CREATING A BETTER FUTURE **TOGETHER**

National Maternity Strategy

2016-2026

hi healthy ireland

An Roinn Sláinte
DEPARTMENT OF HEALTH

Tús Áite do Shábháilteacht Othar
Patient Safety First

CREATING A BETTER FUTURE **TOGETHER**

National Maternity Strategy

2016-2026

hi Healthy Ireland
An Roinn Sláinte DEPARTMENT OF HEALTH
Tús Áite do Shábháilteacht Othar Patient Safety First

MINISTER'S FOREWORD

I fully endorse this Strategy and it was my privilege to present it to Government for approval. The document maps out how we can improve maternity and neonatal care in the years ahead ensuring that it is safe, standardised, of high-quality and offers a better experience and more choice to women, families and fathers. I particularly support the focus on health and wellbeing throughout.

As Minister and as a TD, I will advocate for it and will work for its full implementation. In fact, we've already started.

I want to thank all of those who contributed to the Strategy's development, in particular the Chair and members of the Steering Group.

Leo Varadkar
Minister for Health

CHAIR'S FOREWORD

It is with great pleasure that I present the country's first *National Maternity Strategy* to the Minister for Health, Leo Varadkar TD. The Maternity Strategy Steering Group was given the onerous task of designing a new maternity service that facilitates choice, yet has all the necessary safety assurances. The Group worked tirelessly to deliver this Strategy and in so doing have worked together to design a model of care based on the principle that childbirth is a natural, physiological process. At the same time, the Strategy recognises that some women have higher care needs and our services must be responsive and capable of ensuring that the increased need is identified quickly and appropriate care provided.

One model of care is proposed, with three separate care pathways. Women should be offered choice regarding their preferred pathway of care, in line with their clinical needs and best practice. Insofar as possible, all care pathways should support the normalisation of pregnancy and birth and women should be encouraged, and supported, to make their individual experience as positive as possible.

At the centre of this Strategy is the mother. We have therefore avoided, as far as possible, profession-centric terms such as 'consultant led' and 'midwifery led', as they incorrectly place an emphasis on the profession. In future, maternity care in Ireland will be provided in an integrated manner, by a multidisciplinary team, with women seeing the most appropriate professional, based on need.

As a mother and a grandmother, I feel privileged to have been given the opportunity to chair this Steering Group, and to help shape the future of our maternity services. On a personal note I want to thank the members of the Steering Group who were so highly motivated and gave unstintingly of their time, their expertise and their experience. My thanks too go to the Secretariat for all their support, dedication and extraordinary hard work over the last few months. Finally, and most particularly, I would like to acknowledge the considerable input to this Strategy of Roisin Molloy and Shauna Keyes, two mothers who have experienced both joy and heartache within our maternity services. Their presence on the Group served to ground us in reality, and I thank them for that. Savita Halappanavar was also ever present with us in our thoughts and we hope that the outcome of our work will be of some comfort to her husband and family.

As I present this Strategy, I ask the Government to commit to investing further in maternity services in the coming years; I ask the National Women & Infants Health Programme to implement this Strategy with passion and to reorganise services on the lines proposed as a priority, and lastly I ask the maternity workforce to take ownership of the Strategy and to work together, in partnership across professions and with families, to deliver a new, better and safer maternity service.

Sylda Langford
Chair

EXECUTIVE SUMMARY

1. Irish maternity services are good and compare well with those in other countries in terms of safety and patient outcomes. Much has been done to improve services in recent years. We have more consultant obstetricians and staff midwives than ever before and there has been considerable investment in new buildings, equipment and units. This will continue with the Government decision to re-locate the four standalone maternity hospitals in Dublin and Limerick to new state-of-the-art hospitals on the campuses of adult teaching hospitals. The new National Women & Infants Health Programme will provide improved oversight and governance of maternity services, raising quality and standardising care.

2. In recent years, several reports and reviews have highlighted significant service deficits and failings which have undermined confidence in our maternity services and staff morale. There is a lack of choice for expectant mothers, inadequate emphasis on general health and wellbeing, ageing infrastructure, poor staffing ratios by international standards and geographic variation in services.

3. The commitment to develop this Strategy arises from the report, *Investigation into the safety, quality and standards of services provided by the Health Service Executive to patients, including pregnant women, at risk of clinical deterioration, including those provided in University Hospital Galway, and as reflected in the care and treatment provided to Savita Halappanavar.* That report recommended that a strategy be developed to implement standard, consistent models for the delivery of a national maternity service that reflects best available evidence, to ensure that all pregnant women have appropriate and informed choices, and access to the right level of care and support.

4. This Strategy is intended to provide the framework for a new and better maternity service. The Strategy is focused on, and responsive to, women and their individual needs. It seeks to rebuild and restore confidence in our services by making them as safe as possible. The Strategy, recognising that for all women, the transition to motherhood is an event of a huge social and emotional significance, seeks to create a partnership approach to service delivery.

5. This Strategy is informed by a review of national and international literature on models of care across selected jurisdictions and a public consultation. Both reports are being published along with this Strategy.

6. The vision for maternity services, articulated in this Strategy, is an Ireland where:

   Women and babies have access to safe, high quality care in a setting that is most appropriate to their needs; women and families are placed at the centre of all services, and are treated with dignity, respect and compassion; parents are supported before, during and after pregnancy to allow them give their child the best possible start in life.

   To realise this vision, four strategic priorities are identified:

   - A health and wellbeing approach is adopted to ensure that babies get the best start in life. Mothers and families are supported and empowered to improve their own health and wellbeing;
   - Women have access to safe, high quality, nationally consistent, woman-centred maternity care;
   - Pregnancy and birth is recognised as a normal physiological process and, insofar as it is safe to do so, a woman's choice is facilitated;
   - Maternity services are appropriately resourced, underpinned by strong and effective leadership, management and governance arrangements, and delivered by a skilled and competent workforce, in partnership with women.

7. Due to a variety of contributing factors, including demographic, lifestyle and medical co-morbidities, maternity care in Ireland has become more complex. Despite this, perinatal and maternal mortality rates remain low. However, challenges remain: the proportion of complex pregnancies is increasing, caesarean section rates are increasing, the proportion of low birth weight babies and preterm births are increasing and breastfeeding rates remain low. All of these factors impact on maternity service provision. It is clear that maternity services must be in a position to respond to increasingly diverse and complex population needs in order to provide safe, evidence-based, accessible care to all mothers, babies and their families in Ireland.

8. Pregnancy and birth is a time when women have a unique opportunity to focus on their health and wellbeing, and positive choices can have a significant impact on giving each baby the best start in life. By providing appropriate information and supports, maternity services can make 'every contact count' to support behaviour change, in particular around reducing lifestyle behaviours with harmful effects such as smoking, as well as increasing protective measures such as immunisation, improved nutrition and physical activity. In addition, it is important that supports and interventions on overall health and wellbeing, including mental health and sexual health, are addressed and supported into the postnatal period.

9. For a minority of women who experience social problems such as isolation, domestic violence or addiction, pregnancy and birth can provide an opportunity for them to access support for their safety and wellbeing, and that of their baby. Staff in maternity services are uniquely placed to help vulnerable women and their babies access support and protective services.

10. Leadership, governance, clinical commitment and clinical effectiveness approaches are required to deliver safe quality maternity care at national, regional and local level. There is a need for investment in capacity development for quality and patient safety in our maternity services. It is essential that each maternity network should have, within its corporate responsibility, a defined patient safety and quality framework. This requires that each service/hospital has a dedicated patient safety and quality leadership and oversight function, which encompasses both the maternity quality and maternity patient safety elements.

11. Currently maternity care in Ireland is largely consultant led and hospital-based; the model of care now proposed represents a fundamental overhaul of services. The Strategy recommends that maternity services should be woman-centred, and provide integrated, team-based care, with women seeing the most appropriate professional, based on need. Every woman will have a named lead healthcare professional who will have overall clinical responsibility for her care.

12. The Strategy recognises that all pregnant women need a certain level of support, but some need more specialised care, and it proposes an integrated care model that encompasses all the necessary safety nets in line with patient safety principles, which delivers care at the lowest level of complexity, yet has the capacity and the ability to provide specialised and complex care, quickly, as required.

13. The Strategy classifies pregnant women/babies into three risk groups; normal-risk, medium-risk (requiring a higher level of oversight), and high-risk (requiring a more intensive level of care, either throughout or at a particular stage of care). Across all risk levels there is the potential need for an increased level of care and the importance of a smooth transfer between pathways of care is recognised.

14. A choice of pathway of maternity care will be available based on this risk profile. A woman will be supported to make an informed choice with regard to her care pathway and will have her care delivered by a particular team. All care pathways should support the normalisation of pregnancy and birth.

- *Supported Care*: This care pathway is intended for normal-risk mothers and babies, with midwives leading and delivering care within a multidisciplinary framework.
- *Assisted Care*: This care pathway is intended for mothers and babies considered to be at medium-risk, and for normal-risk women who choose an obstetric service. Care will be led by a named obstetrician and delivered by obstetricians and midwives, as part of a multidisciplinary team.
- *Specialised Care*: This care pathway is intended for high-risk mothers and babies and will be led by a named obstetrician, and will be delivered by obstetricians and midwives, as part of a multidisciplinary team.

15. In determining the new model of care, patient safety is the first and the overriding principle. Of critical importance therefore is the need to underpin the model of care with evidence-based care guidelines and audit, which will provide the necessary patient safety assurances, and help to ensure consistency in practice across the country. To that end, comprehensive intrapartum guidelines will be developed through the National Clinical Effectiveness Committee (NCEC) process. The Strategy also recommends a national audit in line with the NCEC criteria, that dedicated emergency obstetric teams be provided in each maternity unit, and that a maternal retrieval service should be available alongside the existing neonatal retrieval service.

16. Fundamental to the Strategy is the need for continuity of care(r), and one to one care for a woman in labour. The Strategy proposes the development of a community midwifery service where hospital midwives, working as part of a multidisciplinary team, provide antenatal and postnatal care in the community. The interface between the community midwifery and public health nursing services will need elaboration, in consultation with the various stakeholders. All pathways of care will strive to support the normalisation of the birth process as much as possible, and will lend themselves to a shared model of care with the GP, as provided for by the *Maternity and Infant Care Scheme.*

17. Women in the *Supported Care* pathway will give birth in an *Alongside Birth Centre*; women in this care pathway may also choose a homebirth. Women in the *Assisted Care* or *Specialised Care* pathways will give birth in a *Specialised Birth Centre*.

18. *An Alongside Birth Centre* should ideally be situated immediately alongside and contiguous to a *Specialised Birth Centre* (current labour ward). These will provide comfortable, low tech birth rooms; labour aids such as birthing balls and pools and complementary therapy will be welcome alongside natural coping strategies. If epidural analgesia, electronic foetal monitoring or syntocinon is required, transfer to the *Specialised Birth Centre* will be organised and where possible the same midwife will continue the women's care. In an emergency, the necessary critical services will be brought to the woman in the *Alongside Birth Centre*.

19. For all care pathways, the physical infrastructure should be of a high standard, providing a homely environment and respecting the woman's dignity and need for privacy during childbirth. While it is recognised that more medical equipment is required in a *Specialised Birth Centre*, as far as possible, all birth centres should be conducive to providing a calm and relaxing environment, such that it can best support a physiological process. Modern facilities including, where appropriate, birthing aids and birthing pools should be available.

20. Each maternity network will be required to prepare a plan to provide *Alongside Birth Centres* across their network. In determining the priority for implementation, each maternity network will have regard to the need to ensure a reasonable geographic spread of such birth centres across the network. Pending the development of *Alongside Birth Centres*, or where it is determined that, given the small size of a maternity unit, a discrete *Alongside Birth Centre* cannot be justified, it

is recommended that a designated space is established within a *Specialised Birth Centre*, with an appropriate environment and processes to ensure that, as far as possible, the normal-risk woman will be provided with a natural childbirth experience.

21. With the new model of maternity care is a requirement for strong and effective clinical leadership at national, maternity network, and individual maternity unit level. This will enable us to create and sustain a safe maternity service across the hospital, the community and into the home.

22. The changes recommended will have a significant impact on workforce requirements. There is a clear need therefore for the *National Women & Infants Health Programme* to work, as appropriate, with the HSE HR Division, to scope out the staffing requirement arising from the new model of care, and prepare a workforce plan to incrementally build capacity in the maternity services workforce. Workforce planning will need to go beyond the core requirement of obstetricians and midwives, and apply across the entire multidisciplinary team.

23. It will also be necessary to analyse the training needs associated with the implementation of the new model of care to ensure that the current and future maternity workforce have the necessary skills and competencies to deliver safe high quality maternity care.

24. Implementation of the Strategy will largely fall to the new *National Women & Infants Health Programme.* This will involve examining existing arrangements and putting the necessary architecture and processes in place to ensure the delivery of safe services in line with the vision articulated in this Strategy.

25. The Programme will work with maternity networks and individual maternity units to ensure that maternity service provision is remodelled on the lines proposed, and that a culture of continuous improvement is fostered throughout the service. As a first step, the Programme will be required to develop and manage a detailed implementation plan and timetable, to deliver on the Strategy's required actions. The plan will be finalised within six months of the date of publication of the Strategy.

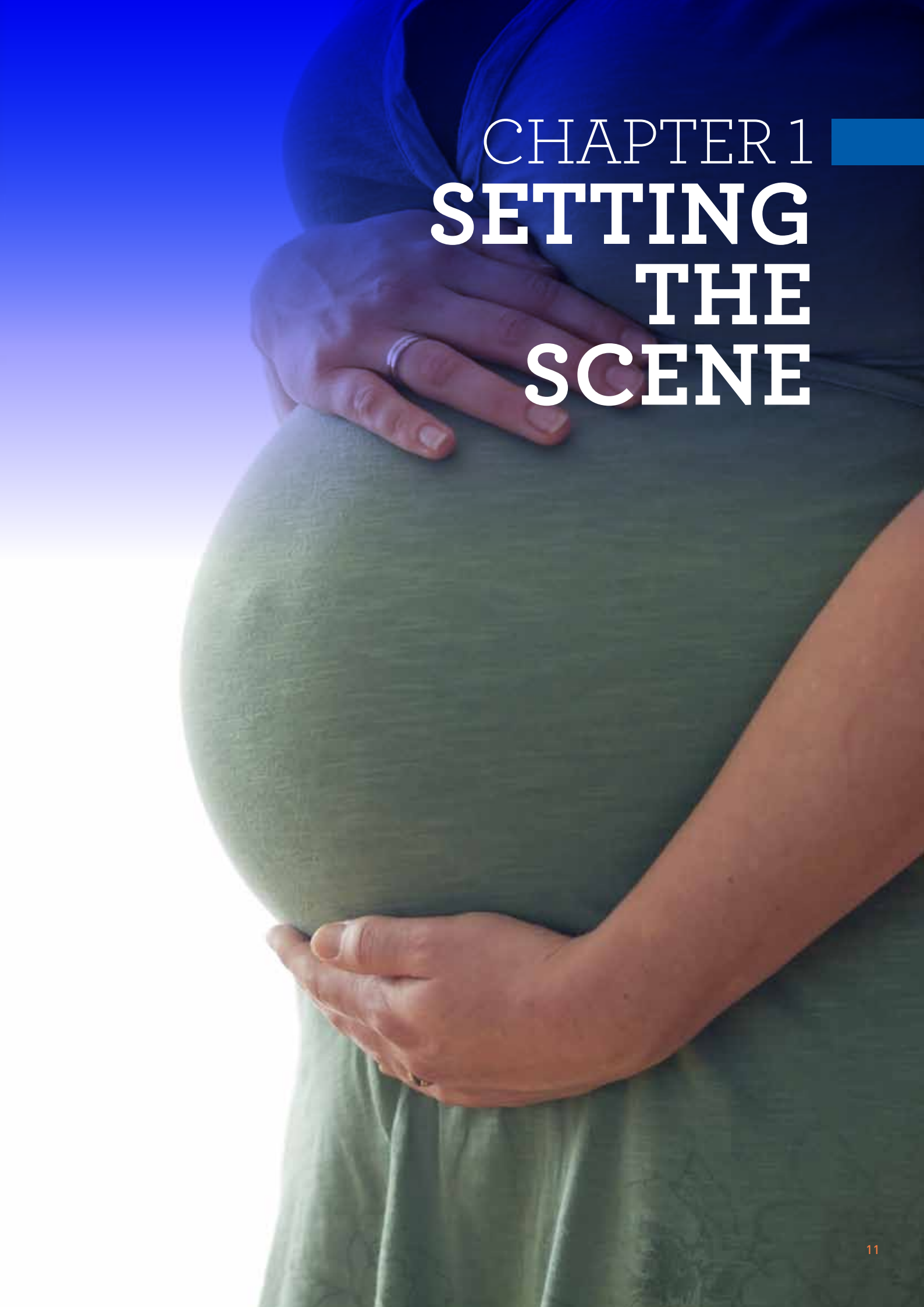
26. Additional funding will be necessary to resource the new maternity service envisioned in this Strategy. It is therefore recommended that the Government commit to providing annual development funding to the HSE which will be ringfenced to implement this Strategy.

27. Progress on the implementation of the Strategy will form part of the normal performance dialogue between the Department and the HSE. In addition, the *National Women & Infants Health Programme* will be required to submit an annual report to the Minister which will include details of the progress made in each maternity network; the report will be published.

> **The introduction of midwifery-led care is a step in the right direction giving women more choice and allowing them to be involved in the planning of woman centred care and giving feedback to those delivering and planning each woman's individual care.**

Service User

TABLE OF CONTENTS



CHAPTER 1
SETTING THE SCENE

1.1 INTRODUCTION

This is Ireland's first national maternity strategy. In recent years, a number of reports and reviews of maternity services have highlighted significant service deficits and this has undermined confidence in our services. However, much has been done to improve maternity services across the country. Additional investment has provided for an increase in the number of frontline maternity staff and there are plans to build four new maternity hospitals. This will ensure that, in the future, all maternity hospitals are co-located with an adult acute hospital. We have more midwives and obstetricians than ever before, and our maternal and perinatal outcome data continues to provide evidence that our maternity services are safe and compare favourably internationally. In addition, the new *National Women & Infants Health Programme* will provide improved oversight and governance of maternity services, and standardise care across all our maternity units.

The commitment to develop this strategy arises from the recommendations of the HIQA Report, *Investigation into the safety, quality and standards of services provided by the Health Service Executive to patients, including pregnant women, at risk of clinical deterioration, including those provided in University Hospital Galway, and as reflected in the care and treatment provided to Savita Halappanavar.* That report recommended that a strategy be developed to implement standard, consistent models for the delivery of a national maternity service that reflects best available evidence, to ensure that all pregnant women have appropriate and informed choices, and access to the right level of care and support.

The Strategy was informed by a review of national and international literature and a public consultation process, and was guided by a Steering Group which represented wide stakeholder interest.

The Steering Group has considered current service provision, and, in looking to the future, has developed the blueprint for the development of our maternity service for the next 11 years. The Strategy proposes to enhance and modernise current service delivery, recognising the need to ensure that a culture of learning is developed and cultivated within our maternity service, such that services are improved on an ongoing basis. It envisions a service which provides fully integrated, quality maternity care across the continuum of care. The service will be woman-centred, yet will acknowledge the vital role of the partner/father and family. Care will be led by a lead professional who will be part of a multidisciplinary team. Care will be provided in the community as far as possible, through combined care between the GP and the maternity service and through an outreach community midwifery service, where hospital midwives will work alongside, and in association with, public health nurses and general practice services. While recognising that some pregnant women will need a higher level of medical or other specialised support, the Strategy seeks to normalise pregnancy and birth as far as possible. A choice of birth setting will be facilitated where it is safe to do so.

Chapter 1 sets out the context for the Strategy and outlines the vision for the future. Four overarching strategic priorities are identified, around which the new maternity service will be shaped. Chapter 2 explains the drivers for change, sets out the international trends in maternity services and summarises what the public think of our maternity services and how they might be improved. This Chapter also describes the current and projected trends in population and their needs which, of course, have an integral role in shaping the delivery of maternity care.

The four strategic priorities are discussed in Chapters 3, 4, 5 and 6. Chapter 3 focuses on health and wellbeing, recognising that pregnancy and birth is a time when women have a unique opportunity to focus on their health and wellbeing, and positive choices can have a significant impact on giving each baby the best start in life. Chapter 4 outlines the very significant work that is underway at present in relation to the patient safety agenda and, looking forward, underlines the need to enable maternity services to deliver safe care while balancing competing pressures in a dynamic and complex environment. Chapter 5 proposes a new model of maternity care which is based on the premise that all women need

a certain level of support but some need more specialised care. The model promotes an integrated, evidence-based and multidisciplinary team-based approach across all care settings.

Chapter 6 discusses the need for strong and effective leadership, management and governance arrangements to create and sustain a safe, and high quality, maternity service. This Chapter also looks at the workforce planning arrangements which will be required to ensure that we have a competent, well resourced and educated workforce to deliver the new model of care proposed in this Strategy.

Chapter 7 describes how the Strategy will be realised. The new HSE *National Women & Infants Health Programme* will lead on the implementation of the Strategy's actions. Progress will be monitored on an ongoing basis through the performance dialogue between the Department of Health and the HSE, and, in addition, a formal annual report will be submitted to the Minister. The annual report will be published.

1.2 VISION

Our vision for maternity services is an Ireland where:

**"Women and babies have access to safe, high quality care in a setting that is most appropriate to their needs;
women and families are placed at the centre of all services, and are treated with dignity, respect and compassion;
parents are supported before, during and after pregnancy to allow them give their child the best possible start in life."**

To realise this vision, four strategic priorities have been identified:

1. A health and wellbeing approach is adopted to ensure that babies get the best start in life. Mothers and families are supported and empowered to improve their own health and wellbeing;
2. Women have access to safe, high quality, nationally consistent, woman-centred maternity care;
3. Pregnancy and birth is recognised as a normal physiological process and, insofar as it is safe to do so, a woman's choice is facilitated;
4. Maternity services are appropriately resourced, underpinned by strong and effective leadership, management and governance arrangements, and delivered by a skilled and competent workforce, in partnership with women.

1.3 MATERNITY SERVICE PROVISION IN IRELAND

1.3.1 MATERNITY SERVICES

Currently, maternity services in Ireland are predominantly hospital based, with over 99% of births occurring within a hospital setting; pregnancy is the largest single reason for admission to hospital in Ireland. There were 67,347 births in Ireland in 2014 – a breakdown of births by unit is set out at *Appendix A*.

