported an average response rate to surveys of 33%. In a recent Swiss study of 717 patient satisfaction surveys, response rates varied between 16.1% and 80%, with an average of 49.8% (Perneger *et al.*, 2020).

Prior to the recent HIQA Maternity Patient Experience Survey in Ireland, distributed to women who were three months postpartum, two pilot studies were undertaken (Harrison *et al.*, 2019). The first used a postal questionnaire but received a low response rate of 28.7%. The second pilot study was developed to increase response rates and received a slightly higher response rate of 33.1%. The postal response was significantly higher than the online platform and telephone option, with only 3.5% of respondents utilising the online option in the second pilot study. This differs remarkably to the current study whose online response rate was significantly higher than the postal platform (63% online versus 37% postal),

suggesting that online is more easily accessible to this cohort of women.

5.8 Looking Forward – The Future of the Poppy Clinic

In response to the increasing numbers of women attending the Poppy clinical annually, and as a result of the findings of this current evaluation, several steps are in the planning, or implementation stages of improving the quality of care women receive at the clinic. With improved education and a more stream-lined referral pathway, to allow women to attend the most appropriate clinic for their individual needs, more women can avail of the Poppy clinic service. The Poppy clinic is in a unique and privileged position to now increase the number of clinics per week from one to three, including evening clinics offering new mothers a greater choice of appointments. Also, a dedicated Advanced Midwife Practitioner (AMP) in Assisted Care is now working full time to coordinate, manage and offer care to the women who need it the most, including women who require specialised care postnatally, through the Poppy clinic. The AMP role incorporates early identification of problems and offering early, timely interventions for this cohort of new mothers. Included in this new role will be further development and expansion of the service to meet ongoing postnatal mothers' needs and the continued education of new

obstetricians, GP's, PHN's and the multidisciplinary team. This is the first position of its kind in Ireland. An integral element of the AMP position will be the expansion of the clinic, increasing the service to women outside clinic times and caring for the more socially complex women who give birth in the hospital, such as those who have economic vulnerability.

Using the data gathered from the chart review and the survey, the new referral pathway (above) has been developed to further streamline the process of referring women to the Poppy clinic.

Incorporating this new knowledge into practice and educational programmes will enable clinicians to communicate with women in a holistic, informed and empathic manner, as requested by the participants. This will be a vital component in improving aspects of relational care offered in the clinic. Communication training for staff working in the Poppy clinic will be implemented to enhance aspects of relational care highlighted by the women in this study as needing improvement. This includes staff members' knowledge of patient history, making a plan of action in conjunction with the women and fully understanding the woman's concerns. As part of this training, the psychological impact of birth, interventions and complications will be highlighted to staff on induction to the Poppy clinic.

In response to the findings of this research study, measures have been implemented to streamline the appointment times, while in turn reducing them. It is envisioned that the addition of the two new clinics per week will also assist in this endeavour. Since the development of the clinic, the numbers of attendees have increased by 500% in six years, without an increase in clinic hours or resources. The increase in clinic slots and the new AMP role gives the research site a valuable opportunity to expand the service to more women. While the referral pathways for the Poppy clinic within the hospital are clear, greater awareness & transparency of the service must be shared with the GP's and PHNs. The limited resources and time available in the outpatient department have prevented further expansion of the Poppy clinic outside the organisation, as the clinic was consistently overbooked and unable to accommodate larger numbers of attendees. With additional education of all healthcare professionals caring for women postnatally, as discussed above, more women who cannot be treated in the community can attend the clinic and be cared for by experts in postnatal morbidity.

5.9 Strengths and Limitations

A significant strength of the study is the mixed-methods design. This included a survey with two previously validated measures, and a retrospective chart review

leading to a comprehensive evaluation of the Poppy clinic. The study was carried out in one of the largest maternity health care services in the Republic of Ireland, with an average of 8000-10000 births per annum (NMF, 2018). Furthermore, the research team was made up of key, experienced academics and clinicians in the areas of research, academia and clinical practice, strengthening the credibility of the research process. This study is not without its limitations. The study was undertaken in one maternity unit in an urban hospital in Ireland; these findings may differ elsewhere.