There are 19 maternity hospitals/units throughout the country, three of which, the National Maternity Hospital, the Rotunda Hospital and the Coombe Women & Infants University Hospital, are voluntary hospitals. The size of the 19 maternity hospitals/units varies significantly, with 9,261 births in the National Maternity Hospital in 2014 compared with 1,100 births in South Tipperary General Hospital in the same period[1].

Table 1: Categorisation of Hospitals/Units by Annual Births in 2014[1]

Number of Births	Number of Maternity Hospitals/ Units	Hospitals
<1500	3	Sligo General, South Tipperary General and Kerry General Hospitals
1500 - 2000	7	St Luke's Kilkenny, Wexford General, Midland Regional Portlaoise, Cavan General, Letterkenny General, Mayo General and Portiuncula Hospitals
2000 - 3000	3	Midland Regional Hospital Mullingar, University Hospital Waterford and University Hospital Galway
3000 - 4000	1	Our Lady of Lourdes Hospital Drogheda
4000 - 5000	1	University Maternity Hospital Limerick
5000 - 8000	0	
8000 - 9000	3	Coombe Women & Infants, Rotunda and Cork University Maternity Hospitals
>9000	1	National Maternity Hospital

All of the smaller maternity units are based in general hospitals with other services including paediatrics, medicine and surgery. Four of our maternity hospitals are standalone facilities - the National Maternity Hospital, the Rotunda Hospital, the Coombe Women & Infants University Hospital and University Maternity Hospital Limerick. However, plans to redevelop the National Maternity Hospital on the St Vincent's Hospital campus are well advanced and a planning application is imminent. In addition, the increased funding available to the Department of Health under the Government's six year capital investment framework, *Building on Recovery 2016 -2021*, will enable a wider maternity capital programme towards the later years of the plan, involving the relocation of the Rotunda Hospital to the Connolly Hospital campus in Blanchardstown, and Limerick Maternity Hospital to the University Hospital Limerick campus at Dooradoyle. The Plan also includes the redevelopment of the Coombe Women & Infants University Hospital on the St James's Hospital campus, the site for the proposed children's hospital, thus ensuring

the development of a tri-located adult/paediatric/maternity facility. A plan is therefore in place to ensure that all maternity hospitals in the country will be co-located with an adult acute hospital in the medium term.

The Maternal and Newborn Clinical Management System Project is working on the design and implementation of an electronic health record for all women and babies in maternity services in Ireland. This record will allow information to be shared with relevant providers of care covering all antenatal, intrapartum and postnatal women and the newborn, until discharge from either the hospital or community care, to the care of the public health nurse. Phase 1 sites for implementation in 2016 are; Cork University Maternity Hospital; Kerry General Hospital, the National Maternity Hospital and the Rotunda Hospital. The system will then be deployed to the remaining 15 hospitals/units on a phased basis. In view of the very significant potential benefits of the system, in terms of improved care as a result of better communication, supported decision making and enhanced clinical audit, it is important that the electronic system is rolled out across all maternity hospital/ units as a priority and extended to the community as early as possible.

The services currently available to women are:

- **Consultant-led service**: Service provided in a maternity hospital/unit by a multidisciplinary team led by a consultant obstetrician.
- **Combined care**: *The Maternity and Infant Care Scheme* provides an agreed programme of care to an expectant mother and her new born baby for up to six weeks after birth. Under the programme, the care is shared between the GP and the hospital/DOMINO services. The woman attends her GP for a set number of antenatal visits as well as additional visits depending on clinical need. The woman also attends her GP for postnatal visits for both herself and her baby. While national statistics are not available in relation to the number of women who avail of the scheme, it is clear that a very large proportion of women choose combined care for their maternity care.
- **Midwife-led units**: Available to low-risk women in Cavan General and Our Lady of Lourdes Hospital Drogheda, where the service is co-located with a consultant-led unit. The service is planned, managed, coordinated and delivered by midwives and covers the antenatal, intrapartum and postnatal periods. Care is delivered in the community and in an alongside midwife-led unit. While situated close to the labour ward, the unit has a discrete identity. In 2014, 288 and 121 births were recorded in Drogheda and Cavan respectively. This combined figure of 409 represents approximately 7.9% of all births in Drogheda and Cavan and 0.6% of all births in Ireland that year.
- **DOMINO (Domiciliary In and Out)**: This service is available in a limited numbers of hospitals and usually within confined geographical boundaries/distances. While the model differs from hospital to hospital, the service is generally provided by a team of hospital-based community midwives who care for women throughout pregnancy, birth and during the postnatal period. Antenatal appointments can take place either in the hospital or in a community setting. The woman generally transfers home within 12-24 hours after the birth. The community midwife continues to look after mother and baby for the first few days at home. 2,297 DOMINO births were recorded in 2014, accounting for 3.35% of total births.
- **Early Transfer Home Scheme**: A scheme available in a number of hospitals to facilitate mothers who wish to leave hospital within a few hours after giving birth. Postnatal care is provided by a team of community midwives in the woman's home.
- **Home births**: The National Maternity Hospital and University Hospital Waterford offer a very limited home birth service to low-risk women. In addition, the HSE facilitates a home birth service through

self-employed community midwives (SECM). Approximately 20 SECMs have signed a Memorandum of Understanding (MOU) with the HSE to provide planned home birth services to eligible women. SECMs are bound by the terms of the MOU and are indemnified under the Clinical Indemnity Scheme operated by the State Claims Agency. The SECM is the primary carer for the woman throughout her pregnancy and for up to 14 days postnatally. Home births account for approximately 0.2% of births in Ireland[2].

- **Postnatal care** is provided to all women; however the care is provided in different settings and for a different duration, depending on the model of care. For women birthing in hospitals, postnatal care is provided within the hospital setting. The average length of hospital stay is dictated by the type and complexity of the delivery. The average postnatal length of stay in Irish maternity hospitals/ units, for 78.8% of singleton spontaneous deliveries and 38.3% of multiple spontaneous deliveries, was two days or less in 2014. For caesarean section deliveries, this increased to three to five days for 90% of singleton deliveries and 80.4% for multiple deliveries[2].

  Women who receive their care in midwifery-led units, the DOMINO or Early Transfer Home services, receive postnatal care for the first few days at home. This care is provided as an outreach service by hospital midwives.

  However, in the main, postnatal care is provided by public health nurses (PHNs) who visit mother and baby at home soon after their discharge from hospital. Home visits are essential to support a new mother and baby. Women who avail of the *Maternity and Infant Care Scheme* attend their GP for the six week postnatal check, and bring their baby to the GP for a two week and six week check.

- **PHN services** aim to deliver a sustainable community nursing service that effectively meets the health needs of the population, within a primary care setting. This involves the delivery of nursing care to various client groups, including families in the community.

  PHNs are directed to visit all mothers and their infants within 72 hours of hospital discharge as a priority. PHNs have a key role in supporting child health, families and new babies, screening for postnatal depression, providing breast feeding support and checking the baby's development, amongst other services. The impact of the work of PHNs with families who are vulnerable or at risk due to social disadvantage is particularly important. The PHN is key to identifying issues which may develop into problems, or risks, if they are not addressed. The focus of the PHN programme is on identification, prevention and early intervention for families experiencing difficulties allowing appropriately based interventions to prevent situations deteriorating.

> **There are many aspects of our current maternity service working well and this is due to the dedicated, caring and knowledgeable healthcare workers providing excellent care to women and their families.**
>
> Service User

Choice in model of care is largely dependent on location, with more choice available in the larger hospitals as outlined in Table 2.

Table 2: Choice in model of care

	DOMINO	Early Transfer Home	Home Births[a]	Midwifery-Led Units
Ireland East Hospital Group				
National Maternity Hospital	✔	✔	✔	
St Luke's Hospital Kilkenny				
Midland Regional Hospital Mullingar				
Wexford General Hospital	✔			
Dublin Midlands Hospital Group				
Coombe Women's & Infants University Hospital	✔	✔		
Midland Regional Hospital Portlaoise[b]				
RCSI Hospital Group				
Rotunda Hospital	✔	✔		
Cavan General Hospital				✔
Our Lady of Lourdes Hospital Drogheda				✔
South/South West Hospital Group				
Cork University Maternity Hospital	✔	✔		
Kerry General Hospital[c]		✔		
South Tipperary General Hospital				
University Hospital Waterford	✔		✔	
University of Limerick Hospital Group				
University Maternity Hospital Limerick				
Saolta University Hospital Group				
University Hospital Galway		✔		
Letterkenny General Hospital				
Mayo General Hospital				
Portiuncula Hospital General & Maternity Ballinasloe				
Sligo General Hospital				

[a] In addition, the HSE facilitates a home birth service through Self Employed Community Midwives (SECMs)
[b] Portlaoise plans to introduce DOMINO and ETH
[c] Kerry does not provide home support

> It's disheartening to see that the range of ante and postnatal care and birthing options that are available in major urban areas (Dublin) are not available in smaller hospital catchment areas. As someone who lives rurally I would love to be able to avail of home based antenatal and postnatal care.

Service User

1.3.2 ANAESTHESIA

All 19 hospitals/units provide anaesthesia services including 24 hour on call care for the emergency caesarean section and other obstetric emergencies. The service also provides epidural analgesia, anaesthesia for elective caesarean sections as well as a consultation/ pre-assessment service. Recent data from the UK suggests that more than 60% of pregnant mothers have some interaction with the anaesthesia service.[3]

1.3.3 NEONATOLOGY

Neonatology is a sub specialty of paediatrics which relates to the medical care of newborn babies. There has been a dramatic fall in mortality and morbidity rates for newborn infants in the last 30 years[4]. With medical advances, the clinical case mix has altered with an increased emphasis on intensive care for extremely pre-term and ill term infants.

There are a total of 300 special care baby unit cots across the country for preterm and sick newborns - 193 special care, 52 high dependency care and 55 intensive care. The neonatal units provide differing levels of care depending on their size and medical/nursing numbers. There are four tertiary units - National Maternity Hospital, Rotunda Hospital, Coombe Women & Infants University Hospital and Cork University Maternity Hospital- providing the most complex level of care. There are four secondary neonatal units providing an intermediate level of care – University Maternity Hospital Limerick, University Hospital Galway, Our Lady of Lourdes Drogheda and University Hospital Waterford. The remaining 11 units provide routine newborn care and have immediate resuscitation facilities available.

The neonatal units are integrated through the National Neonatal Transport Programme (NNTP). The transport service is intended for any infant up to the age of six weeks who requires an increased level of care not available at the referring hospital. The majority of infants are transported to Dublin hospitals but the NNTP also transports neonates to regional neonatal/surgical intensive care units nationally or internationally as required.

A designated neonatal transport nurse, neonatal registrar and an ambulance driver are available to set out within 40 minutes to any hospital for a sick infant. The team provides stabilisation advice and intensive care at the referring hospital, prior to, as well as during, the transport to the relevant tertiary centre. The team travels in a dedicated ambulance, which has been designed and equipped especially for neonatal retrievals. While most transfers are by road, air transport, in association with the Irish Air Corps, is available where required.

A new model of care for neonatology services in Ireland has recently been published by the HSE and is intended to ensure sustainability in neonatal services. The model has three core objectives:

1. Improve safety and quality in the delivery of baby-centred care;
2. Improve access to the appropriate services;
3. Improve cost-effectiveness of services delivered.

1.3.4 HEALTH AND SOCIAL CARE PROFESSIONALS AND OTHER SUPPORT SERVICES

Provision of maternity and neonatal care requires the specialised input of a wide range of professions. Radiographers, medical laboratory scientists and biochemists provide diagnostic and screening services for mothers and neonates. The Health and Social Care professions including medical social workers, psychologists, speech and language therapists, occupational therapists, physiotherapists and dietitians, support women and their infants and families to achieve health and wellbeing through practical and therapeutic interventions from preconception, throughout antenatal care and into the postnatal phase as part of the wider multidisciplinary team.

1.3.5 OTHER SPECIALTIES

Links with other specialties in acute care such as endocrinology, cardiology, gastroenterology, radiology, microbiology and haematology etc. for collaboration, are an essential aspect of the provision of maternity care where women present with existing chronic conditions or develop complications during the course of their pregnancy.

1.3.6 SERVICE PRESSURES

It is acknowledged that, in recent years, maternity services have experienced particular service pressures in terms of the increase in numbers of births; staff recruitment and retention; relatively low levels of obstetricians and midwives; rising costs of services; insurance coverage and litigation; adverse incident investigations, increasing levels of clinical interventions and significant infrastructural deficits. While the birth rate has decreased since 2009, the most recent birth figures remain higher than pre-2005 levels[5]. Services are also dealing with more complex cases due to increases in obesity levels, diabetes, average age of first time mothers, assisted reproduction, multiple pregnancies etc. In addition, and in line with international experience, women's desire for greater choice in maternity care is growing.

Staff recruitment and retention is a major issue in Ireland, as it is for maternity services in other countries. While the number of obstetricians increased from approximately 111 whole time equivalents in 2008 to 121 in 2014, Ireland still has a relatively low level of obstetricians by OECD standards. The ratio of obstetricians to births has increased year on year since 2008; this is attributable to the increase in the number of obstetricians, as well as the declining birth rate. The National Clinical Programme for Obstetrics and Gynaecology in their *Consultant Workforce Planning 2015: Supplementary Report*[6], recommended that the number of consultant obstetricians/gynaecologists should be increased to the equivalent of the United Kingdom on a 'per 1,000 live births' basis. This identified a need for approximately 100 new consultant posts.

While the number of midwives has increased in recent years and the number of births has fallen, we remain understaffed relative to other developed countries. The HSE identified the necessity to review midwifery staffing requirements in relation to clinical activity to support services, in line with Birth Rate Plus®. Birth Rate Plus® is a workforce planning and strategic decision-making methodology for determining clinical midwifery staffing and has been used in the UK since 1988; it is also used internationally. The results of this review are awaited.

In some smaller hospitals which do not have dedicated obstetric anaesthesia/critical care cover, providing emergency cover for the obstetric unit as well as for surgical/medical emergencies/ICU/patient transfers can be very problematic. It is considered that a comprehensive maternity service across the 19 units requires the dedicated support of an anaesthetic/critical care service; this issue is further addressed in Chapter 6.

There is wide variation between maternity hospitals/units in access to the wider multidisciplinary team. Outside of the four largest maternity hospitals (National Maternity Hospital, Rotunda Hospital, Coombe Women & Infants University Hospital, Cork University Maternity Hospital) services are shared across hospital specialties. While there is a lack of international data against which to benchmark the health and social care professions, it is accepted that dietetic, physiotherapy and medical social work services are particularly affected by the increasing numbers and complexity of cases referred, changing demographics and the requirement for a higher level of specialisation & training.

1.4 METHODOLOGY

On 30th April 2015, the Minister for Health established the National Maternity Strategy Steering Group to advise on the development of the strategy. The Terms of Reference of the Group were:

To develop a National Maternity Strategy which encompasses preconception[d], antenatal, intrapartum, postnatal and neonatal care provided across acute, primary and community settings (generally spanning the period from up to three months before conception and until six weeks after birth).

a) A Strategy that seeks to ensure that
   i. women and babies have access to safe, high quality maternity care
   ii. the needs of mothers and families are placed at the centre of maternity services
   iii. the health and wellbeing of women and babies is promoted and protected
   iv. women's choice is facilitated insofar as it is safe to do so
   v. outcomes in Ireland are on a par with best international performance
   vi. care is accessible and delivered by the most appropriate professional(s) in the most appropriate setting based on the woman's and infant's needs and
   vii. resources are used effectively in producing these outcomes

b) In doing so, addresses the following key issues
   i. principles which should underpin integrated models of care and appropriate care pathways
   ii. arrangements for workforce planning and organisation which maximise the contribution of the maternity service workforce, support the delivery of best practice models of care and facilitate staff to work to the full scope of their practice and
   iii. governance and leadership arrangements necessary at a local, regional (hospital group) and national level to ensure the outcomes set out at (a) above are achieved and demonstrated.

Membership of the Group is set out at *Appendix B.*

The Steering Group met nine times and at one of these meetings, the Group received presentations related to the development of a maternity strategy in Northern Ireland and in Wales.

The Department of Health approached the development of this Strategy through the commissioning of a literature review in 2014, to highlight key areas for consideration; public consultation and expert advice.

The literature review titled '*A National and International review of literature on models of care across selected jurisdictions to inform the development of a 'National Strategy for Maternity Services in Ireland'* focused on models of care as they impacted on:

[d] Excluding assisted human reproduction

1. patient safety;
2. patient-centredness;
3. quality assurance;
4. accessibility;
5. cost;
6. training and staffing implications.

The literature review is available on the Department's website at www.health.gov.ie.

An online public consultation process was conducted between 18th June and 15th July 2015. 1,324 valid submissions were received from individuals and organisations. The submissions were analysed by the Institute of Public Health in Ireland and their report *Consultation on the development of the National Maternity Strategy for Ireland* is also available on the Department's website.

Conscious that some women and families would not be in a position to engage with the online consultation, two focus groups were held; in Cork on 15th July and in Dublin on 20th July. The Department engaged with the National Women's Council of Ireland in order to target representatives and spokespersons for vulnerable groups to participate in the focus groups. The findings from the focus groups are included in the consultation report referred to above.

> **My experience of maternity services in Ireland was a very positive one and in my time using the services I was cared for by a number of fantastic doctors and midwives.**
>
> Service User

CHAPTER 2
DRIVERS FOR CHANGE

2.1 INTRODUCTION

In recent years, a number of reports have highlighted the need for development and improvement in our maternity services. This chapter sets out a number of relevant reports that provide the context for this Strategy, and outlines the strategic approaches that have been taken towards the provision of maternity care in a number of other jurisdictions. This chapter also discusses Ireland's population health needs and summarises the findings of the public consultation exercise which was undertaken to inform this Strategy.

Figure 1: Drivers for Change

2.2 REPORTS ON IRISH MATERNITY SERVICES

A number of reports have been published into maternity services in Ireland over recent years which highlight very significant shortcomings in our services. In particular, the HIQA reports into the safety, quality and standards of services provided to patients in University Hospital Galway and the Midland Regional Hospital, Portlaoise, as well as the Chief Medical Officer's report into perinatal deaths at Portlaoise, directly point to the need to develop a National Maternity Strategy. The purpose of the Strategy should be to implement standard, consistent models for the delivery of a national maternity service that reflects best available evidence to ensure that all pregnant women have appropriate and informed choice, and access to the right level of safe care and support 24 hours a day.

The reports mentioned above as well as the reviews of *Governance of Maternity Services in Cavan General Hospital and South Tipperary General Hospital (Flory Reports)* identify the need for a very significant improvement in our services.

Confidence in maternity services has been severely shaken in recent years and this has had implications not only for service users but also for staff. While implementation of the recommendations of the various aforementioned reports is intended to, and has, served to improve services, it is hoped that this Strategy will provide a framework for a new model of safe service provision which will help restore and rebuild confidence in our services and provide women and families with high quality services.

> **I didn't have a say in how I wished my birth would go, I felt like I was a number and didn't matter. I felt the consultant's team members were dismissive of my feelings regarding their choices for me and felt like I was a puppet with no voice; going through a first pregnancy is scary enough without being made feel like I had no control or say with anything that was to be done to my body. Communication needs to be improved greatly; a woman should be made feel part of the process not just an instrument in it!**
>
> Service User

2.3 INTERNATIONAL TRENDS IN MATERNITY POLICY

An analysis of the strategic approaches to maternity services in seven jurisdictions, namely Australia, Canada, New Zealand, England, Wales, Northern Ireland and Scotland, was examined to inform the development of this Strategy. Each country has produced a document or plan focusing on the delivery of services for pregnant women and their families.

Three common areas are identified in these plans[7]:

- woman-centredness;
- quality and safety;
- access.

The visions and aims as well as the key characteristics of maternity systems for each jurisdiction are presented in *Table 3*.

Table 3. Vision and aims and key characteristics of maternity systems across the seven jurisdictions under review.

Australia	**Commonwealth of Australia (2011)** ***National Maternity Services Plan 2010.*** **Canberra** 5 year vision. Maternity care will be woman-centred, reflecting the needs of each woman within a safe and sustainable quality system. All Australian women will have access to high-quality, evidence-based, culturally competent maternity care in a range of settings close to where they live. Provision of such maternity care will contribute to closing the gap between the health outcomes of Aboriginal and Torres Strait Islander people and non-indigenous Australians. Appropriately trained and qualified maternity health professionals will be available to provide continuous maternity care to all women. • Mainly obstetrician led and hospital based, but strategic committment to shift to primary care • Public clinic care • GP shared care (mainly antenatally) • Midwife primary care • 97% women give birth in conventional labour wards (70% public, 30% private)
Canada	**Society of Obstetricians and Gynaecologists of Canada (2008)** ***A National Birthing Strategy for Canada: An inclusive, integrated and comprehensive pan-Canadian framework for sustainable family-centred maternity and newborn care.*** Shared Goal, Shared Vision. To ensure sustainable and appropriate family-centred maternity and newborn care through an inclusive, integrated and comprehensive pan-Canadian birthing strategy. • Predominantly obstetrician-led care • Reducing levels of GP involvement • Small numbers of community midwives, not universally available • Large numbers of obstetric nurses employed • Gynaecology services generally provided in tertiary care units

> **Birth is not an illness, our bodies are not broken. Birth is normal, ordinary and safe for the majority.**
>
> Service User

New Zealand	**Ministry of Health (2011)** ***New Zealand National Maternity Standards: A set of standards to guide the planning, funding and monitoring of maternity services by the Ministry of Health and District Health Boards*** The New Zealand Maternity Standards provide guidance for the provision of equitable, safe and high-quality maternity services throughout New Zealand. They are underpinned by three short standards. 1. Maternity services provide safe, high-quality services that are nationally consistent and achieve optimal health outcomes for mothers and babies. 2. Maternity services ensure a woman-centred approach that acknowledges pregnancy and childbirth as a normal life stage. 3. All women have access to a nationally consistent, comprehensive range of maternity services that are funded and provided appropriately to ensure there are no financial barriers to access for eligible women. • Lead Maternity Carer (LMC) since 1991, who is either an independent midwife or general practitioner obstetrician. • In 2010, 78.2% of LMCs were midwives; 1.6% were GPs; 5.8% were obstetricians and 14.4% had an unknown or no LMC. • In 2010, 85% of births occurred in hospital; 10.8% in a primary unit (birth centre); and 3.2% at home.
England	**National Audit Office (2013)** ***Maternity Services in England (Report by the Comptroller and Auditor General).*** The Department of Health's main aims for maternity services are: • to improve performance against quality and safety indicators; • for mothers to report a good experience; • to encourage normality in births by reducing unnecessary interventions; • to promote public health with a focus on reducing inequalities; and • to improve diagnosis and services for women with pregnancy-related mental health problems. The Department outlined its strategy for maternity services in 2007 in Maternity Matters. It intended to achieve its aims by: offering choice in where and how women have their baby; providing continuity of care; and ensuring an integrated service through networks and agreed care pathways. The strategy is underpinned by NICE Guidelines - Antenatal care for uncomplicated pregnancies (2008) - Intrapartum care for healthy women and babies (2014) - Antenatal and postnatal mental health (2014) • Obstetric unit: Obstetrician has primary professional responsibility for care • Alongside midwifery unit: Midwives have primary professional responsibility for care • Freestanding midwifery unit: Midwives take professional responsibility for care: general practitioners may also be involved in care • Community midwifery universally available • Gynaecology services generally provided in tertiary care units and specialist centres

Northern Ireland	**Department of Health, Social Services and Public Safety [Northern Ireland] (2012)** ***A Strategy for Maternity Care in Northern Ireland, 2012-2018.*** The aim of this Strategy is to provide high-quality, safe, sustainable and appropriate maternity services to ensure the best outcome for women and babies in Northern Ireland. In doing so, it is recognised that all health and social care staff and members of the public must work together if health and social care maternity outcomes are to be improved, not just for mother and baby, but for both parents and the wider family. This is because clinical treatment, emotional care and social factors are inextricably linked during a woman's pregnancy. The Strategy also recognises that, for some members of society, disadvantage starts before birth and can increase over the course of their lifetime. • Obstetric unit: Obstetrician has primary professional responsibility for care • Alongside midwifery unit: Midwives have primary professional responsibility for care • Freestanding midwifery unit: Midwives take professional responsibility for care: general practitioners may also be involved in care • Community midwifery universally available • Gynaecology services generally provided in tertiary care units and specialist centres
Wales	**Welsh Government (2011)** ***A Strategic Vision for Maternity Services in Wales.*** The Welsh Government's vision for maternity services in Wales is a service that promotes pregnancy and childbirth as an event of social and emotional significance, where women and their families are treated with dignity and respect. For every mother, wherever they live, and whatever their circumstances, pregnancy and childbirth will be a safe and positive experience so that she, her partner and family can begin parenting feeling confident, capable and well supported in giving their child a secure start in life. • Obstetric unit: Obstetrician has primary professional responsibility for care • Alongside midwifery unit: Midwives have primary professional responsibility for care • Freestanding midwifery unit: Midwives take professional responsibility for care: general practitioners may also be involved in care • Community midwifery universally available • Gynaecology services generally provided in tertiary care units and specialist centres

Scotland	**Maternity Services Action Group (MSAG) (2011)** ***A Refreshed Framework for Maternity Care in Scotland.*** The aim of the Scottish 'refreshment' is to strengthen the contribution that NHS maternity care makes to improving maternal and infant health and reducing the unacceptable inequalities in maternal and infant health outcomes. • Obstetric unit: Obstetrician has primary professional responsibility for care • Alongside midwifery unit: Midwives have primary professional responsibility for care • Freestanding midwifery unit: Midwives take professional responsibility for care: general practitioners may also be involved in care • Community midwifery universally available • Gynaecology services generally provided in tertiary care units and specialist centres

> **Hospital services are wonderful for emergency cases but the way we are setting our services up, we are creating the emergency situations by intervening too early, too frequently and without need.**

Service User

2.3.1 SUMMARY

While maternity care systems vary considerably, the key trends and characteristics emerging internationally, in the drive towards safer, quality care with better outcomes, include the following[7]:

- Nationally consistent, comprehensive maternity services;
- A variety of care settings to appropriately address the needs of pregnant women;
- A woman-centred approach that acknowledges pregnancy and childbirth as a normal life stage and takes account of the experiences and wishes of pregnant women;
- Multidisciplinary care, with good communication and clear referral guidelines;
- A strengthened role for midwives;
- Improved data, particularly in relation to:
  - systematic monitoring and assessment of adverse events;
  - consistent screening for risk factors;
  - outcome measurement.

Key considerations for inclusion in this Strategy are as follows:

- WOMAN-CENTRED CARE
- SAFETY AND RISK TOOLS
- EVIDENCE FOR PRACTICE
- MULTIDISCIPLINARY TEAM WORKING
- WORKFORCE PLANNING FRAMEWORKS
- RANGE OF MODELS OF CARE
- STANDARDS
- SUSTAINABILITY

2.4 POPULATION NEEDS

2.4.1 INTRODUCTION

The population and their needs play an integral role in shaping the delivery of maternity care services to women and their families. The pathway for women, babies and new families from preconception to early years is a complex one with many interdependencies. This section will describe the current and projected trends in population and their needs. The delivery of maternity services must be examined in the context of these population trends and needs, in order to provide safe, family-centred, evidence-based, quality maternity care. This description will provide context to the Strategy and will support future workforce planning.

2.4.2 POPULATION

Key Findings

- General population is expected to increase
- Ireland has one of the highest fertility and birth rates in Europe
- Projected birth numbers are expected to increase in some regions
- Perinatal and maternal mortality rates are low

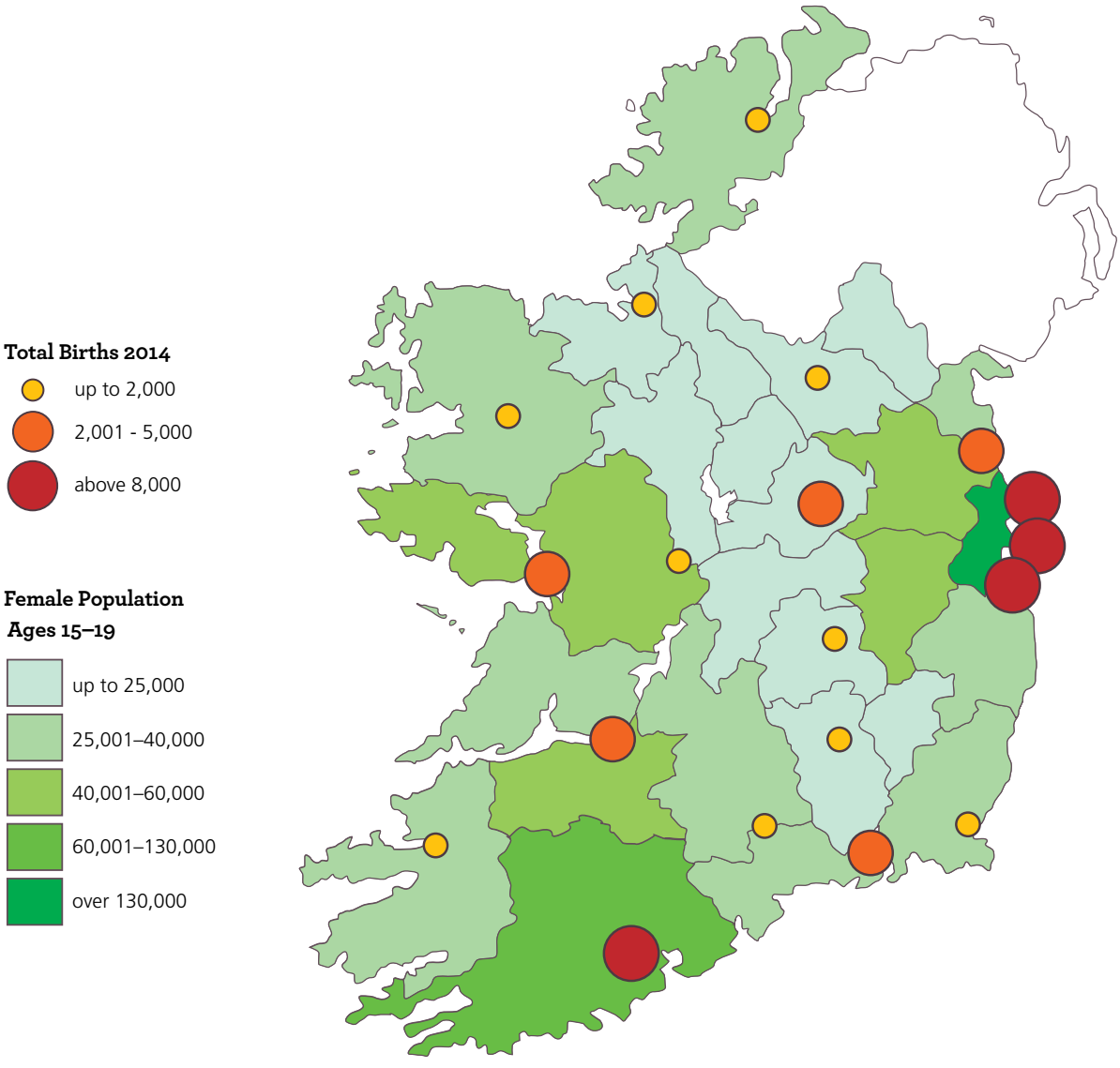
2.4.2.1 POPULATION GROWTH AND PROJECTIONS

In 2011 Ireland had a population of 4,588,252[8]. According to a 2013 CSO report, population projections for the 2016-2026 period are estimated to increase from 4.69 million in 2016 to 5.04 million in 2026[9]. These projections were calculated using M2F2 assumptions[e]. Using M1F2 assumptions[e], population projections are estimated to increase from 4.69 million in 2016 to 5.24 million in 2026[9]. This increase in population will lead to increased demand for all healthcare services including maternity care. Planning of maternity care for mothers, families and babies must take into account these population changes.

2.4.2.2 POPULATION DISTRIBUTION OF WOMEN OF CHILDBEARING AGE

The population of women of childbearing age in Ireland (defined as women aged 15 to 49 years) is unevenly distributed as the majority of this group reside in urban and commuter areas surrounding major cities, as shown in Figure 2. Figure 2 also shows the location of the 19 maternity units. The size of the representative symbol reflects the number of births reported by the unit for 2014 as per the map legend.

Figure 2: Population of females aged 15-49 years, by county with location of maternity hospitals/units in Ireland, 2014



Source: *Central Statistics Office & HSE Data Management report*

[e] M2: Net migration returning to positive by 2018 and rising slowly thereafter to plus 10,000 by 2021. F2: Total fertility rate to decrease to 1.8 by 2026 and to remain constant thereafter. It must be noted that these projections are based on what would be likely to happen if recent trends in fertility, mortality and international migration were to continue, subject to the overall constraint of the national projections, and the more distant the projection period from the reference year of the base population the more unreliable the assumptions are likely to be. M1: Net migration returning to positive by 2016 and rising steadily thereafter to plus 30,000 by 2021.

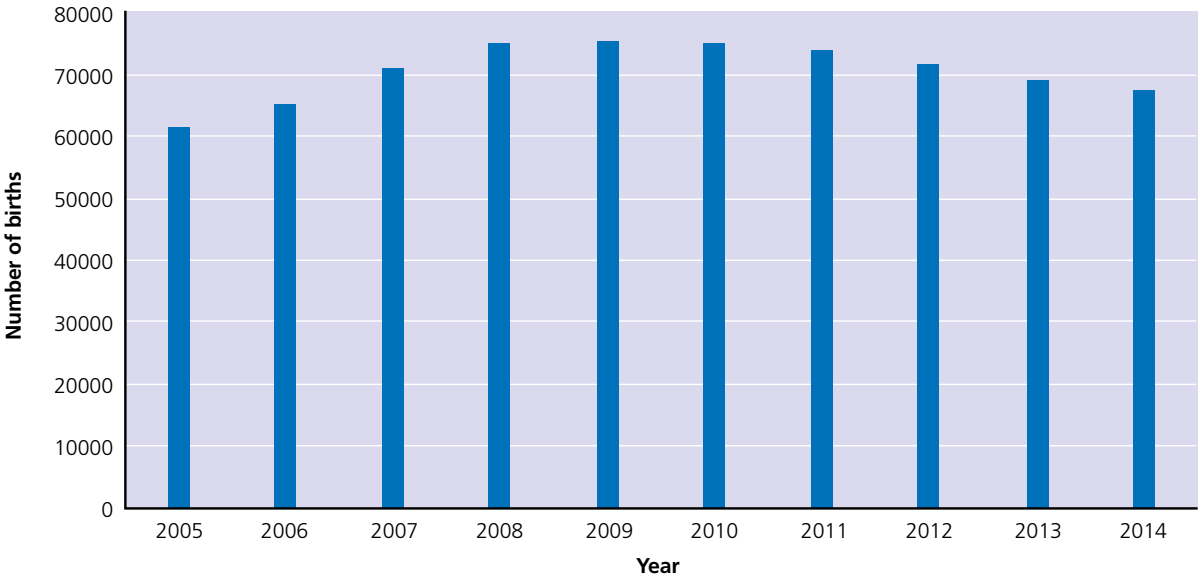
2.4.2.3 FERTILITY RATE

Ireland has consistently one of the highest fertility rates in Europe. The total fertility rate in Ireland was 1.95 in 2014[10] which is a slight decrease from the rate of 2.07 recorded in 2008.[11] While international data for 2014 is not available, in 2013 Ireland's fertility rate of 1.96 was higher than the EU-28 total fertility rate of 1.55[12]. Since 2005 the total fertility rate for women aged 40-44 years has been higher than those aged 15-19 years and this divergence has been increasing year on year.[9] The changing age profile of women giving birth reflects the fact that many women are now deciding to have children later in life. This has implications not only for birth rates, but also for care requirements, as pregnancy during later life can be associated with increased challenges.[13]

2.4.2.4 BIRTH RATES AND PROJECTIONS

Ireland recorded a birth rate (number of live births per 1,000 population) of 14.6 per 1,000 population in 2014.[14] This figure shows a slight increase from the 2013 figure of 14.4[15] which was the highest in the EU, where the crude birth rate for the EU-28 was 10 per 1000 population.[12] However, the total number of births has been steadily decreasing.

Figure 3: Total number of births by year, Ireland, 2005 – 2014



Source: Central Statistics Office[5]
**2005-2011 data are final number of births and are based on the number of births occurring in the year. 2012-2013 data are provisional and are based on the number of births registered within the year.*

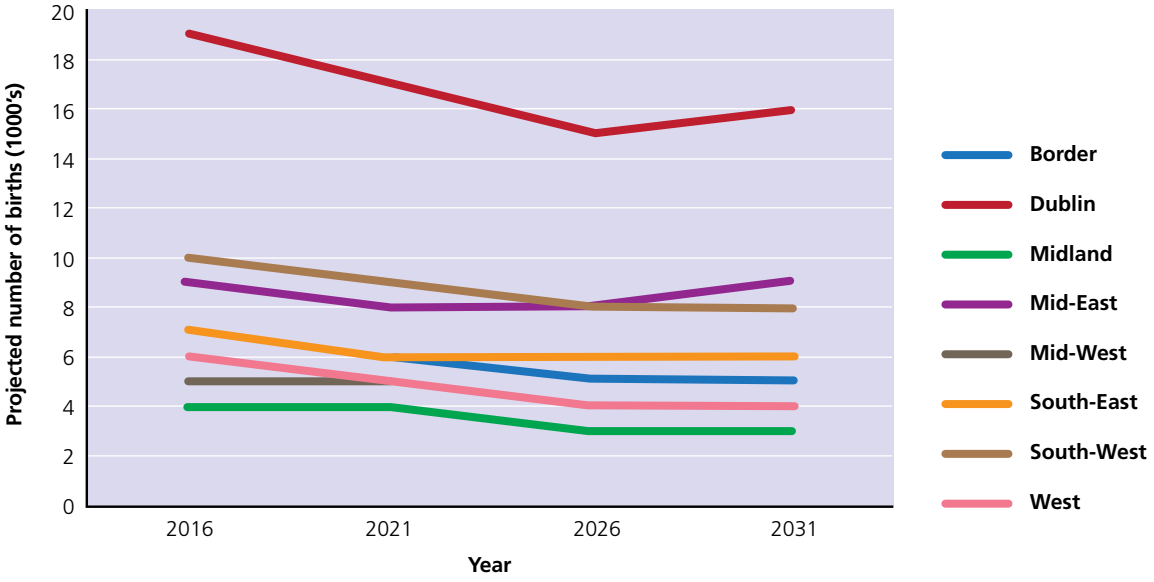
Projections in the numbers of births calculated using 2013 CSO data reveal that the number of births is expected to drop from over 75,000 in 2013, to 55,000 in 2031[9]. These figures were calculated using M2F2 assumptions and caution should be used when interpreting as per previous notes.

Figure 4 shows the projected numbers of births expected if recent demographic trends were to continue. The downward trend in numbers of births is expected to continue until towards the end of the next decade, when there may be a slight increase in the numbers of births in some regions. Irish maternity services must be planned to be able to effectively respond to the demands of birth number fluctuations.

Due to the greater uncertainty attaching to regional as distinct from national population projections, the results for individual regions must be regarded as somewhat tentative.

Figure 5 demonstrates predicted national birth projections for the same time period. Six different combinations have been plotted, based on the assumptions explained below. All combinations predict that the number of births will decrease until approximately 2020. From this point the combinations display some variation between projections.

Figure 4: Projected numbers of births 2016-2031 on a regional basis (M2F2 assumptions)



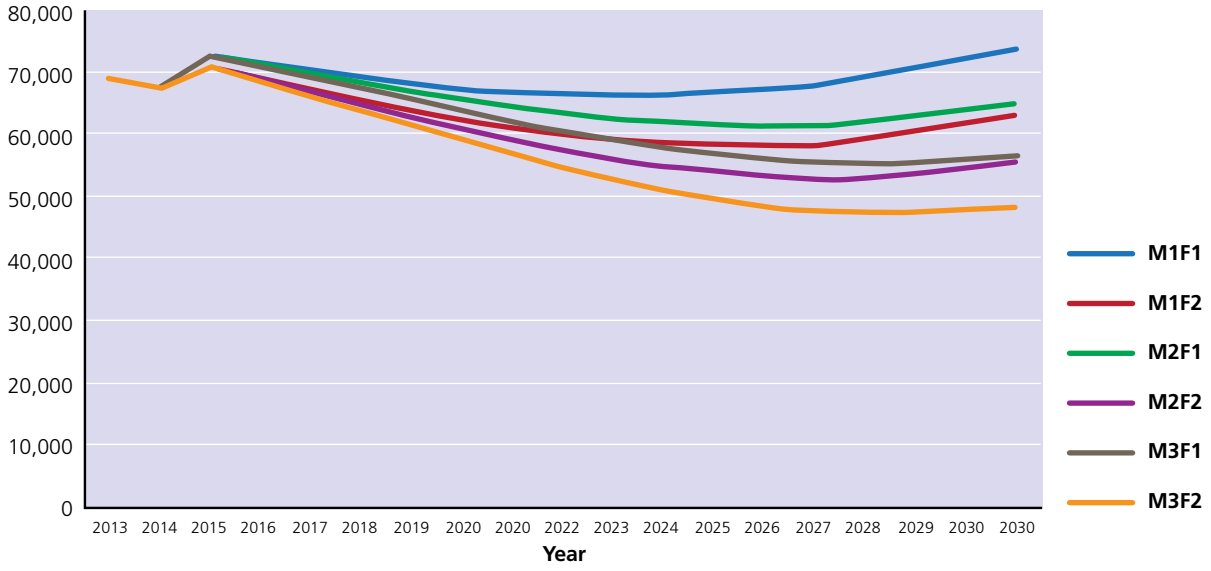
Source: Central Statistics Office

Figure 5 shows projected births 2015 – 31, based on the combination of the following assumed migration and fertility rates[f]:

M1: Net migration returning to positive by 2016 and rising steadily thereafter to + 30,000 by 2021.
M2: Net migration returning to positive by 2018 and rising thereafter to +10,000 by 2021.
M3: Net migration remaining negative for the whole period.
F1: The total fertility rate to remain at the 2010 level of 2.1 for the lifetime of the projections.
F2: The total fertility rate to decrease to 1.8 by 2026 and to remain constant thereafter.

[f] This rate is the number of children a woman would have if she was subject to prevailing fertility rates at all ages from a single given year, and survives throughout all her childbearing years.

Figure 5: Projected Births 2015 -31 All assumptions



Source: Central Statistics Office

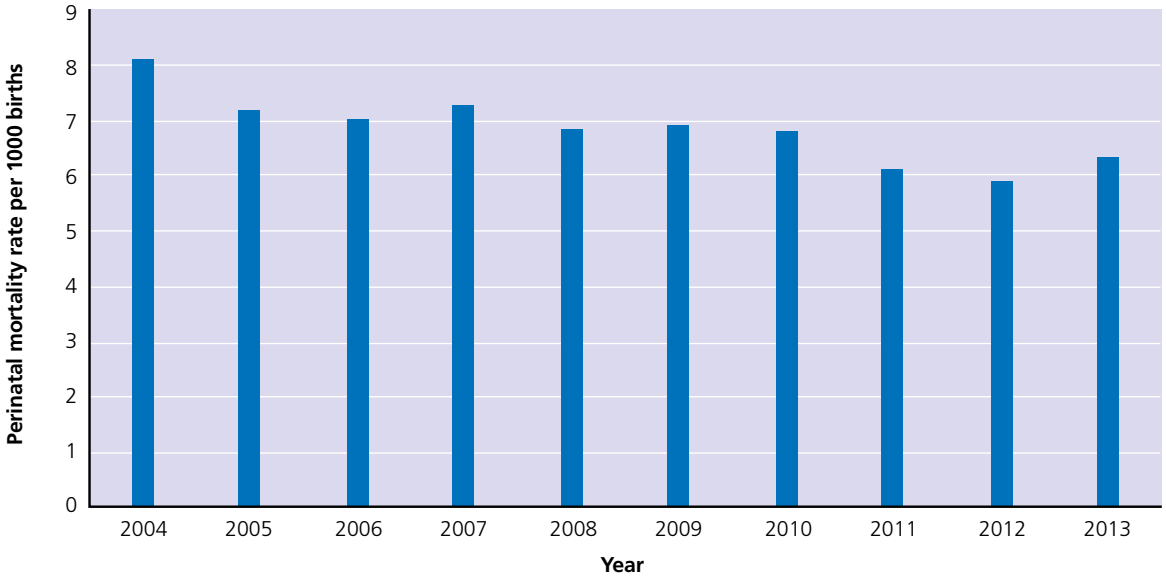
2.4.2.5 PREGNANCY LOSS

Spontaneous miscarriage occurs in about one in five pregnancies and affects about 14,000 couples in Ireland nationally.[16] The majority of cases are genetic in origin and cannot be prevented. Women who miscarry may present with pain or vaginal bleeding and thus, they may require immediate access for emergency care in either a maternity or an acute hospital setting. There are advantages clinically if the diagnosis of miscarriage (or ectopic pregnancy) is made early in the first trimester, with the appropriate use of ultrasound assessment.[17]

2.4.2.6 PERINATAL MORTALITY RATE

Between 2004 and 2013, there was a decreasing trend in the perinatal mortality rate in Ireland (Figure 6). The *Perinatal Mortality in Ireland Annual Report* (2012) recorded that the observed national perinatal mortality rates have decreased by approximately 10% over the previous five year period.