5.10 Conclusion

The Poppy clinic provides a valuable service to women suffering from a morbidity as result of pregnancy or birth. The feedback given by the women in the current study has provided the research team with a valuable opportunity to examine the issues raised and assess how their views can be incorporated into the future running of the clinic, ensuring progress is made in all areas of communication and practice. Using the data gained from the study provides an opportunity for improvement as the clinic expands.

Recommendations

- Postnatal morbidity clinics are an essential element of maternity care and should be developed in all maternity units in Ireland.
- Women at high risk of developing an infection or wound breakdown, such as women who have undergone caesarean section, women with a blood loss of over 500ml, assisted vaginal births, prolonged labour or women with a Hb less than 11mmol/l should be given information on signs of infection and wound breakdown and the contact details of the Poppy clinic or other postnatal morbidity clinic should symptoms develop.
- Midwives and obstetricians should be familiar with women's history and reason for her attendance at the Poppy clinic prior to commencing any consultation.
- Compassionate communication skills are essential for all clinicians treating women with a postnatal morbidity, specifically primiparous women who are at higher risk of psychological morbidity.
- Waiting times should be kept to a minimum for women attending hospitals postnatally for a postnatal morbidity.
- A national referral pathway should be available in the community (GP and PHN practices) and in all maternity units for all women displaying symptoms of a morbidity after discharge.

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Appendices

Appendix 1: Survey



UCD School of Nursing,
Midwifery and Health
Systems



The National Maternity Hospital
Vita Gloriosa Vita ~ Life Glorious Life

EVALUATION OF THE POPPY CLINIC SERVICE

Questionnaire

This questionnaire asks you to tell us about your experiences of attending the Poppy Clinic – at the National Maternity Hospital (Holles Street).

The research is being undertaken by a joint research team from the UCD School of Nursing, Midwifery and Health Systems and the National Maternity Hospital. If you have any questions about the study please call:

Jean Doherty (Research Assistant)

Tel: 0892351869 Email: jdoherty1@nmh.ie or

Caroline Brophy (Midwife Manager, Outpatients department, Holles Street)

Tel: (01) 637 3100, bleep 211, Email: cbrophy@nmh.ie

How to fill in the Questionnaire

Most of the questions can be answered by putting a tick in the box next to the answer that best applies to you. For example:

Has your baby had any problems getting to sleep?

Yes, a lot

Yes, sometimes

No, not at all

If you wish to write any comments, please do so on the last page of the questionnaire.

It will take approximately 6-8minutes to complete this questionnaire.

This document is 7 pages long (front and back). Please fill out all pages and let us know if there are any pages missing.

We know that you are probably very busy, but we would really like to have your answers about your experience of attending this clinic. All information that you provide is STRICTLY CONFIDENTIAL and all findings from the study will be presented in an anonymous form. You will not be asked for any details that will identify you as an individual. The information provided will be stored in a secure location in the National Maternity Hospital.

This survey includes the SWOPS – Satisfaction with Outpatient Services - questionnaire (Keegan and McGee, 2003) and the CARE – Consultation and Relational Empathy – questionnaire (Mercer *et al.*, 2004), validated for use in Irish maternity services.

Section 1: This section asks questions about you and your baby (please tick or fill in the spaces as appropriate):

1. What is your age in years?

2. Are you currently *(Please tick the ONE that most applies)*

- Married
- Separated or divorced
- Widowed
- Not in a relationship/single
- Living with a partner/boyfriend
- In a relationship, but not living with your partner

3. What is your highest level of education? *(Please tick ONE only)*

- No formal education
- Primary School
- Secondary School
- Trade/technical College
- University
- Other *(please specify)* _____

4. Is this your first baby?

Yes, first baby

No

5. If NO, how many babies have you had altogether, including this one?

(Please include any that were stillborn after 24 weeks of pregnancy)

- Two babies
- Three babies
- Four or more babies

6. If NO, have you ever had a caesarean section on any of your previous deliveries?

Yes

No

Section 2: This section asks about your most recent pregnancy and birth.