Figure 6: Perinatal mortality rate per 1,000 births by year, Ireland, 2004 -2013



Source: Perinatal statistics report, Healthcare Pricing Office, 2013

The CMO Report into perinatal deaths in Midland Regional Hospital Portlaoise recommended that the HSE should ensure that the NPRS and NPEC are consolidated to create a single national reporting system for official statistics on perinatal events in Ireland.[18]

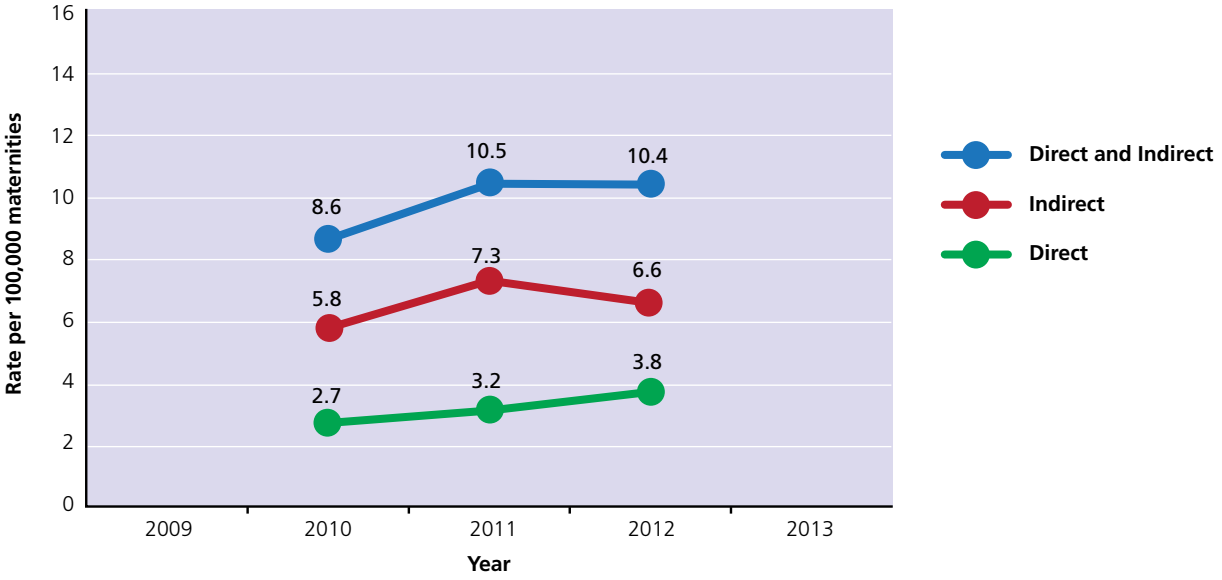
2.4.2.7 MATERNAL MORTALITY RATE

The Confidential Maternal Deaths Enquiry reports that the number of maternal deaths in Ireland is relatively small.[19] Due to the small numbers involved, maternal mortality rates must be interpreted with caution as wide fluctuation in annual rates occurs. Maternal mortality rates (MMR) are based on maternal deaths due to direct[g] or indirect[h] causes and do not include deaths due to coincidental causes. For the years 2009 – 2011, the MMR in Ireland was 8.6 per 100,000 maternities. For the 2010 – 2012 period, the MMR was 10.5 per 100,000 maternities. For the 2011 – 2013 period, the MMR was 10.4 per 100,000 maternities. However, the apparent increase in MMR from 2009-2011 does not represent a statistically significant increase. There was no statistically significant difference in MMRs between Ireland and the UK during this period.

[g] Direct deaths are deaths resulting from obstetric complications of the pregnant state (pregnancy, labour and puerperium), from interventions, omissions, incorrect treatment or from a chain of events resulting from any of the above[19].

[h] Indirect deaths are deaths resulting from previous existing disease, or disease that developed during pregnancy and which was not the result of direct obstetric causes, but which was aggravated by the physiological effects of pregnancy[19].

Figure 7: Direct and Indirect Maternal Mortality rates per 100,000 maternities in Ireland: rolling three year average 2009 – 2013



Note: Three-year moving average rates are plotted in middle year of triennium

Source: Confidential Maternal Deaths Enquiry[19]

2.4.2.8 TERMINATION OF PREGNANCY

In 2014, the UK Department of Health reported that 68% of women resident outside of England and Wales who underwent a legal abortion, were registered as normally being resident in the Republic of Ireland [20]. The number of abortions to women registered as being resident in the Republic of Ireland has fallen each year since 2010, from 4,402 in 2010 to 3,735 in 2014. However it must be noted that not all women attending for abortion use their Irish address, hence this data may represent an underreporting of the true number.

2.4.3 POPULATION NEEDS

Key Findings

- Age of mothers giving birth has increased
- Mothers who classify their occupation as "home duties" had the highest proportion of births and second highest perinatal mortality rate in 2013
- Mothers of many nations are giving birth in Ireland

2.4.3.1 MATERNAL AGE

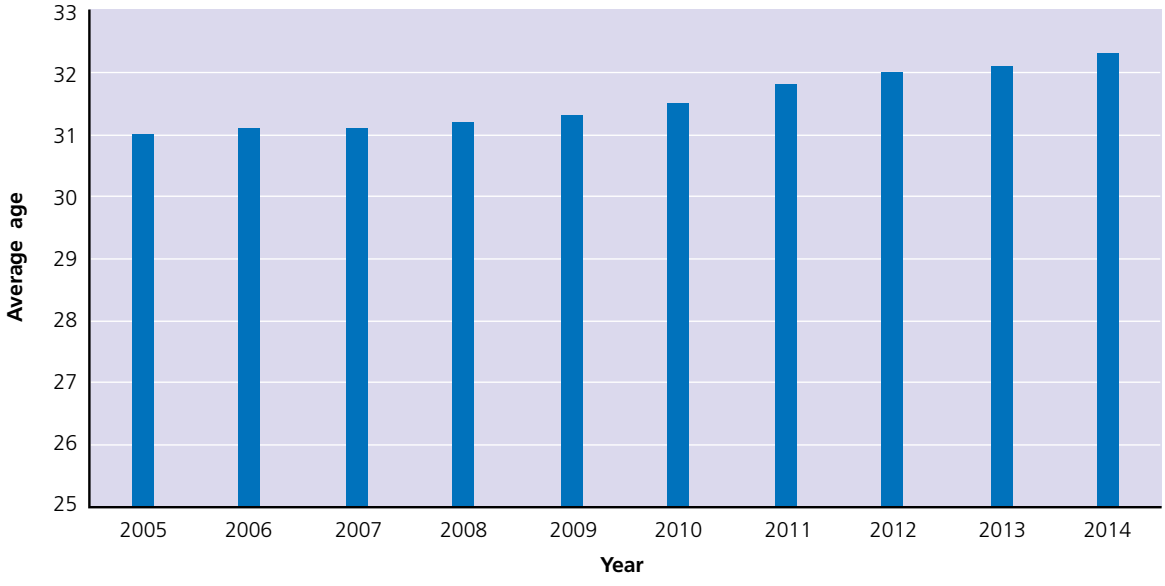
Adverse maternal and perinatal outcomes are associated with younger and older mothers.[21,22,23,24,25,26] The general trend towards an older population of women giving birth has implications for maternity and neonatal services, including the capability of services to respond to complex pregnancies.

The average age of mothers giving birth in Ireland has gradually increased over the past 10 years, from 31 in 2005 to 32.3 years in 2014 (Figure 8 and 9).[27,28] In 2013, the largest proportion of births (36.7%) took place in the 30 – 34 year age group, while almost 6% of births were to mothers aged 40 years or greater.[2] The proportion of pregnancies occurring in those aged less than 20 years reduced from 4% of live births in 2005, to 2% of live births in 2013.[27,2] The perinatal mortality rate was highest for mothers aged less than 25 years, at 7.9 per 1,000 live births and stillbirths.[2] The lowest perinatal mortality rate of 5.0 per 1,000 live births and stillbirths was for babies born to mothers aged 30 to 34 years.[2]

The issue of increasing maternal age is seen across developed countries and presents many obstetric and perinatal challenges including low birth weight, chromosomal abnormalities, placenta praevia and increased caesarean section rates.[13,27]

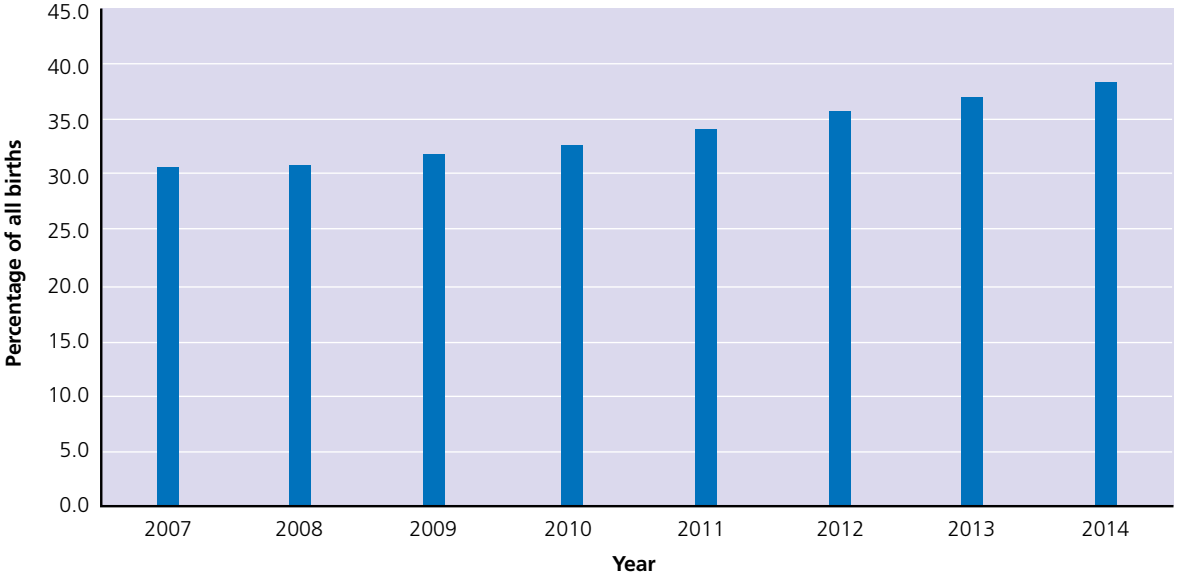
Certain culturally distinct groups in Ireland such as Travellers have a lower average age of mothers giving birth than the general population with many factors contributing to this difference.[30]

Figure 8: Average maternal age by year, Ireland, 2005 – 2014



Source: Central Statistics Office
* 2005 to 2012 data is final and based on the number of births occurring in the year. 2013 and 2014 data is provisional and is based on the number of births registered within the year.

Figure 9: Proportion of pregnancies in women aged 35 years and over by year, Ireland, 2007-14



Source: Central Statistics Office
*2007 to 2012 data is final and based on the number of births occurring in the year. 2013 and 2014 data is provisional and is based on the number of births registered within the year

No significant changes were recorded in the average age of women aged under 20 giving birth between the years 2005 and 2013. As can be seen in Table 4, the average age remained almost static.

Table 4: Average Age of Mothers Under 20 years, 2005-2013. Maternities Only

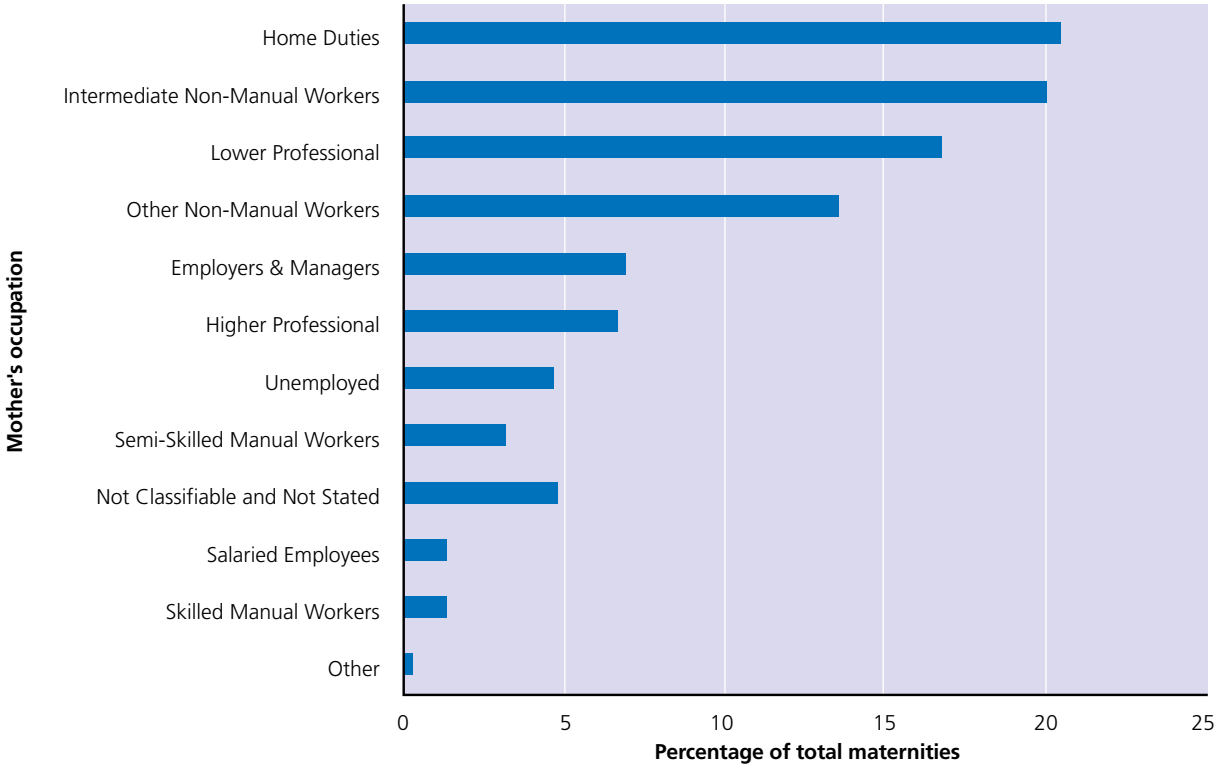
Year	2005	2006	2007	2008	2009	2010	2011	2012	2013
Average Age of Mothers Under 20 years.	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.2	18.2

Source: National Perinatal Reporting System (NPRS), Healthcare Pricing Office (HPO), November 2015

2.4.3.2 SOCIOECONOMIC GROUP

The National Perinatal Reporting System (NPRS) uses a system based on occupation classification to define socioeconomic group. In 2013, the highest proportion of total births were to mothers whose socio-economic group was classified as either "home duties" (20.4 per cent) or "intermediate non-manual workers" (20.0 per cent)[2] (Figure 10). Mothers in the socio-economic group "home duties" had the second highest perinatal mortality rate of 9.0 per 1,000 live births and stillbirths, behind only the "non classified group".[2] The lowest perinatal mortality rates of 4.4 per 1,000 live births and stillbirths were recorded for mothers in the "employers and managers" socio-economic group.

Figure 10: Mothers' occupation, Ireland, 2013; Source: National Perinatal Statistics Report



2.4.3.3 NATIONALITY

In 2013, 15.5% of births in Ireland were to women from EU countries outside of Ireland, and a further 6.6% were born to women from non-EU countries.[2] The nationality of mothers may have implications for language and service needs.[19] For example, certain conditions are more common in particular ethnic groups and families who have recently moved to Ireland may have difficulties reading or speaking English, and therefore require additional support.

Analysis of the nationality of the mothers of the 67,462[i] babies whose births were registered in Ireland in 2014 identified over 110 countries of origin. Tables 5 and 6 show the nationalities and languages represented most, excluding Irish and English respectively. 4,162 babies were born to Polish mothers, accounting for 28% of babies born to non Irish mothers.

Table 5: Top Five Countries

1	Poland	4162
2	United Kingdom	1481
3	Lithuania	1099
4	Romania	948
5	Latvia	683

Table 6: Top Five Languages

1	Polish	4162
2	Lithuanian	1099
3	Romanian	948
4	Latvian	683
5	Mandarin	458

Source: CSO, 2014

[i] CSO 2014 birth figures are provisional as they are based on year of registration

2.4.4 HEALTH AND WELLBEING

Key Findings

- Nearly one fifth of mothers smoke, and one fifth drink alcohol during pregnancy
- One quarter of pregnant women are obese
- Ireland has one of the lowest breastfeeding rates in Europe

The *Growing Up in Ireland* study showed that 28% of mothers whose children were born between 1997 and 1998 smoked during pregnancy.[31] This had fallen to 18% of mothers whose children were born in 2007.[31] Babies born to mothers who smoke during pregnancy have an increased risk of premature birth, low birth weight and Sudden Infant Death Syndrome compared to mothers who do not smoke.[32]

2.4.4.1 ALCOHOL

The Growing Up in Ireland survey demonstrated that 20% of mothers drank alcohol at some stage in the pregnancy and 6% drank in all three trimesters.[31] Alcohol intake can harm the developing baby in a number of ways and high consumption is associated with premature birth and Foetal Alcohol Syndrome.[33] Babies born with Foetal Alcohol Syndrome and their families have complex needs and require input from multiple services including social, psychological, paediatric, educational and developmental.

2.4.4.2 DRUGS

There is a paucity of data regarding drug use during pregnancy in Ireland. One study in the Coombe Women & Infants University Hospital in Dublin showed that 4.6% of women who registered for care reported using drugs during pregnancy.[34] In 2008 alone, 236 women were referred to the three drug liaison midwives linked to the three main maternity hospitals in Dublin and 180 babies were born to opiate-dependent women.[34] These women have complex medical and social needs and are at an increased risk of having babies with low birth weights and other complications.[35] Their involvement with the maternity services provides an opportunity to reduce their drug dependence and improve their social circumstances and wellbeing.

2.4.4.3 OBESITY

At present in Ireland there is no national level reporting of obesity in pregnancy. A recent study in the Coombe Women & Infants University Hospital found that approximately one in six women who book in for antenatal care is obese.[36] It found that, although maternal obesity rates remained stable over five years, the absolute number of severely obese women increased by 48.5%. Obesity in pregnancy increases the risk of mother and baby complications including increased risk of gestational diabetes, pre-eclampsia, foetal growth abnormalities, interventions during labour and has long term consequences including an increased risk of childhood obesity.[37,38,39,40]

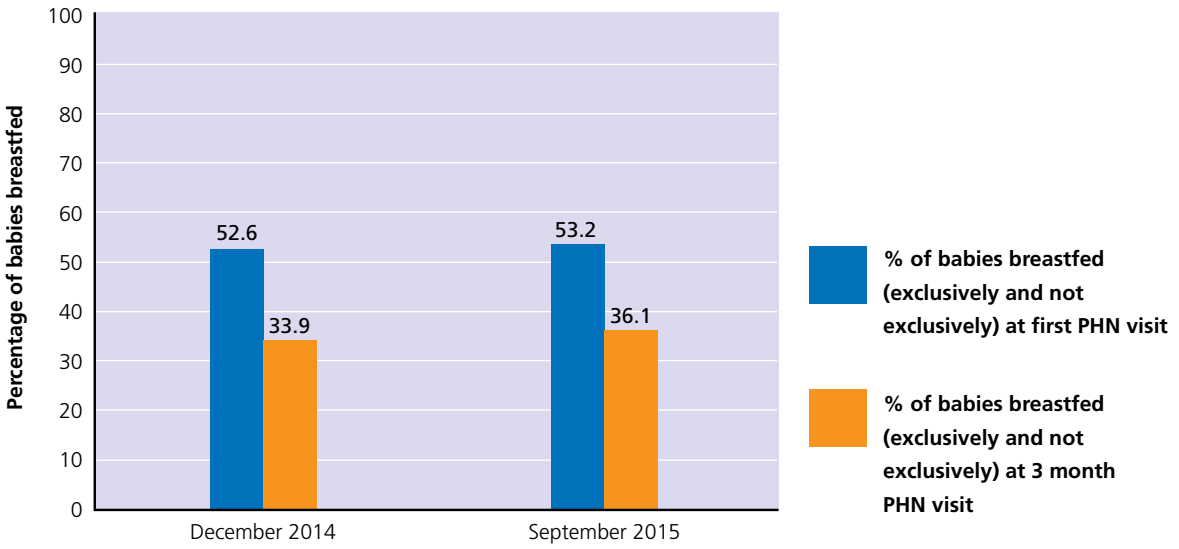
It is also noted that many women are overweight at the start of pregnancy, with a BMI in the range 25-30kg/m2. Excessive weight gain in pregnancy is associated with an increased risk of complications, but also increases the mother's risk of obesity postpartum.[41]

2.4.4.4 BREASTFEEDING

Ireland compares poorly to other European countries in relation to breastfeeding, despite the recognised importance of breastfeeding for mothers and infants.[42,43,44,45,46] In 2011, 55% of babies in Ireland were breastfed at any time[47], increasing to 56% in 2013[2], compared with 96% in Australia[48] and 81% in the UK[49].

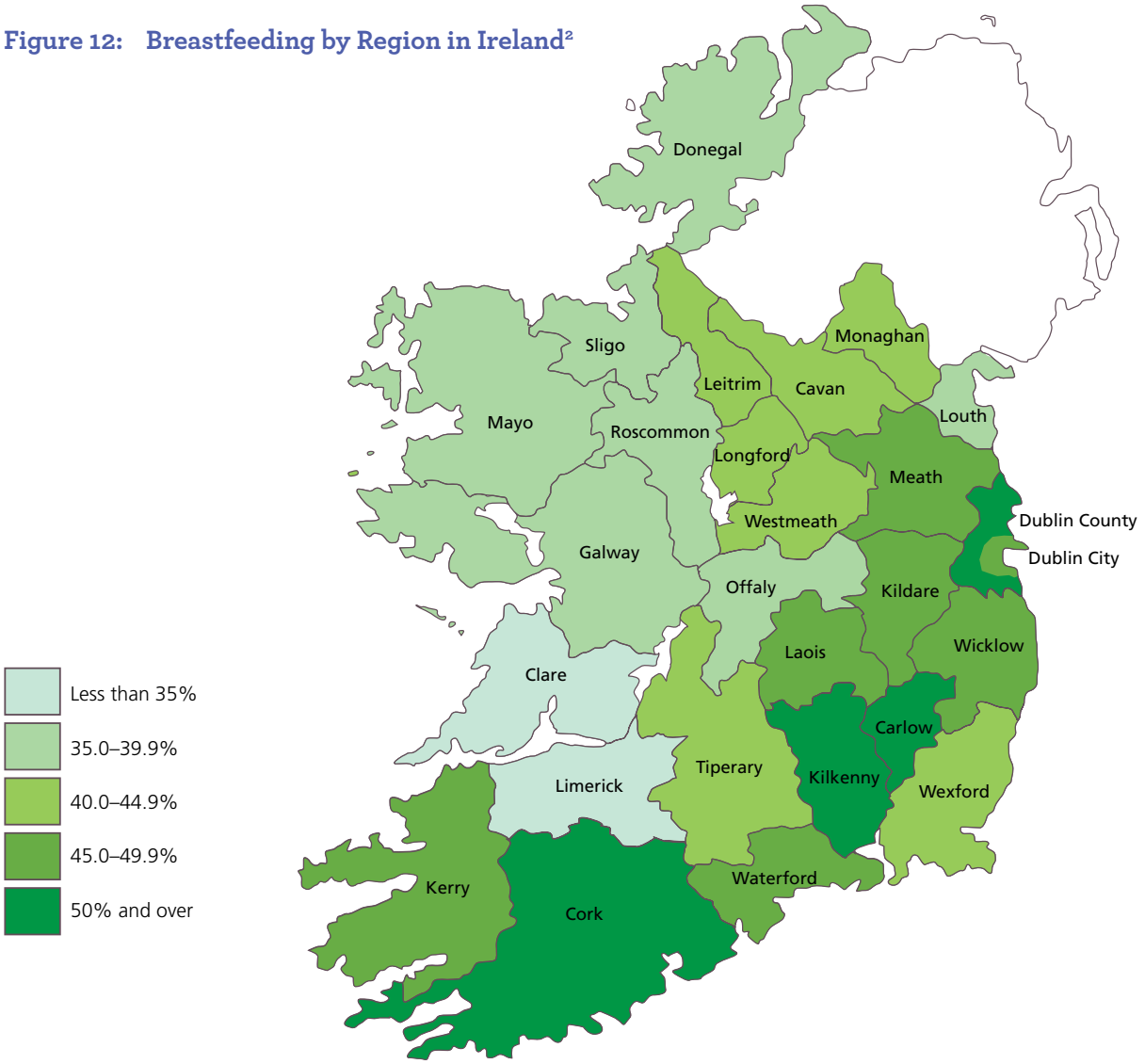
Since 2015, the percentage of babies receiving any breast milk at the first and three month PHN visits has been reported nationally.[50] There has been little change in breastfeeding rates between 2014 and 2015; however, between the first and three month visits, 20% fewer babies were recorded as being breastfed in 2014 and 2015 (Figure 11).

Figure 11: Percentage of babies breastfed at the first and 3 month PHN visit, Ireland, 2014 – 15



Source: Performance Assurance Reports, March 2015 Healthcare Data Report, HSE, 2015 & Performance Assurance Reports, September 2015 Healthcare Data Report, HSE, 2015

Figure 12: Breastfeeding by Region in Ireland[2]



2.4.4.5 DOMESTIC VIOLENCE

Domestic abuse can encompass physical, emotional, verbal, financial or sexual abuse and violence from an intimate partner. It affects women of all backgrounds, regardless of social class and education. 30% of domestic violence has been found to begin or escalate during pregnancy.[51] While Ireland has one of the lowest rates of domestic violence within the EU[52], women from ethnic minorities are particularly at risk.[53] The impact of domestic abuse in pregnancy is wide-ranging. Physical impacts include - miscarriage, low birthweight, placental separation, foetal fractures, rupture of uterus, preterm labour, long lasting physical disability, while psychological consequences might include depression, anxiety, post traumatic stress disorder, flashbacks, nightmares or an exaggerated startle response[54].

2.4.5 COMPLEX PREGNANCIES

Key Findings

- Medical and mental health co-morbidities are leading to complications in pregnancy
- Multiple births are increasing

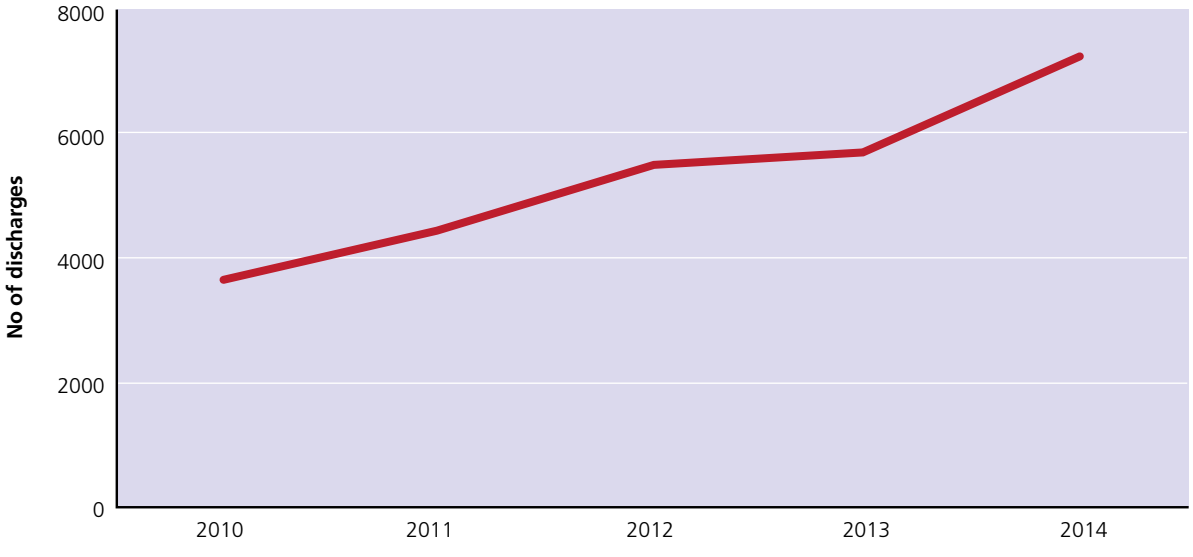
The 2014 MBRRACE Report found that pre-existing medical or mental health problems led to complications during and after pregnancy.[55] Two thirds of mothers who died, died from medical and mental health problems in pregnancy and only one third from direct complications of pregnancy such as bleeding. Three quarters of women who died had medical or mental health problems before they became pregnant. Women with pre-existing medical and mental health problems need pre-pregnancy advice and often sub-specialised clinical involvement in their maternity care, adding extra demands on maternity services. In addition, women who develop complications during their pregnancy may require additional support and may be at increased risk of poor outcomes.

2.4.5.1 DIABETES MELLITUS

The number of mothers whose pregnancies are complicated by pre-existing or new onset diabetes mellitus has increased in Ireland (Figure 13). This is similar to international literature findings.[56] Pre-existing diabetes may be Type 1 or Type 2. A higher rate of overweight and obesity in women of childbearing age contributes to a higher incidence of type 2 diabetes pre-pregnancy. Early engagement with maternity services is necessary, and women ideally should attend specialised multidisciplinary teams regularly from four or five weeks gestation.[57] Gestational diabetes mellitus is defined as any degree of glucose intolerance with onset, or first recognition, during pregnancy, usually after 24 weeks gestation, accounting for the significant majority of cases of diabetes in pregnancy.[58]

New recommendations on the diagnosis of gestational diabetes were implemented by maternity hospitals/units in Ireland between 2012 and 2014. These changes in diagnostic criteria contributed to the increase in diabetes related discharges observed.[59] Diabetes mellitus is associated with an increased risk of complications in pregnancy including, congenital anomalies, miscarriage, stillbirth, preterm delivery, shoulder dystocia, caesarean section, short and long term infant metabolic disorders and development of long term maternal diabetes mellitus.[56] Diabetes and associated complications during pregnancy, require close monitoring, education and support from an extended multidisciplinary team to reduce the risk of complications, increasing the care needs both for mothers and their babies.

Figure 13: Number of women discharged with a diagnosis of diabetes mellitus in pregnancy, Ireland, 2010 – 14

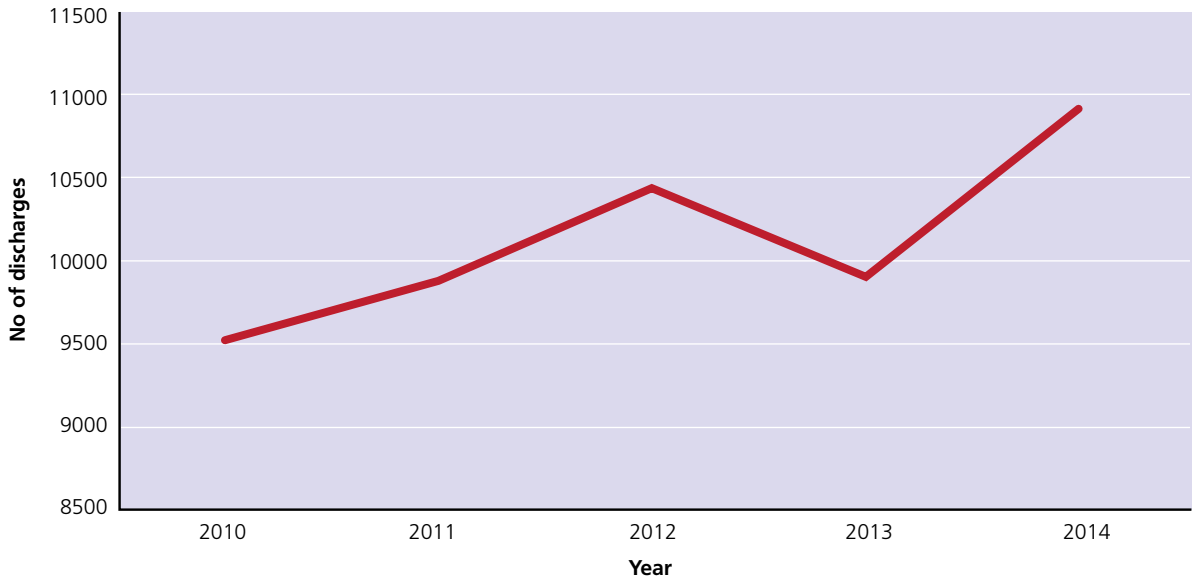


Source: Healthcare Pricing Office: Hospital-Inpatient Enquiry Scheme

2.4.5.2 HYPERTENSIVE DISORDERS

Diagnoses of hypertensive disorders in pregnancy have increased in recent years in Ireland (Figure 14). An increase in other risk factors for hypertension, including obesity and advanced maternal age are likely to contribute to the increasing numbers of mothers diagnosed with hypertension in pregnancy.[60] This increase in diagnoses is in keeping with the international picture, where hypertensive disorders in pregnancy are the most common medical disorders of pregnancy and are associated with increased maternal and perinatal risks.[61,62] The risks include, development of pre-eclampsia and eclampsia, intrauterine growth restriction, preterm birth, perinatal and maternal death.[63]

Figure 14: Number of women discharged with a diagnosis of hypertension in pregnancy, Ireland, 2010 – 14



Source: Healthcare Pricing Office: Hospital-Inpatient Enquiry Scheme

2.4.5.3 MENTAL HEALTH

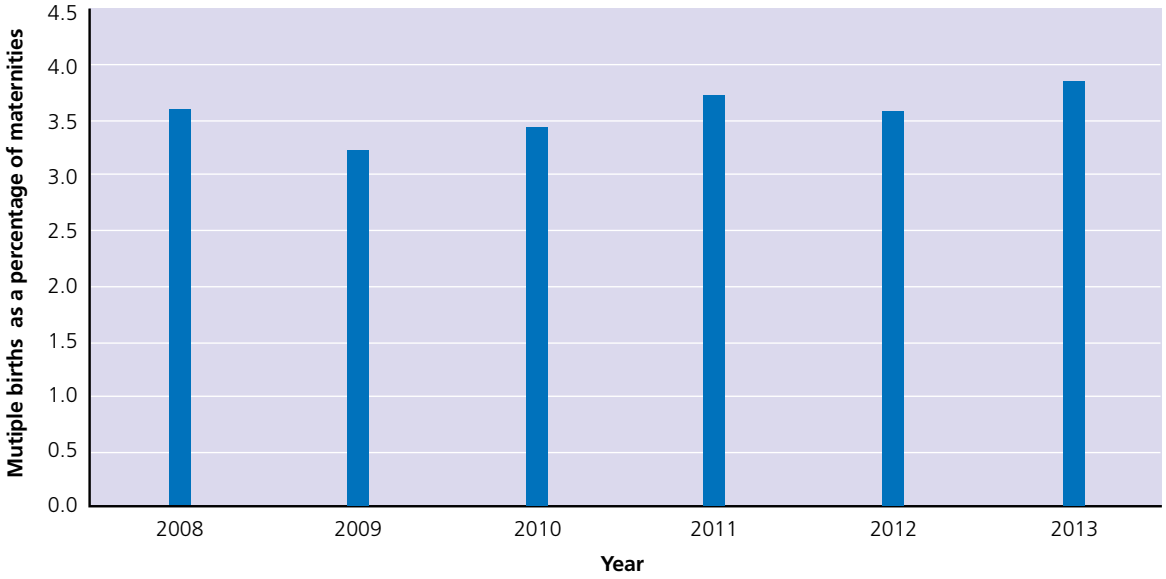
There is currently no national level data collection and monitoring of perinatal mental health complications in Ireland. Data is restricted to individual and unit level studies. Of approximately 1,500 mothers reviewed by the liaison perinatal mental health team in the Coombe Women & Infants University Hospital in 2013, 25% were diagnosed with antenatal depression, and a further 42% were diagnosed with postnatal depression.[64] Mental health problems in the perinatal period not only negatively impact on mothers' mental and physical health, but research has demonstrated that such issues may negatively affect mother–infant interaction and infants' neurodevelopment.[65,66]

2.4.5.4 MULTIPLE BIRTHS

In recent years there has been an increasing trend in the proportion of multiple births (Figure 15). Multiple births may require more complex management which may lead to increased service demands[67]. Multiple births are more common following IVF than in natural conception and these are linked to a

significant increase in mortality and morbidity for both mother and babies. Multiple births lead to an increased incidence of premature births and low birth weights which can result in increased admissions to neonatal intensive care units. [68,69,70]

Figure 15: Multiple births as a percentage of all maternities, Ireland, 2008-13



Source: National Perinatal Reporting Scheme

2.4.6 MATERNITY OUTCOMES

Key Findings

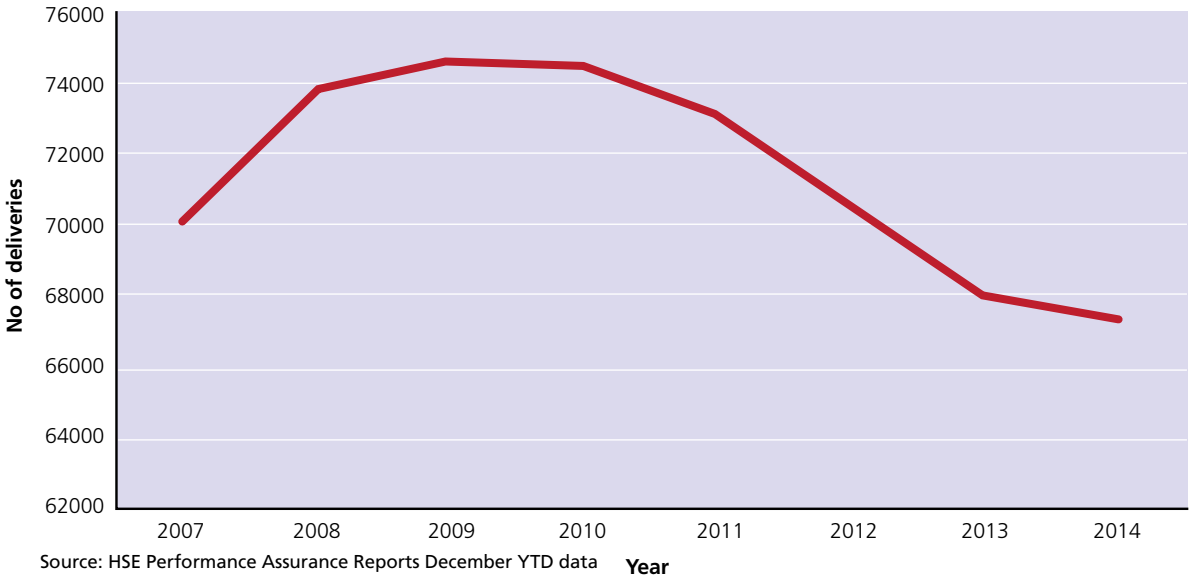
- The percentage of caesarean sections has increased
- The percentage of low birth weight babies has increased
- The percentage of preterm births has increased

2.4.6.1 NUMBER OF DELIVERIES

The highest number of deliveries reported by the HSE occurred in 2009 (74,602).[71] Since 2009, the number of deliveries reported by the HSE has reduced; however the rate of this reduction has slowed in the last two years (Figure 16)[j].

[j] Figures based on December year to date annual HSE Performance Assurance Reports, excludes deliveries managed by private healthcare providers

Figure 16: Total number of deliveries reported by the HSE, 2007 – 14

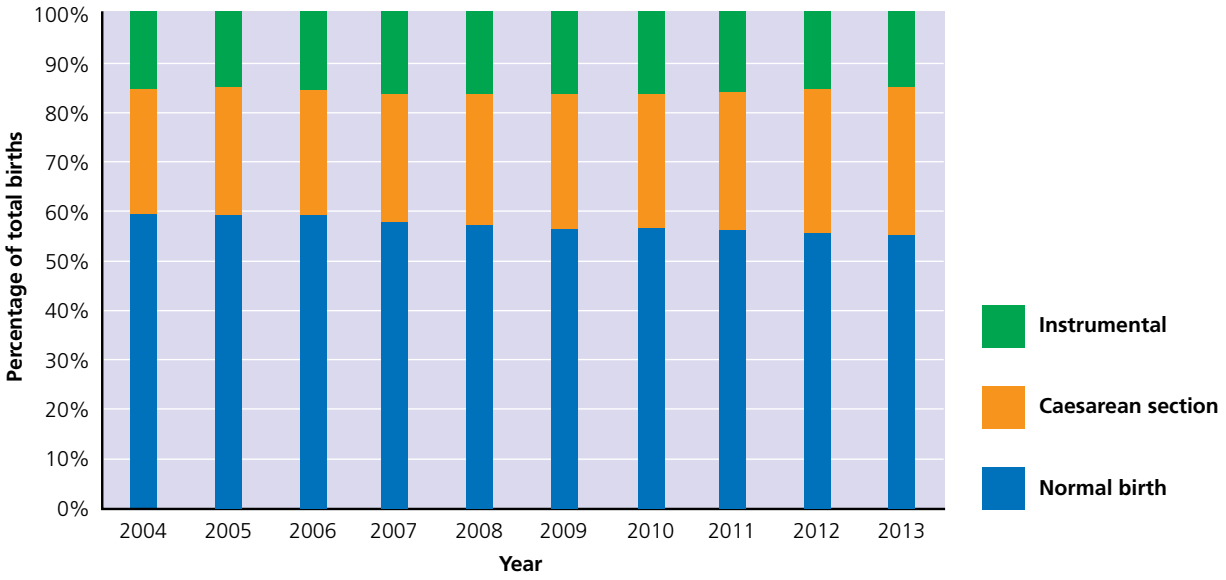


Source: HSE Performance Assurance Reports December YTD data

2.4.6.2 NORMAL, INSTRUMENTAL BIRTHS AND CAESAREAN SECTIONS

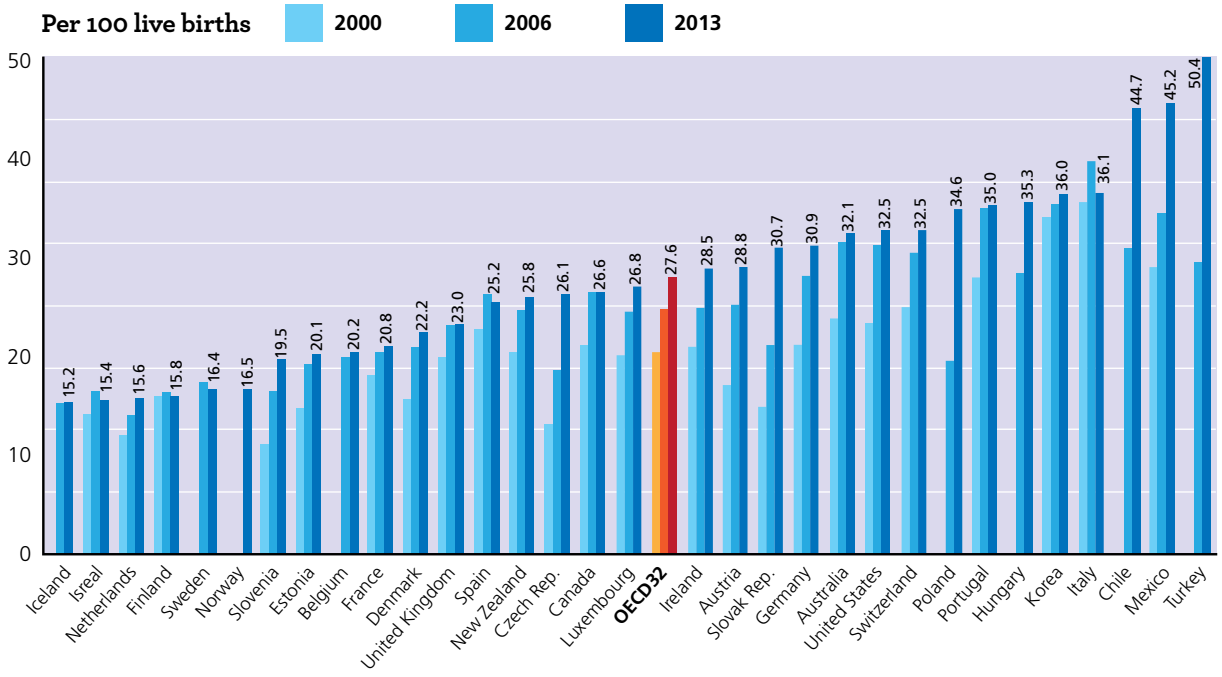
The majority of women in Ireland continue to have vaginal births, however the proportion undergoing caesarean section births has increased every year since 2007 (Figure 17). The increase in intervention rates in Ireland reflects a wider increase taking place internationally (Figure 18). Caesarean section rates reported for Ireland in 2013 (28.5 per 100 live births) were slightly higher than the OECD average rate reported of 27.6 per 100 live births.[72] There are many possible reasons for these increases including; reductions in the risk of caesarean delivery, increasing litigation, increases in first births among older women, and the rise in multiple births resulting from assisted reproduction. [73,74,75]

Figure 17: Births by mode of delivery, Ireland, 2004-13



Source: NPRS

Figure 18: International Comparison of C-Section rates



Source: OECD Health at a Glance[76]

2.4.6.3 NEONATAL OUTCOMES

Advances in maternity and neonatal care have contributed to the increased survival of low birth weight and preterm babies.