7. How would you describe your overall physical health throughout your pregnancy?

- Excellent
- Very Good
- Good
- Fair
- Poor
- Very Poor

(Space for comment, if you wish):

8. How would you describe your emotional well-being throughout your pregnancy?

- Excellent
- Very Good
- Good
- Fair
- Poor
- Very Poor

(Space for comment, if you wish):

9. Did you have any health problems prior to this pregnancy that meant you needed regular medication, or monitoring?

Yes

No

If YES, please describe

10. When was your most recent baby born?

On time (37 – 40 weeks)

Late (greater than 40 weeks)

Early (less than 37 weeks)

11. Did you have any of the following medical conditions or health problems during your pregnancy, delivery or after your baby was born?

Gestational diabetes

- High blood pressure
- Pre-eclampsia
- Obstetric cholestasis
- Low lying placenta / placenta previa / placenta accreata
- Depression
- Other (*please specify*) _____

12. What type of birth did you have?

- Vaginal birth
- Instrumental birth (using forceps or a suction cup)
- Caesarean section

13. If you had a caesarean section, was it:

- Planned or
- An emergency?

14. Did you attend the hospital: (*Tick one only*)

- As a public patient
- As a private patient
- As a semi-private patient
- With the community Midwives
- Other (*please specify*) _____

15. When your baby was born, what did she or he weigh?

- Less than 3kg (6.6lbs)
- 3kg-3.5kg (6.6lbs-7.7lbs)
- 3.6kg-4kg (7.7lbs-8.8lbs)
- More than 4kg (8.8lbs)

16. What was the reason for referral to the Poppy clinic? (*What physical complication arose from the birth of your child which led you to be referred?*)

Section C: This section will ask you questions about your visit/s to the Poppy clinic after the birth of your child (*this includes care you may have received from a member of the Poppy clinic service outside Poppy clinic appointment times*).

17. How many weeks after the birth of your child did you visit the Poppy **clinic?** weeks

18. Who referred you to the Poppy clinic?

- Midwife on the postnatal ward
 - Emergency Department
 - Hospital doctor
 - GP
 - Gynae ward
 - Not sure
 - Other (*please specify*)
-

19. How many times did you visit the Poppy clinic or meet with a Poppy clinic **representative?**

20. On average, how long were you waiting in the waiting room, for your appointment?

- Less than 30 minutes
- 30-60 minutes
- More than 60 minutes
- Not sure

21. On average, how long did you spend with the midwife/doctor at the appointment?

- Less than 10 minutes
- 10-20 minutes
- More than 20 minutes
- Not sure

A few last questions about the care received at the Poppy clinic

23) Did you have enough time to discuss your problem with the doctor/midwife?

Yes, definitely Yes, somewhat No

24) Did your doctor/midwife explain the reasons for any treatment or action in a way that you could understand?

Yes, definitely Yes, somewhat No Does not apply

25) If you had an important question to ask the doctor/midwife, did you get answers that you could understand?

Yes, definitely Yes, somewhat No I did not need to ask I did not get the opportunity to ask

26) Did you have confidence in the doctor/midwife examining and treating you?

Yes, definitely Yes, somewhat No

27) Did the doctor/midwife seem aware of your medical/pregnancy/birth history

She/he knew enough She/he knew something She/he knew little Don't know/can't say but not enough or nothing

28) Were you involved as much as you wanted to be in the decisions made about your care and treatment received in the Poppy clinic?

Yes, definitely Yes, somewhat No

29) When you left the clinic did you know what was going to happen next and when?

Yes, definitely Yes, somewhat No

30) Are there any areas where you feel we could make improvements?

31) Please use the following section for any comments you would like to make.