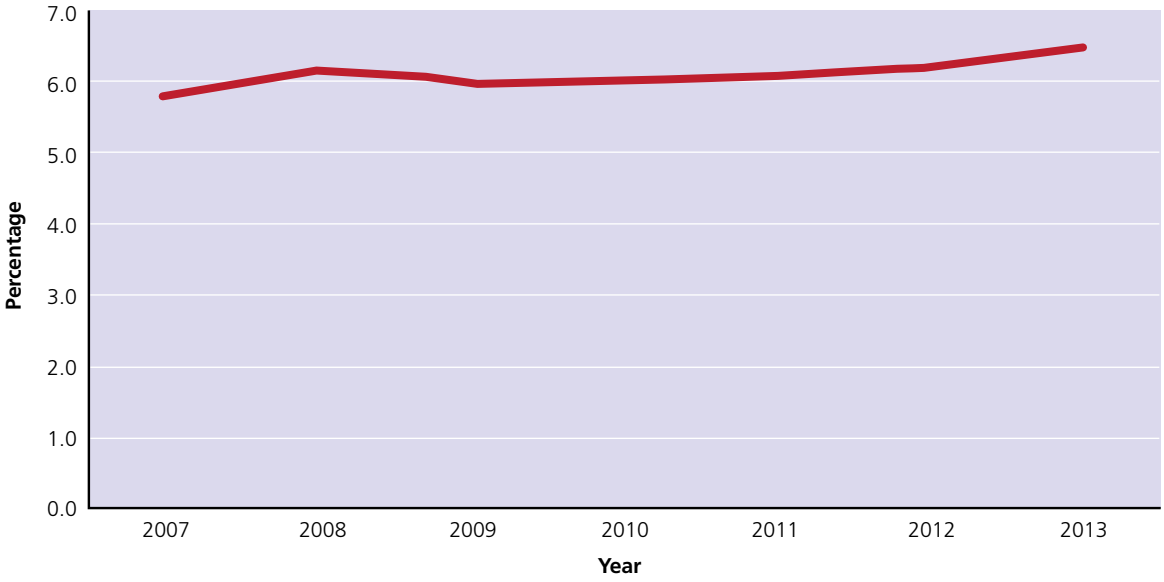
2.4.6.4 LOW BIRTH WEIGHT

The percentage of low birth weight (<2500g) babies, as a proportion of all babies born in Ireland, has increased from 5.0% in 2004 to 5.5% in 2013.[2, 29] Babies born at low birth weight are at increased risk of short and long term adverse health effects and may require increased health service input. [77,78,79]

2.4.6.5 PRETERM BIRTHS

The proportion of babies born before 37 weeks has increased from 5.8% in 2007, to 6.5% in 2013 (Figure 19). Babies born before term are at increased risk of neonatal morbidity, mortality and long term adverse medical and social consequences. [80,81]

Figure 19: Percentage of preterm births, Ireland, 2007-13



Source: NPRS

2.4.7 SUMMARY

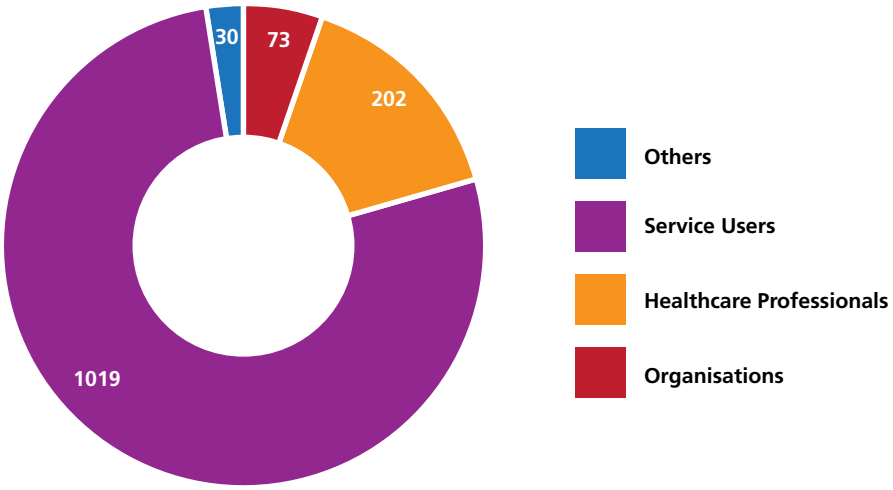
Due to a variety of contributing factors, including demographic, lifestyle and medical co-morbidities, maternity care in Ireland has become more complex. Despite this, perinatal and maternal mortality rates remain low. However, challenges remain: the proportion of complex pregnancies is increasing, caesarean section rates are increasing, the proportion of low birth weight babies and preterm births are increasing and breastfeeding rates remain low. All of these factors impact on maternity service provision. It is clear that the maternity services must be in a position to respond to the increasingly diverse and complex population needs in order to provide safe, evidence-based, accessible care to all mothers, babies and their families in Ireland.

2.5 PUBLIC CONSULTATION

2.5.1 INTRODUCTION

This Strategy is informed by a public consultation which was undertaken in mid-2015. It comprised an online questionnaire and two focus groups, which took place in Cork and Dublin. Participants for the focus groups were organised by the National Women's Council of Ireland. Data from the consultation was analysed by the Institute of Public Health in Ireland and a report detailing the findings can be accessed at www.health.gov.ie.

Figure 20: Breakdown of public consultation respondents



2.5.2 KEY FINDINGS

Some key findings of the public consultation are listed below[81]. The full findings are detailed in the consultation report, available at: www.health.gov.ie.

WHAT IS WORKING WELL?

- ✔ Our dedicated professional frontline staff;
- ✔ Hospital consultant-led services particularly in the context of complex pregnancies and management of emergencies;
- ✔ Midwifery-led care and community midwives/DOMINO and early discharge scheme;
- ✔ Home birth services, where available;
- ✔ Access to combined care under the *Maternity and Infant Care Scheme* free of charge;
- ✔ Allied specialist support services, where available.

WHAT IS NOT WORKING WELL?

- ✘ Overcrowding and a lack of resources;
- ✘ Inadequate engagement with women as partners in their care;
- ✘ Poor staff communication;
- ✘ Excessive antenatal clinic waiting times;
- ✘ Poor quality and inconsistent antenatal and postnatal care, support and advice;
- ✘ Limited mental health supports in the community;
- ✘ Unsatisfactory care following a loss or bereavement;
- ✘ Overmedicalised model of childbirth for low-risk women;
- ✘ Lack of choice in models of care;
- ✘ Poor breastfeeding support in the hospital and community.

HOW CAN SERVICES BE IMPROVED?

To promote health and wellbeing:

- Standardise health promotion advice and information for pregnant women and make it available online;
- Devise and roll out public health campaigns that promote the benefits of health and wellbeing for women, babies and their families;
- Provide more and better quality breastfeeding information and education.

To provide information and support on care options:

- Provide accessible, clear, consistent and impartial advice on maternity care options;
- Publish statistics on maternity care services;
- Make women partners in their care.

To facilitate a choice of care models:

- Facilitate choice and provide more options for maternity care;
- Implement evidence-based policies and practice;
- Ensure continuity of care.

To ensure safety:

- Maintain adequate staffing levels in all maternity care settings and ensure high quality working conditions;
- Facilitate a transparent and accountable service through clear governance structures, regular audits and patient feedback;
- Ensure high quality care by providing opportunities for further staff training and continued professional development.

To make services needs centred:

- Provide opportunities for service user feedback and engagement;
- Facilitate better communication channels between healthcare professionals and service users;
- Ensure adequate staffing levels to enable personalised care.

To facilitate improved access to services:

- Expand community and home based care to ensure greater access to midwifery-led services in all geographical locations;
- Standardise referral pathways and facilitate the integration of services including small and large units as well as pathways between hospital and community settings;
- Provide more outreach clinics.

For workforce and governance:

- Incentivise opportunities for continued professional development;
- Invest in the services and ensure adequate staffing levels;
- Increase the capacity of midwives and midwifery-led services.

To ensure best practice is applied consistently:

- Standardise systems for regular audits and reviews of practice, including independent public inspections;
- Develop and implement national guidelines on maternity care;
- Establish and standardise clear governance structures to ensure accountability and transparency.

CHAPTER 3
HEALTH AND WELLBEING

Priority 1:

A health and wellbeing approach is adopted to ensure that babies get the best start in life. Mothers and families are supported and empowered to improve their own health and wellbeing.

3.1 HEALTHY IRELAND

Healthy Ireland, the Framework for Improved Health and Wellbeing 2013 – 2025, aims to improve the health and wellbeing of the population of Ireland over the coming generation, by outlining clear pathways and strategies for all people to follow. *Healthy Ireland's* vision is that of an Ireland, where everyone can enjoy physical and mental health and wellbeing to their full potential, and where wellbeing is valued and supported at every level of society and is everyone's responsibility.

Healthy Ireland also calls for action, not just on interventions to target particular health risks, but to place a broad focus on addressing the wider social determinants of health – the circumstances in which people are born, grow, live, work and age – to create economic, social, cultural and physical environments that foster healthy living. In this context, promoting healthy communities requires addressing these social determinants of health, issues such as public transportation, education, access to healthy food, economic opportunities etc. and, therefore, ensuring better health outcomes for everybody.

Healthy Ireland takes a lifecourse approach so the principles of healthy behaviours are supported throughout life including pregnancy. A proactive approach to good pregnancy-related health and wellbeing must begin early during the school years.

3.1.1 A HEALTHY PREGNANCY

Healthy Ireland underlines that early intervention before birth is as critical as giving ongoing support during a child's early years. International evidence suggests that antenatal and early life experiences may have consequences for a child's health and wellbeing in infancy, through to adulthood and later life, further emphasising the importance of giving every baby the best possible start in life. In order to give the child the best start in life, intervention and support must take account of the family's determinants of health, e.g. socio-economic circumstances. This will ensure that support is provided in a broad and holistic manner.

It is recognised that appropriate preconception care has beneficial outcomes for both mother and baby.[83] However, a majority of respondents (66.5%) to the public consultation indicated that they did not access preconception care for their most recent pregnancy. This is likely due to a number of factors, including, a lack of awareness of the importance of such care, and the fact that about half of pregnancies in high-income countries are unplanned.[84] Growing Up in Ireland found that only 35% of women had their pregnancy confirmed by week six, and 84% of women by week 12. It is assumed that planned pregnancies are more likely to be confirmed sooner rather than later.

The benefits of intervening early and providing appropriate advice and support are considered to be two-fold. Good health and wellbeing, in women of reproductive age, becomes the norm, thereby mitigating some of the risks associated with unplanned pregnancies, and, families will be more likely to avail of preconception care when planning a pregnancy. Targeted public health campaigns and messages are necessary, through which families are advised of the benefits of preconception care, and encouraged to

access such care in their community, from their GP or PHN. Preconception care is particularly important for women who are taking prescription drugs. Some women and families with pre-existing conditions will require specialised preconception care which should be provided in both the community and the hospital.

The promotion of health and wellbeing in pregnancy is important and can serve as a motivation for families to make improved lifestyle choices in areas such as family nutrition, family exercise, abstention from alcohol and smoking etc. Some women will need referral to health and social care professionals such as physiotherapists, dietitians and psychologists for more targeted interventions and support.

During the public consultation, advice on a healthy lifestyle was rated as very good/good by 32% of respondents, acceptable by 37% and poor/very poor by 32%. A number of approaches should be taken to improve the quality and dissemination of pregnancy-related health and wellbeing advice. The *National Brief Intervention Model*, which is being developed by the HSE for all healthcare professionals, aims to make 'every contact count'. This strategy also recommends the development of an online resource for maternity services to act as a one-stop shop for all maternity-related information.

Diabetes in pregnancy should be addressed under the *Healthy Ireland* goal of improving health throughout the life course. It is a classic intergenerational condition, adversely affecting outcomes for mother and infant during the pregnancy, and in later life for the children, who subsequently have higher rates of diabetes with all the associated health and health service costs implications. It is recognised that women who achieve tight glycaemic control, prior to and during pregnancy, have a perinatal mortality risk close to that of women without diabetes; however the risks of maternal and foetal morbidity in women with diabetes still remains higher than in non-diabetic pregnancies.[85]

The Population Needs Assessment in Chapter 2 provided an overview of the health and wellbeing of Irish women during pregnancy. Some specific topics are discussed in more detail in the following sections, taking account, where relevant, of international evidence.

3.2 NUTRITION

Maternal nutrition at preconception and during pregnancy influences the growth and potential development of the foetus and contributes to the maturity of a healthy baby. Nutrition during pregnancy affects not only foetal development, but also the risk of chronic diseases for that infant in adulthood.[86] The critical window of opportunity seems to occur from preconception until 24 months of age. Health professionals working with mothers and babies during this key time have a unique opportunity to influence the lifelong health of mother, infant and the family unit, by encouraging an appropriate diet and the intake of certain supplements such as folic acid and vitamin D. Folic acid supplements must be taken before conception as the neural plate closes at 21-28 days of foetal life; in that context preconception diet and folic acid supplementation is extremely important.

Evidence suggests that improvements are possible in the nutrition of women in the preconception phase. Results of the *National Nutrition Survey* show that many women of childbearing age fail to achieve dietary targets for iron or calcium, putting them at increased risk of deficiency such as anaemia. Tarrant et al[87] found that a less than optimal level of women of childbearing age in Ireland were taking supplements such as folic acid and vitamin D. Groups identified as being at particular risk of nutritional deficiency, or who would benefit from nutritional intervention, include adolescents, women on low-incomes, women with a low or high body mass index at the beginning of pregnancy, and women at high risk of pre-eclampsia or diabetes.

Neural Tube Defects (NTDs) are a group of serious congenital neurodevelopmental malformations

associated with failure of closure of the neural tube within four weeks of conception. The burden of illness is heavy for families and the health services, particularly when babies with spina bifida require surgery soon after birth. NTDs are potentially preventable in two thirds of cases if women increase their intake of folic acid. A recent comprehensive national audit found that the incidence of NTDs in Ireland was 1.17/1000 in 2011 and it appears to be increasing.[88] This may be attributable to decreases in maternal periconceptual folic acid supplementation and/or decreases in the percentage of foods fortified voluntarily with folic acid.[89,90] Only one in four women booking for antenatal care in an Irish maternity hospital took adequate periconceptual folic acid.[91] The Strategy welcomes the review group that has been established by the Department of Health which will inform policies and future public health campaigns on periconceptual supplementation and on food fortification in 2016.

The HSE and the Institute of Obstetricians and Gynaecologists have published a guideline entitled *Nutrition for Pregnancy* which provides information for mothers, and prospective mothers, to improve the management of nutrition during pregnancy. While this is welcomed, it is recognised that access to dietetic services within maternity services is very limited and mainly targeted towards diabetes in pregnancy. It is recommended that a dietetic service be made available in each maternity network, to ensure that the needs of women with type 1, type 2 and gestational diabetes, as well as those with other nutritional issues, are addressed.

3.3 BREASTFEEDING

Breastfeeding is important for the health of both mother and infant. For mothers, this includes a lower risk of postpartum depression,[92] a reduced risk of cardiovascular disease, breast cancer and ovarian cancer[93] and a faster return to pre-pregnancy weight.[94] It is associated with a reduced risk of type 2 diabetes later in life for the mother, even if she has had gestational diabetes.[95] For infants, breastfeeding provides better protection from acute infections,[96] otitis media,[97] neonatal enterocolitis[98] and respiratory illness.[99] Links have also suggested that breastfeeding reduces the risk of obesity in the child.[100,101]

Despite the evidence of the importance of breastfeeding, rates in Ireland remain amongst the lowest in the OECD. While the rate has improved from 38% in 2000,[102] only 56% of babies in Ireland were breastfed on discharge from maternity hospitals/units in 2013.[2] This compares with rates of babies being breastfed at any time of 96% in Australia,[48] and 81% in the UK.[49] In March 2015, the *Health Service Performance Assurance Report* included breastfeeding rates for the first time and this additional reporting is welcomed. September 2015 data shows that at the first PHN visit, which normally takes place within 72 hours of discharge, 53.2% of babies were breastfed. At the three month PHN visit, the rate fell to 34.2%.

Factors that increase the likelihood of a mother breastfeeding include high levels of income, higher levels of social class, higher levels of education and mothers who are older.[103] Children born in Baby Friendly Health Initiative-accredited hospitals were more likely to be breastfed than children born in a non-accredited hospital. However, this effect weakens over time, to the extent that after two months there was no difference between the two groups,[104] highlighting the need for breastfeeding support to continue in the community.

The importance of dedicated staff, such as the HSE National Breastfeeding Coordinator and the wider team of lactation consultants, and statutory and voluntary supports, in promoting and supporting breastfeeding in Ireland is recognised. The National Breastfeeding Coordinator works with a national committee to oversee the implementation of breastfeeding action plans and monitors progress in relation to breastfeeding targets; liaising with local breastfeeding committees, maternity hospitals, community health services and voluntary breastfeeding organisations. Initiatives include an annual

National Breastfeeding Week, the HSE website www.breastfeeding.ie, and an online *Ask the Expert* support service provided by International Board Certified Lactation Consultants. Other initiatives include: breastfeeding support groups, the development of a breastfeeding competencies framework, and a breastfeeding policy for primary care teams and community healthcare settings.

Nonetheless, a lack of breastfeeding support in the hospital, community and home setting was highlighted in the public consultation. Women reported receiving inconsistent, sometimes contradictory and poor quality information on breastfeeding, and limited support on postnatal wards with little or no access to lactation consultants. In addition, the respondents reported a perceived pressure to use infant formula. Some respondents noted a striking contrast between the emphasis placed on the benefits of breastfeeding during their antenatal care with the subsequent lack of practical support received during the postnatal period. Areas for improvement identified include increased community based support for breastfeeding. It was noted that if the necessary information and support is made available, more women are likely to breastfeed. In that context, it is considered that all maternity service staff should receive training both on the importance of, and best methods to, initiate and continue breastfeeding.

Since 2005, Ireland's activities in relation to breastfeeding has been directed by *Breastfeeding in Ireland: A Five Year Strategic Action Plan*. In 2013, the HSE engaged the Institute of Public Health in Ireland to conduct a review and evaluation of the 2005 Action Plan. That review highlighted a range of priorities, core to which was a need to foster greater engagement across a variety of sectors, including the community. Other priority themes related to enhancing messaging, training, antenatal care and education, managing commercial interests and breastfeeding education in schools. The HSE *Breastfeeding Action Plan 2016–2021* is due to be published shortly and will be informed by the 2013 review. It is anticipated that implementation of the policy will serve to drive improvement in breastfeeding uptake. It will be important, therefore, that any actions included in the plan, that are directed at the maternity service, are fully addressed in a timely fashion.

The HSE *Infant Feeding Policy for Maternity and Neonatal Services* is now standard policy in all maternity care settings. All settings are encouraged to review their maternity, neonatal and NICU procedures and practices to ensure that they are fully aligned with national breastfeeding guidance. While all 19 maternity units/hospitals participate in the WHO Baby Friendly Health Initiative (BFHI), only nine units/hospitals are currently designated Baby Friendly. Full compliance with the BFHI is now recommended in this Strategy.

In addition to practical supports which can be provided to mothers, such as support to continue breastfeeding on return to the workplace, a broader societal change is required in order to promote a more positive culture around breastfeeding. This should support women to feel confident about their choice to breastfeed. This includes engaging extended family members and childminders who, perhaps due to not being aware of the importance of breastfeeding, may not be best informed to support a family's choice to feed their baby expressed breastmilk while in their care. Breastfeeding promotion campaigns should be tailored and targeted to help the wider community, including family members, childminders and employers, play their role in improving Ireland's breastfeeding initiation and duration rates.

> Although lip service is paid to breastfeeding, actual support in hospitals and from public health nurses is woefully inadequate - there needs to be true commitment to change, training and resourcing. It would help if formula was not handed out like smarties for free in all the wards.
>
> Service User

3.4 OBESITY AND OVERWEIGHT

Obesity is an important risk factor in pregnancy. Chapter 2 outlines the complications that can arise due to maternal obesity including the increased risk of gestational diabetes mellitus, pre-eclampsia, foetal growth abnormalities and interventions during labour. Additionally, the long term consequences of maternal obesity include an increased risk of neural tube defects, elevated lifelong risk of diabetes mellitus and cardiovascular disease for the woman and an increased risk of childhood obesity for her children [105,106,107,108,109].

While the WHO *Modelling Obesity Project* indicates that, for women, obesity levels could rise from the 23% recorded in 2010, to 57% for 2030, the *Healthy Ireland Survey 2015* suggests that levels of overweight and obesity in adults in Ireland may be stabilising. The *Survey 2015* findings show that 22% of women are obese, with a further 31% overweight. It is clear, however, that any increase in maternal obesity will have serious implications for clinical practice and maternity service provision.

Excessive maternal weight gain in pregnancy (gestational weight gain) is also associated with complications. Clinical reports from the four largest maternity hospitals indicate that fewer than half of women have a BMI in the healthy range at booking, with the majority of women overweight at the time of conception.[41] Irish research demonstrates the benefit of lifestyle interventions delivered in the antenatal period, in avoiding excessive weight gain and in improving intakes of key nutrients during pregnancy. [109]

In recognition of the obesity challenge, the Department has developed an Obesity Policy and Action Plan. This includes a focus on supporting healthy weight for women in their reproductive years, during pregnancy, in infancy and early years. The policy recognises the important role played by family and parents as the most influential factor on a child's eating habits and physical activity in the early years, and seeks to secure a healthy weight as early in a child's life as possible. Health and social care professionals such as dietitians and physiotherapists have an important role to play in developing and delivering appropriate interventions to support women in maintaining a healthy weight in pregnancy and beyond.

3.5 PHYSICAL ACTIVITY

Physical inactivity is now identified as the fourth leading risk factor for global mortality. Physical inactivity levels are a cause for concern as there are major implications for the prevalence of non-communicable diseases and the general health of the population.

No data is available about participation rates in physical activity by pregnant women in Ireland; however, it is known that a large number of Irish people are not meeting the levels of physical activity recommended in the *National Guidelines on Physical Activity for Ireland*. The recent *Healthy Ireland*

Survey identified that less than a quarter of women were meeting these recommendations.