*Thank you! We appreciate you taking the time to complete this questionnaire.
We know how busy you are with your baby.*

Appendix 2: Questionnaire cover letter



School of Nursing,
Midwifery & Health Systems



The National Maternity Hospital
Vita Gloriosa Vita ~ Life Glorious Life

I hope this letter finds you and your baby well. I am writing in connection with your recent visit/s to the Poppy clinic in the National Maternity Hospital. We are in the process of evaluating this service and would value your feedback. Please find enclosed a questionnaire which I would appreciate if you would fill out and return to myself, Jean Doherty, Research Assistant, using the closed envelope.

OR

Please email me for a link to an online version of the questionnaire (phone and computer compatible): jdoherty1@nmh.ie

OR

Please go directly to the questionnaire online: www.surveymonkey.com/r/8TX2CBK

It will take approximately 6-8 minutes to complete and is completely confidential. We appreciate your time and your feedback. Please feel free to call me on 089 4596146 if you have any questions.

Kind Regards,

Jean Doherty
Research Assistant

Appendix 3: Information Leaflet



UCD School of Nursing,
Midwifery & Health Systems



The National Maternity Hospital
Vita Gloriosa Vita ~ Life Glorious Life

Evaluation of the Poppy Clinic – Postnatal Outpatient Service in the

Participant Information Sheet

What is the title of the study?

Evaluation of the Poppy Clinic – Postnatal Outpatient Care & Debriefing Service

What is the purpose of the study?

The purpose of this study is to explore the Poppy clinic as it is operated at the National Maternity Hospital and to gain a greater understanding of the experiences of women who avail of the services provided.

Why are we doing this research?

It is anticipated that this research will allow for the improvement and expansion of the Poppy clinic in the National Maternity Hospital and provide enough information to inform the provision of maternal morbidity services nationally and internationally.

Who is invited to participate in the study?

Mothers' who have attended the Poppy clinic, or have received postnatal care or debriefing by a staff member working at the Poppy clinic, in the previous 12 months.

Do I have to take part?

Participation in this research study is entirely voluntary. You are free to withdraw at any time, without giving a reason.

What will happen if I take part?

You will receive a survey to complete. The survey includes questions about the care you received from the Poppy clinic, for example why you were referred, how you were treated by the staff members who looked after you, how long you waited in the waiting room etc. The researcher who will be gathering your information does not work at the clinic or in the outpatient department and the staff who looked after you will not know what answers you gave to the questions. You have the option of completing the survey either by post, which can be filled out and returned to us in a provided stamped, addressed envelope, or you have the option of completing the same survey over the phone with a member of the research team at a time which suits you. The survey will take approximately 15 minutes to complete. Confidentiality is assured, and documentation will be stored in a locked cabinet at the National

Maternity Hospital. If you complete the postal questionnaire and send it back your name will not be on the survey. If you complete the survey over the phone, the answers will be written on a survey, by the research assistant, in the same manner as the posted survey and you will not be identified.

What are the possible risks of taking part?

There are no immediate risks to you in completing the survey. It is not anticipated that any questioning in this study is of a sensitive nature or that it would cause upset to participants. However should you feel affected in any way by any of the questions in the survey, we will be happy to refer you to someone who can discuss your issues with you in a sensitive manner.

How will the data from this research study be used?

The findings of this research study will be presented locally to midwives, midwife educators, obstetricians, policy makers and other healthcare professionals. The research findings will be published nationally and internationally and presented at relevant conferences and journals for healthcare professionals involved in midwifery and obstetrics. All findings will be anonymous so that no participants can be identified.

How is this research project funded?

This research is funded by the Nursing & Midwifery Development Unit, South Dublin, Wicklow and Kildare, and is supported by the National Maternity Hospital and University College Dublin.

Ethical approval

This study has been reviewed, and approved, by the Research Ethics Committee in the National Maternity Hospital and University College Dublin

Further information.

You can obtain further information from:

Jean Doherty, Research Midwife, National Maternity Hospital, Education Department, 2nd floor 65/66 Lower Mount Street, Dublin 2. Email: jdoherty1@nmh.ie. Tel: 0892351869