A growing body of evidence confirms the health benefits of being active before, during and after pregnancy; however the WHO advises that further research is needed[110].

Moderate-intensity physical activity is known to keep heart and lungs healthy, and is beneficial for mood and stress. The *Physical Activity Guidelines for Americans*, advise healthy women to get at least 150 minutes of moderate-intensity aerobic activity per week during pregnancy and the postpartum period, ideally spread throughout the week.

A first *National Physical Activity Plan* was published in January 2016. The Plan promotes increased physical activity levels across the population and aims to provide a strong focus for modifying unhealthy lifestyle habits and promoting awareness of the benefits of physical activity in relation, not just to health, but in a wider socio-economic context. While the Plan will work to make physical activity part of everyday life, and raise levels of physical activity by everybody, more will be done to directly target participation by girls and young women to address the significant gender differences in participation. While everybody should be physically active to improve overall health and wellbeing, some people are in particular circumstances that require more tailored advice or referral to a specialised physiotherapist. It is intended that information and advice, relating to participation in physical activity during pregnancy, will be developed in consultation with health and social care professionals and widely propagated.

3.6 TOBACCO

Smoking during pregnancy is acknowledged to be detrimental to the health of both mother and baby and has been found to be the primary cause of low birth weight, due to the toxic compounds contained in cigarettes. Low birth-weight babies are more likely to experience acute illness in infancy and more chronic ill health and neurological problems. Smoking has also been linked to reduced fertility in women and ectopic pregnancy[111]. Children exposed to antenatal smoking are also more likely to develop emotional and behavioural problems such as attention deficit hyperactivity. While the Department of Health recommends that women avoid smoking during pregnancy, as evidenced in Chapter 2, smoking during pregnancy remains an issue.

International evidence has found that low income and low levels of education increase the possibility of maternal smoking during pregnancy, both directly[112] and indirectly, through factors such as stress, depression, alcohol consumption and unplanned pregnancy[113,114]. This was supported by the *Growing up in Ireland* study which recorded 40.8% of mothers in a semi/unskilled social class smoking during pregnancy, compared to only 8.3% of those in the professional/managerial households. In addition to being more likely to smoke than women in higher income groups, women in lower income groups were found to be more likely to smoke a higher number of cigarettes per day. Women having their first child were found to be less likely to smoke than women with previous children. Unplanned pregnancies, stress, depression, living with other smokers and consumption of alcohol were all found to increase the probability of a woman smoking during pregnancy. These patterns strongly suggest that smoking during pregnancy is part of a constellation of psychosocial problems that are linked to, but not determined by, social disadvantage.[104]

Of the 17.6% of women reported to smoke during pregnancy in the *Growing up in Ireland* study, 5% stopped smoking during the pregnancy, and, in general, most pregnant women reduced the number of cigarettes consumed. The HSE operates a website www.quit.ie to assist smokers to quit. Smokers can register and receive free ongoing support by phone, email, and social media or in person from trained advisors. The website provides a section dedicated to smoking during pregnancy which gives information in relation to the detrimental effects that smoking can pose to both mother and infant.

Tobacco Free Ireland, the national tobacco control policy document, has a series of recommendations which aim to reduce smoking prevalence in the overall population and, in particular, recommends the provision of targeted approaches in smoking cessation services for pregnant and postpartum women.

In order to protect the health and wellbeing of both mothers and babies from the harms of smoking, maternity hospitals/units should be tobacco-free campuses and have an on-site smoking cessation service available for pregnant women. Midwives and other frontline healthcare professionals should have formalised and documented training in smoking cessation.

3.7 ALCOHOL

Evidence suggests that high levels of alcohol consumption during pregnancy are associated with miscarriage, low birth-weight and child developmental problems[115]; however the evidence is inconclusive on the risks of light alcohol consumption. Foetal Alcohol Spectrum Disorder (FASD) is a term used to describe the full range of permanent birth defects caused by prenatal exposure to alcohol. FASD is difficult to diagnose as there are many features that need to be present along with a history of prenatal alcohol intake.

Growing up in Ireland has found that Irish women were significantly less likely to report drinking during pregnancy, but, if they did consume alcohol, they were likely to drink more heavily than their UK counterparts. As outlined in Chapter 2, almost 20% of women reported consuming at least one alcoholic drink during pregnancy. A HRB-funded study reported significantly higher rates, where 65-80% of women surveyed in the UK and Ireland drank at some point during their pregnancy. The study reported that 60% of participants drank during the first three months of pregnancy – 19% occasional alcohol consumption, 25% low alcohol consumption, 11% moderate alcohol consumption, and 5% heavy alcohol consumption.[116]

As evidenced in the *Growing Up in Ireland*[104] study, drinking patterns can continue into pregnancy, particularly in the early stages, where pregnancy is not known and/or pregnancy has not been planned. Abstinence from alcohol was less likely among older women with higher levels of education, social class and income; however their pattern of consumption tended to be more moderate than that of younger women with lower levels of income and education. Younger and less educated women were more likely to consume more alcohol earlier in the pregnancy, before reducing their consumption levels in the second and third trimesters. All non-Irish citizenship groups were found to have a lower probability of consuming alcohol than women with Irish citizenship. Only 3.7% of women stopped drinking alcohol during the course of their pregnancy. The health of the mother was also found to influence alcohol consumption. Issues such as stress and depression/anxiety increased the probability of alcohol consumption by 60% and 32% respectively. Conversely, experiencing persistent nausea and vomiting reduced the probability by 27%.

Women are generally asked about their alcohol intake at their first antenatal visit. They are advised to avoid alcohol during pregnancy as there is no safe minimal intake. Women identified as drinking to excess are referred to the social work department for support and advice, and where appropriate, are referred to their GP and other support services. The importance of early identification is essential as ongoing excessive alcohol may have implications for the safety and welfare of the baby and older children. The medical social worker has a key role in co-ordinating support and care for these women and in referring any child welfare and protection services to the Child and Family Agency.

A Pocket Guide *Alcohol and Pregnancy* is readily available throughout the health services. The guide is a result of collaboration between the HSE, the Public Health Agency in Northern Ireland and the Western and Southern Health and Social Care Trusts, with funding secured through the European Union's

INTERREG IVA programme by the cross border health services partnership, Co-operation and Working Together.

The Department of Health recommends that pregnant women abstain from drinking alcohol. It is intended to bring forward legislation to provide for health warning labelling on alcohol products in relation to consuming alcohol during pregnancy. This is welcomed by the Strategy.

While it is recognised that efforts are being made to protect the health and wellbeing of both mothers and their babies from the harms of alcohol, the *National Women & Infants Health Programme* should further develop a consistent approach to informing women about the risks of alcohol consumption during pregnancy. All maternity units should provide appropriate supports to women to help them reduce alcohol consumption. In addition maternity hospitals/units should facilitate increased awareness of FASD amongst healthcare professionals and strengthen their methods of detecting alcohol abuse and supporting women to reduce their intake.

3.8 DRUGS

Limited information is available on the extent of drug misuse during pregnancy in Ireland. One study in the Coombe Women & Infants University Hospital showed that 4% of women who registered for care, reported using drugs during pregnancy[34]. Of the women who recorded use of drugs, the most common cited drug was methadone, which suggests previous engagement with available services in an attempt to cease the practice.

The impact on the baby of the mother's drug abuse prior to birth, is not always immediately apparent, and sometimes the full harm is not evident until later. The HSE identifies potential negative outcomes of misuse of drugs during pregnancy as increased stress and impulsiveness later in life (cannabis), heart defects and learning difficulties (cocaine) and withdrawal symptoms (opiates) (www.drugs.ie). Women who take drugs are at an increased risk of having babies with low birth weights. There is also risk for the baby associated with the use of infected needles.

Women with drug issues have been found to be a particularly vulnerable group due to a lack of engagement with the maternity services and a tendency to under report the level of their drug use. Extensive support from a medical social worker, both for the mother and for her baby, is necessary to ensure engagement with necessary maternity, neonatal, postnatal and social care services. Three drug liaison midwives are employed by the HSE addiction service, each linked to one of the Dublin maternity hospitals. The *National Women & Infants Health Programme* should examine the need to provide drug liaison midwives and specialist medical social workers in all maternity networks.

The drug liaison midwives provide a link between the maternity service and the drug treatment service. The role of the drug liaison midwife is to case manage pregnant, drug dependent women, providing education and support during their pregnancy. Information is also provided on the possible effects of drug use in pregnancy - a booklet *"Substance Misuse in Pregnancy"* has been developed. In addition, women are supported to access priority drug treatment and admission to residential inpatient drug treatment centres. One mother and child residential treatment service is available in Dublin, provided by Coolmine Therapeutic Community.

It is important that maternity services work in partnership with drug services and the Child and Family Agency to support parents with substance abuse issues and to identify potential ongoing harm for babies and older children. Involvement with maternity services provides an opportunity for women to reduce their drug dependence and improve their social circumstances.

The Department of Health is working on the development of a new National Drugs Strategy for the period post 2016. The intention over the coming months is to lay the groundwork for a concise and focused policy, placing a clear emphasis on the practical implementation of actions. An examination of the approach to drugs policy and practice in other jurisdictions will also help to identify any additional evidence-based approaches which might be considered in an Irish context.

3.9 PERINATAL MENTAL HEALTH

Pregnancy and birth are major life-changing events for expectant parents and it is important that the emotional aspects of adjusting to parenthood are acknowledged and supported. Mental health morbidity in the perinatal period[117] not only negatively impacts on mothers' mental and physical health, but research has demonstrated that such issues may negatively affect mother-infant interaction and infants' neurodevelopment, as well as the wider family[65,66]. Depression and anxiety are common during the perinatal period because of a confluence of risk factors and a potential exposure to vulnerability factors[117].

A US study using self-report in a study of 3,051 pregnant women[118], estimated the prevalence rate of 'fair' or 'poor' antepartum mental health as 7.8%. They noted that women with low social support, in poor health or with a history of poor mental health are at increased risk. The postnatal period is also a point of risk and opportunity in terms of mental health, with high prevalence rates of depression and anxiety identified[119]. For example, a history of an eating disorder may not have any impact on pregnancy outcomes where women are well supported and in remission,[120] but active eating disorders appear to increase the risk of caesarean section and postpartum depression.

Prevalence rates of postnatal depression in Ireland are reported to range from 11.4% to 28.6%[121]. Factors that are suggested to increase the likelihood of postnatal depression include subjective distress in labour, obstetrical emergencies, severe labour pain and poor coping skills[119,122]. Biological factors, lifestyle changes, social circumstances, personal history of depression and high expectations of motherhood may also be present[123], and an increased risk of recurrence for women with a previous diagnosis of mental health issues.

Women suffering from depression who are pregnant or who have recently had a baby are advised to attend their GP or Primary Care Team. Where an individual is assessed as requiring referral for specialist mental health services, their GP can refer to the local general adult mental health service[k], or perinatal mental health team where available. Where a woman is acutely ill or experiencing a psychosis, she may require admission to an approved mental health centre, following which she can return to the care of the Community Mental Health Team, and her GP. Mother-baby bonding should be facilitated and supported at all times, and as such, every effort should be made to keep the mother and baby together, if clinically appropriate.

Perinatal mental health was a recurring theme of the public consultation, the findings of which point to the need for better and more accessible mental health support pre, during and post pregnancy.

It is important to note that the biggest risk for mental ill-health in pregnancy or postnatal period is a prior history of mental health difficulties. Regardless as to whether a woman presents to a maternity service with a pre-existing mental health problem, or develops one during this time, it is important that the maternity and mental health services work together to provide the best care possible. The lead healthcare professional will play an important role here, and should aim to ensure that continuity of care is maintained. Women at risk of developing or experiencing emotional or mental health difficulties in the perinatal period should be identified, and a multidisciplinary approach to assessment and support adopted. Those women with a previous history of a mental health condition should be identified early

[k] 114 teams nationally

and midwives should work collaboratively with mental health services, such as the perinatal psychiatrist, liaison mental health nurse or psychologist, and other support services, including medical social workers, to ensure the right support is offered. The Child and Family Agency is well placed to provide practical family support to the mother, her partner and any older children and, where necessary, to undertake assessments relating to the ongoing welfare and protection of the new baby and other children.

Currently there are three perinatal psychiatrists, with one based at each of the Dublin maternity hospitals, on a part time basis with services under significant pressures. Access to such services on a tertiary basis should be standardised, and as a minimum provided on a maternity network basis.

The impacts of changing social structures are likely to be particularly relevant in the postnatal stage. Living apart from the extended family and established support networks may cause some new parents to feel isolated in their new roles during this time of significant change. Online and community supports are, increasingly, playing important roles to mitigate this. In addition, vulnerable women and families often require medical social work support.

Preliminary work on the development of a successor policy to *A Vision for Change*, which sets out the policy framework for mental health services, is underway. This provides a timely opportunity to give detailed examination to national perinatal mental health needs.

The mental health of women during and after pregnancy should be better supported through:

- **Awareness**: Make information on perinatal mental health available to all healthcare professionals, women and their families.
- **Screening**: All healthcare professionals involved in antenatal and postnatal care, should be trained to identify women at risk of developing or experiencing emotional or mental health difficulties, including an exacerbation of previous mental health issues, in the perinatal period.
- **Support**: Improve access to mental health and family supports to ensure appropriate care can be provided in a timely fashion. Additional support should be available for women who have experienced traumatic birth or the loss of a baby.

3.10 DOMESTIC VIOLENCE

Healthcare professionals have an important role to play in recognising and responding to domestic violence.[124] The *HSE Policy on Domestic, Sexual and Gender Based Violence* sets out the policy framework that guides the health sector's response to domestic violence. It is designed to dovetail with the National Strategy developed by Cosc, the Office for Prevention of Domestic, Sexual and Gender-Based Violence. The HSE is named in the *Second National Strategy on Domestic, Sexual and Gender-Based Violence,* published in January 2016, as the implementing body for a review of current approaches and outcomes in respect of questions posed by staff in different settings, including maternity services, regarding domestic, sexual and gender-based violence.

3.11 CHILD WELFARE AND ABUSE

Parental alcohol and drug addiction, maternal mental health, and domestic abuse, are associated with child abuse and neglect in the research literature and social work practice. In particular, the correlation between child abuse and domestic violence is high, with estimates ranging between 30% to 66%, depending on the country in question.[125] The medical social worker is generally the direct link between the maternity services and the Child and Family Agency, who can provide support, as well as protective

services, over the short and longer term. While the medical social worker is the key contact point with the Child and Family Agency, all staff need to be alert to child welfare and protection concerns.

Children First: National Guidelines for the Protection and Welfare of Children covers the recognition, reporting and management of child safety concerns for individuals and agencies that come into contact with children. The Children First Act 2015, not yet commenced, mandates amongst others, medical and nursing professionals to report child abuse to the Child and Family Agency.

3.12 IMMUNISATIONS

Before becoming pregnant, a woman should be up-to-date with routine vaccines, to help protect both her and her child. The Irish Immunisation Guidelines for Pregnant Women are as follows:

- All rubella seronegative women of child bearing age should be offered one dose of measles, mumps and rubella (MMR) vaccine;
- All pregnant women should be offered influenza vaccine. This should be given throughout the influenza season (September to May);
- All pregnant women should be offered pertussis vaccine (whooping cough), between 27 and 36 weeks' gestation. However, it can be given at any time during pregnancy or in the week after delivery;
- All women of childbearing age without a definite history of varicella infection (chickenpox) should have their immunity checked. Women with negative varicella serology should be vaccinated with two doses of varicella vaccine, at least four weeks apart, prior to, or after, pregnancy, unless there are specific contraindications.

3.13 SUMMARY

Pregnancy and birth is a time when women have a unique opportunity to focus on their health and wellbeing, and positive choices can have a significant impact on giving each baby the best start in life. By providing appropriate information and supports, maternity services can make 'every contact count' to support behaviour change, in particular around reducing lifestyle behaviours with harmful effects such as smoking, as well as increasing protective measures such as immunisation, improved nutrition and physical activity. In addition, it is important that supports and interventions on overall health and wellbeing, including mental health and sexual health, are addressed and supported into the postnatal period.

The maternity and related health services play an important leadership role in promoting a supportive culture around breastfeeding.

3.14 ACTIONS

1 The Department of Health will ensure that a health and wellbeing approach underpins both maternity policy and service delivery.

2 Antenatal care will encompass a holistic approach to the woman's healthcare needs including her physical, social, lifestyle and mental health needs.

3 Postnatal care will promote health and wellbeing for the new mother and baby, support breastfeeding and identify and support those at risk, with a particular emphasis on mental health.

4 The Department of Health will engage with the education sector to ensure that a proactive approach to health and wellbeing begins early during school years.

5 Additional supports will be provided to pregnant women from vulnerable, disadvantaged groups or ethnic minorities, and will take account of the family's determinants of health, e.g. socio-economic circumstances.

6 An online resource for maternity services, to act as a one-stop shop for all maternity-related information, will be developed; any information provided will be understandable and culturally sensitive.

7 Midwives, obstetricians and GPs will be alert to the heightened risk of domestic violence during pregnancy and postpartum and will ask women about domestic violence at antenatal and postnatal visits, when appropriate. This will be supported by appropriate training for frontline staff to ensure that all such enquiries and disclosures are handled correctly, and that referral pathways and support options for women who disclose domestic violence, are clear.

8 A dietetic service will be available in each maternity network, to ensure that the needs of women with type 1, type 2 and gestational diabetes, as well as those with other nutritional issues, are addressed.

9 A particular focus is required to improve support for breastfeeding both within the hospital and the community.

10 The upcoming HSE Breastfeeding action plan 2016-20 will be resourced and implemented

11 All maternity units will comply with the *Baby Friendly Health Initiative*.

12 The WHO International Code of Marketing of Breast Milk Substitutes and subsequent relevant WHA Resolutions will be implemented.

13 Breastfeeding promotion campaigns will be tailored and targeted to help the wider community to play their role in improving Ireland's breastfeeding initiation and duration rates.

14 Maternity hospitals/units will be tobacco-free campuses and have an on-site smoking cessation service available for pregnant women.

15 Midwives and other frontline healthcare professionals will have formalised and documented training in smoking cessation.

16 Maternity hospitals/units will strengthen their methods of detecting alcohol abuse and supporting women to reduce their intake.

17 The *National Women & Infants Health Programme* will develop a consistent approach to informing women about the risks of alcohol consumption during pregnancy.

18 The *National Women & Infants Health Programme* will examine the need to provide drug liaison midwives and specialist medical social workers in all maternity networks.

19 Access to mental health supports will be improved to ensure appropriate care can be provided in a timely fashion.

20 All healthcare professionals involved in antenatal and postnatal care, will be trained to identify women at risk of developing or experiencing emotional or mental health difficulties, including an exacerbation of previous mental health issues, in the perinatal period.

21 For women at risk of developing or experiencing emotional or mental health difficulties in the perinatal period, a multidisciplinary approach to assessment and support will be adopted.

22 Women with a history of a mental health condition will be identified early and midwives will work collaboratively with mental health and other services, to ensure that the appropriate support is provided.

23 Mother-baby bonding will be facilitated and supported at all times, and as such, every effort will be made to keep the mother and baby together, if clinically appropriate.

24 Access to perinatal psychiatry and psychology services will be standardised, and as a minimum provided on a maternity network basis.

25 Additional support will be available for women who have experienced traumatic birth or the loss of a baby.

CHAPTER 4
SAFE, QUALITY AND WOMAN-CENTRED CARE

Priority 2:
Women have access to safe, high quality, nationally consistent, woman-centred care.

4.1 INTRODUCTION

High quality maternity healthcare means care which is safe, evidence-based, appropriate, timely, efficient, effective and equitable. This care is woman, baby and family-centred. Safety is fundamental to quality healthcare and the maternity services must be enabled to deliver safe care while balancing competing pressures in a dynamic and complex environment. The provision of advocacy services for women and their families is an important driver of quality care.

Assurance of patient safety requires active leadership, governance and clinical commitment to quality at national, regional and local service delivery levels. A National Patient Safety Office will be established within the Department of Health in early 2016. This Office will lead a programme of patient safety measures and advise the HSE, HIQA and health professional regulatory bodies on patient safety issues. This patient safety programme centres on initiatives such as new legislation, the establishment of a national patient advocacy service, measurement of patient experience, introduction of a patient safety surveillance system, extending the clinical effectiveness agenda and setting up a National Advisory Council for Patient Safety.

4.2 MATERNITY SERVICES – CAPACITY FOR PATIENT SAFETY AND QUALITY

The *National Women & Infants Health Programme* and the maternity networks (as described in Chapter 6) will be required to develop capacity for quality and patient safety. Each maternity service will have a defined patient safety and quality operating framework to address service user advocacy, complaints, incident management and response, learning systems, service improvement, and change of culture.

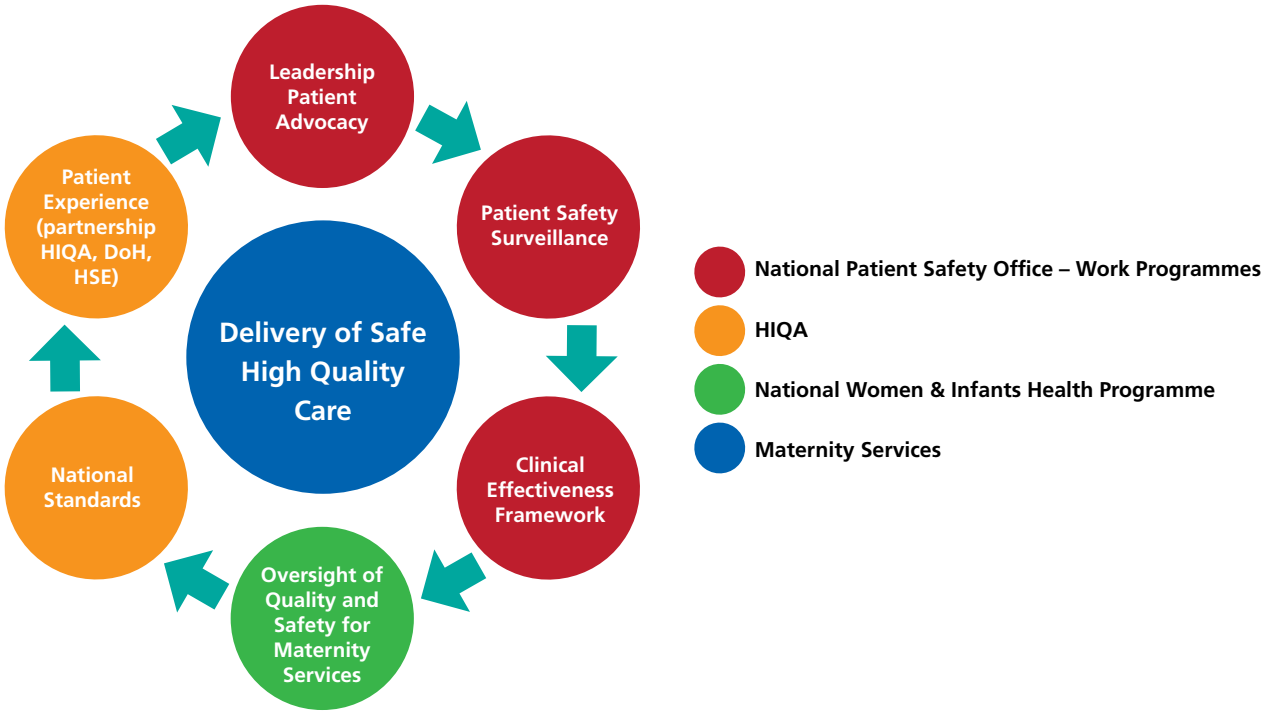
The integration of national and international best available evidence, through utilisation of clinical effectiveness processes, promotes maternity healthcare that is up to date, effective and consistent. Clinical effectiveness incorporates quality assured National Clinical Effectiveness Committee (NCEC) National Clinical Guidelines, NCEC National Clinical Audit and general clinical practice guidance, including guidelines developed through the Clinical Programme for Obstetrics and Gynaecology.

This approach is an important lever for driving improvements in quality and safety in maternity services. This Strategy advocates a risk-based approach to ensure that women are provided with the most appropriate model of care in line with their needs. It is recommended that this Strategy be underpinned by intrapartum guidelines, which should be developed in line with NCEC requirements. These guidelines should be developed as a priority.

The implementation of all national guidelines must be appropriately resourced. Clinical audit and ongoing monitoring of quality and safety data and indicators is essential to continually drive improvements in the quality of the care provided within the maternity service. Information and recommendations from Confidential Enquiries into Maternal Deaths, national audits, adverse event investigations, near misses and analysis of patient complaints at national and local level provide opportunities to learn from mistakes and to introduce procedures and practices to prevent a recurrence of the issues.

A co-ordinated and sustained focus on patient safety and quality improvement promotes clinical and cost-effective healthcare that is evidence-based, with subsequent improved clinical decision making and clinical outcomes for women and babies. Figure 21 outlines an illustration of key elements for Patient Safety and Quality.

Figure 21: Patient Safety and Quality - Themes



Patient safety training and education of healthcare professionals have not kept pace with advances in patient safety, or with workforce requirements. The introduction of patient safety in health professional training for maternity care is therefore necessary and timely, as outlined in Chapter 6. In addition, the Strategy recommends the implementation of multidisciplinary patient safety tools to minimise risk and patient safety incidents. These include the NCEC Clinical Handover Guideline in Maternity Services[126,127] and the Irish Maternity Early Warning System (IMEWS), which contain the communications tool ISBAR (identify, situation, background, assessment and recommendation) and the Safety Pause, and checklists such as those published by the World Health Organization (WHO) in surgery and childbirth.

4.3 NATIONAL STANDARDS

Standards help to set public, provider and professional expectations, and enable everyone involved in healthcare to play a vital part in safeguarding patients and delivering continuous improvement in the quality of care provided. The HIQA *National Standards for Safer Better Healthcare* provide a strategic approach to improving safety, quality and reliability in our health services. They will inform the basis for future licensing of all healthcare facilities in Ireland.

HIQA has commenced the development of *National Standards for Safer Better Maternity Services*. These standards will follow the eight themes in the *National Standards for Safer Better Healthcare*, as presented in Figure 22. Criteria will be presented as maternity service specific.

Figure 22: HIQA themes - *National Standards for Safer Better Healthcare*

Theme 1 of HIQA's National Standards is *Person-centred Care and Support*. Service users' needs, preferences and experiences determine their perception of the quality of the service they receive. A number of forthcoming initiatives will address this standard, namely advocacy, open disclosure, code of conduct, measuring patient experience and a Maternity Care Charter.

4.4 NATIONAL PATIENT ADVOCACY SERVICES

Typical advocacy activities at an individual level relate to patient rights, matters of privacy, confidentiality or informed consent, patient representation, awareness building, and support and education of patients and their carers. Increasingly, patient advocates are assisting patients to navigate healthcare systems, as well as helping them to cope with psychological and social effects of health problems. At a macro level, patient advocates give a patient voice on public fora.

Work on a new national model for patient advocacy, as recommended by the *Report of the investigation into the safety, quality and standards of services provided by the Health Service Executive to patients in the Midland Regional Hospital, Portlaoise* (2015), has commenced. This will involve a review of international best practice models and a scoping exercise of the current national models. The National Patient Safety Office (NPSO) in the Department will define the core components for the national advocacy model and oversee its introduction. The NPSO will give consideration to appropriate mechanisms to focus on patient rights.

4.5 OPEN DISCLOSURE

Measures are now in place, and more are planned, to foster and support a culture of open disclosure within the health service. Open disclosure can be considered as an open consistent approach to communicating with patients and their families when things go wrong in healthcare. This includes expressing regret for what has happened, keeping the patient informed, providing feedback on investigations and the steps taken to prevent a recurrence of the adverse event.

A National Policy on Open Disclosure was developed jointly by the HSE and the State Claims Agency (SCA) and launched in November 2013. Since then, the HSE and SCA jointly have trained, and continue to train, healthcare professionals nationally in Open Disclosure which is being implemented across all health and social services nationwide. In November 2015, the Government approved the drafting of legislative provisions to support Open Disclosure. This will be included in the Department of Justice and Equality's draft *Civil Liability (Amendment) Bill*. which is at an advanced stage. The legislation is part of a broader package of reforms aimed at improving the experience of those who are affected by adverse events.

4.6 CODE OF CONDUCT

In addition to the professional codes of conduct that each of the health professions have from a regulatory stance, the Department of Health has recently completed work on a *Code of Conduct for Health and Social Service Providers* that clearly sets out employers' and employees' responsibilities in relation to achieving an optimal safety culture, governance and performance of the organisation. This followed a recommendation in the report, *Investigation into the safety, quality and standards of services provided by the Health Service Executive to patients, including pregnant women, at risk of clinical deterioration, including those provided in University Hospital Galway, and as reflected in the care and treatment provided to Savita Halappanavar.* The HSE in the 2016 Service Plan has committed to the implementation of the Code, and HIQA can monitor its implementation as part of the national standards.

4.7 MEASUREMENT OF WOMEN'S EXPERIENCE

The woman's voice is essential to evaluate and inform the care given, to guide quality improvements, and to inform quality improvement initiatives at a local and national level. The ultimate purpose of gathering women's views is to improve the quality and safety of the care provided. *The National Healthcare Quality Reporting System 2015* report highlighted that Ireland does not have standardised and comparable patient experience surveys, or the requirement to collect data on patients' experiences consistently, in order to improve patient experience.

A joint partnership programme between HIQA, the Department of Health and the HSE has been established to put in place a plan for the measurement of patient experience across Irish acute hospitals. This will give patients a voice to inform our health system and will for the first time facilitate a comparison between Irish and international patient experiences. HIQA will provide guidance to services which wish to develop specific questions for particular services such as maternity services.

4.8 MATERNITY CARE CHARTER

A Charter for Maternity Care is currently being developed by the HSE Acute Hospitals Division in partnership with the Clinical Programme for Obstetrics and Gynaecology. The Charter will outline a set of principles which describe what matters to women and their partners when engaging with and using maternity services in Ireland.

> **We fail to collect robust data on outcomes, fail to detect patterns, fail to learn from serious incidents, fail to disclose. We need a structure with explicit lines of who holds responsibility and accountability. We can no longer blame an inanimate 'system'.**
>
> Service User

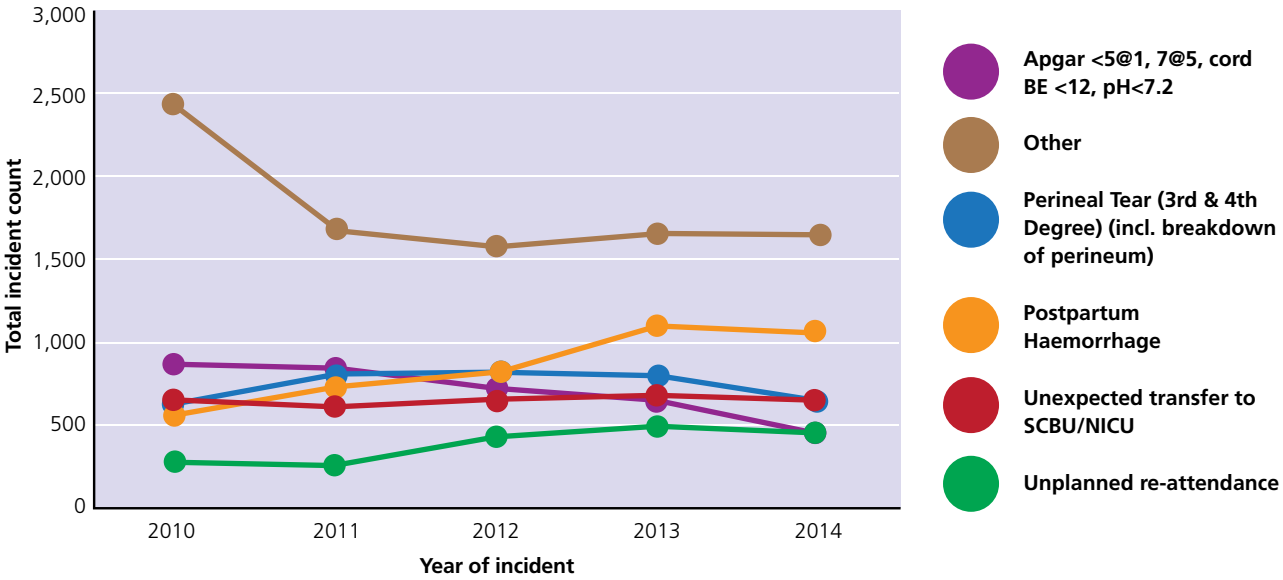
4.9 NATIONAL PATIENT SAFETY SURVEILLANCE

The Department of Health National Patient Safety Office will establish a *National Patient Safety Surveillance System* as recommended by the Chief Medical Officer's report, *HSE Midland Regional Hospital, Portlaoise Perinatal Deaths (2006-date)* (2014). This will provide the evidence to inform patient safety policy and patient safety leadership decisions. This system will produce patient safety profiles by bringing together data from various health information resources. The intelligence gathered will inform priorities for the HSE and monitor their implementation. This will create the opportunity to address the 'precursors to harm, and not just the harm itself' and help to develop a 'problem sensing' culture in the maternity services that actively seeks patient safety alerts.

For maternity services, such a surveillance system is likely to include, but is not limited to, elements on clinical activity, safe structures, optimal workforce, supportive culture, appropriate behaviour, notifications to the Health Products Regulatory Authority, information from the Coroner, SCA data and temporal issues. It will also assist in identifying and developing processes to address data gaps of importance. The SCA, for example, recently published a report titled *Clinical Incidents and Claims Report in Maternity and Gynaecology Services - a five year review 2010-2014.*[128] This national report indicated that in maternity services in 2014, 9,787 incidents occurred, of which 96% were clinical, while 140 claims were created, of which 98% were clinical. In 2014, the total transactional expenditure paid on clinical claims in maternity services nationally was €57.3m, which represented 54% of all clinical care related claims paid by the SCA in that year[128].

Figure 23 from the Report outlines the six most common incidents tracked over five years from 2010 to 2014.

Figure 23: Six most common incidents tracked over 5 years, 2010-2014 inclusive, in Maternity Services, excluding mass actions



A number of datasets are already in development or are reporting quality and safety information for the Irish maternity service as identified in the sections below. It will be important that there is a coherent approach to the development and reporting of the various datasets to provide opportunity for benchmarking in line with national and international standards. Data should be collected from validated sources, duplication of data collection eliminated and data should be used for multiple purposes as required.

The collection of data is not an endpoint and it is important that the surveillance and analysis of data which will inform the development of patient safety profiles for patients, service and clinical cohorts is part of quality improvement cyclical process. This will be a key role for the *National Women & Infants Health Programme*.

Figure 24: Patient Safety Surveillance Feedback and Quality Improvement Loop

4.9.1 IRISH MATERNITY SAFETY STATEMENT

The Chief Medical Officer's report *HSE Midland Regional Hospital, Portlaoise Perinatal Deaths (2006-date)* (2014), recommended that every maternity service should be required to complete and publish a Patient Safety Statement. Work is at an advanced stage on the finalisation of the content/metrics of a new monthly *Irish Maternity Safety Statement*. This statement will be populated with a standard dataset by individual maternity units. It is intended that this statement is updated each month and becomes a core element of clinical governance arrangements.

4.9.2 IRISH MATERNITY INDICATOR SYSTEM (IMIS)

The Clinical Programme for Obstetrics and Gynaecology has developed the *Irish Maternity Indicator System* (IMIS). The IMIS was introduced across all 19 maternity units in July 2014 in order to bring consistency to the measurement and interpretation of maternity services data nationally. IMIS is designed for within-hospital use; data is collected and reviewed monthly within hospitals, and accumulated annual data is sent to the HSE Quality Assurance Programme and the Clinical Programme for Obstetrics and Gynaecology for review. It is the intention to further develop this work and publicly report this data.

IMIS includes 30 indicators across five domains:

- Perinatal indicators for hospital management;
- Neonatal indicators;
- Laboratory indicators;
- Serious obstetric emergencies;
- Methods of delivery.

4.9.3 NATIONAL HEALTHCARE QUALITY REPORTING SYSTEM (NHQRS)

The Department of Health is committed to public reporting of quality indicators that reflect on the quality and safety of health care in Ireland. Such public reporting helps to drive improvements in the quality of the care provided to patients. The NHQRS framework sets out five domains:

- Helping people to stay healthy and well;
- Supporting people with long term conditions;
- Helping people when they are being treated and cared for in our health services;
- Supporting people to have positive experiences of health care;
- Treating and caring for people in a safe environment.

The Department of Health published the first NHQRS annual report in 2015. With regard to maternity services, the report highlighted that the majority of women in Ireland continue to have vaginal births. However, the proportion undergoing caesarean section has increased every year since 2007. In 2013, the national rate was 28.8% while the OECD average was 26.9%.[129]

4.9.4 ADVERSE EVENTS AND THE NATIONAL INCIDENT MANAGEMENT SYSTEM

An adverse event is an incident that results in harm to a patient. Studies of adverse events demonstrate that internationally between 4% and 16% of patients admitted to hospital experience one or more adverse events, of which up to half are preventable[130]. Traditional efforts to detect adverse events have focused primarily on voluntary reporting and tracking of errors. However, public health researchers have established that only 10 to 20% of errors are ever reported and, of those, 90 to 95% cause no harm to patients.[131] The Institute of Healthcare Improvement's global trigger tool allows services to track their own adverse events using 'triggers' or 'clues'. Applying this, studies have identified higher rates of adverse events than with voluntary reporting alone.

It is well recognised nationally and internationally that a healthcare service which reports a high proportion of incidents, across a spectrum of severities, is a service that has a strong patient safety culture. Incidents which are not reported are not identified, and therefore cannot be prevented. Under-reporting is both a national and international opportunity for improvement. It is noted that in 2015, 58.6% of claims received by the SCA had no previous patient safety incident reported to the SCA,[132] while a recent paper from the United States Department of Health identified that hospital staff did not report 86% of events to incident reporting systems.[133]

Understanding why preventable errors occur is key to developing strategies by which they can be addressed and minimised. It must be acknowledged, however, that the delivery of healthcare, including maternity care, is inherently risky, and its scale and complexity is without parallel in other sectors and businesses.

All healthcare enterprises covered by the Clinical Indemnity Scheme are legally obliged to report all adverse events that have occurred to the SCA.[134] The National Incident Management System (NIMS), previously known as STARSWeb, is hosted by the SCA for the HSE and other healthcare enterprises and State Authorities. An incident can be a harmful incident (adverse event), no harm incident, near miss, dangerous occurrence or complaint. It is Department policy that NIMS is the national recording and management system to be utilised by all facilities covered by the Clinical Indemnity Scheme to capture all incidents that occur throughout the public healthcare system. The NIMS database therefore provides key information at national and local level to assist in identifying and managing both clinical and general incidents.

Government approved the drafting of the *Health Information and Patient Safety Bill* in November 2015. This Bill will require providers to report certain incidents, such as Serious Reportable Events, to the SCA, HIQA and the Mental Health Commission. It is now a mandatory requirement of the HSE that all SREs are reported on the NIMS and through the Safety Incident Management Communication /Escalation Form process. For the first time, numbers of SREs are now reported in the HSE monthly performance assurance reports.

4.10 CLINICAL EFFECTIVENESS

The National Clinical Effectiveness Committee (NCEC) is a Ministerial committee which was established as part of the Patient Safety First initiative. The NCEC's role is to prioritise and quality assure, to the level of international methodological standards, a suite of national clinical guidelines and national clinical audit prioritised as important for the Irish health system. Guidelines should be developed by multidisciplinary multistakeholder teams with representation from patients and patient groups.

Clinical guidelines are internationally recognised methods for defining healthcare interventions, improving the effectiveness of care and treatment and reducing variation in care delivery. Guidelines are also a source of robust, quality information for patients.

4.10.1 CLINICAL PRACTICE GUIDANCE

In terms of clinical practice guidance, the health service as a whole is engaged with the development of processes to support clinical decision making at local, regional and national level as part of the quality improvement process. These processes involve the development of policies, protocols and guidelines. It is not in the interests of patient safety for individual organisations/units to develop or implement different guidance for similar clinical circumstances. The methodology to develop these processes is variable and the provision of *NCEC Standards for Clinical Practice Guidance* (2015) will promote consistency of approach and utilisation of appropriate methodology to develop evidence-based clinical practice guidance nationally. The HSE has established a National Policy Steering Group for policies, procedures, protocols and guidelines (PPPG) to develop a framework for the implementation of the *NCEC Standards for Clinical Practice Guidance*. This framework, when implemented, will provide a clear governance process for defining, developing, approving, disseminating, implementing, monitoring, auditing and updating HSE PPPGs. A standard template, staff training and national repository for HSE clinical practice guidelines is also planned by the HSE.

At national, regional and local level within the maternity services, the most appropriate clinical practice guidance (e.g. NCEC national clinical guideline, national guideline, protocol etc.) should be prioritised in a systematic manner, in line with the service need and the methodological rigour required. Not all guidance requires the same pathway of development as an NCEC national clinical guideline. However, regardless of the variation in scope and focus, it is important that the development of all clinical guidance is underpinned by an evidence-based approach and quality assurance measures to assist clinician and patient decisions about appropriate healthcare for specific clinical circumstances.

4.10.2 NCEC NATIONAL CLINICAL GUIDELINES

National clinical guidelines endorsed by the Minister for Health are mandated for implementation in the Irish health system and their implementation will be monitored through the *HSE Performance Assurance Reports*, compliance with the *National Standards for Safer Better Healthcare* and increased alignment with the Clinical Indemnity Scheme. Key performance indicators to measure implementation and impact of national clinical guidelines are being developed.

Fourteen NCEC National Clinical Guidelines have been published to date of which three relate directly to maternity services, following recommendations from the report, *Investigation into the safety, quality and standards of services provided by the Health Service Executive to patients, including pregnant women, at risk of clinical deterioration, including those provided in University Hospital Galway, and as reflected in the care and treatment provided to Savita Halappanavar* (2013):

- Maternity Early Warning System (November 2014);
- Clinical Handover in Maternity Services (November 2014);
- Sepsis Management (November 2014).

The NCEC is commissioning, with the Clinical Programme for Obstetrics and Gynaecology, a guideline on oxytocin.

The Strategy recommends that the NCEC should quality assure a set of National Clinical Guidelines for maternity services that have been developed with key stakeholders. Guidelines on intrapartum care should be developed as a priority to support a risk-based approach to maternity care. The NCEC guideline should include the definition, criteria and processes for each of the risk levels and referral processes, including escalation and de-escalation criteria as required. The *National Women & Infants Health Programme* should provide the clinical leadership for guideline development. Guideline Development Groups must include patient representation as currently recommended by NCEC.

It is noted that the National Institute for Clinical Excellence (NICE) and other international agencies produce high quality clinical guidelines. The NCEC, in partnership with the *National Women & Infants Health Programme*, should explore whether, in the interest of efficiency and effectiveness, such guidelines could be adopted or adapted for the Irish healthcare setting, so that a set of prioritised and quality assured national clinical guidelines are available for the Irish maternity services.

The Strategy recommends that there is a focus on guideline implementation and that resources to support the development and implementation of prioritised guidelines are available.

4.10.3 CLINICAL PROGRAMME FOR OBSTETRICS AND GYNAECOLOGY – NATIONAL GUIDELINES

The Clinical Programme for Obstetrics and Gynaecology was established in 2010 and has since published guidance on a range of clinical issues relating to women's health. Over 30 guidelines have been developed related to maternity care. These are available on the RCPI website at http://www.rcpi.ie/article.php?locID=1.5.71.492 and the HSE website http://www.hse.ie/eng/about/Who/clinical/natclinprog/obsandgynaeprogramme/obsgyneguide.html.

4.10.4 CLINICAL AUDIT

National clinical audit is a cyclical process that aims to improve patient care and outcomes by a national, systematic, structured review of clinical care against explicit clinical standards. All healthcare professionals involved in the maternity service should participate in audit activity on a regular basis.

The NCEC has developed prioritisation and quality assurance criteria and processes for national clinical audit. Prioritisation of national clinical audit will ensure that the clinical audits conducted at national level are of importance to the Irish health system. Quality assurance will give oversight that national clinical audits are being conducted to international best standards for clinical audits. It is anticipated

that audit topics that derive from a particular patient safety or policy issue may be directly commissioned by the NCEC.

Alongside local clinical audit activity, participation in NCEC national clinical audit will assist maternity services with requirements for regulation, licensing and clinical indemnity. From a policy perspective, NCEC national clinical audit will ensure transparency, national public reporting and learning for improvement, at the same time as providing for evaluation and determination of service development. Such an audit is recommended for the maternity services.

4.11 PATIENT CONSENT AND INFORMATION

Throughout pregnancy and, particularly, during labour, women will be required to make decisions in relation to their medical care. It is a basic rule of the common law of tort (e.g. civil wrong which causes injury to another, such as negligence), and a fundamental ethical requirement, that consent must be obtained in advance of the provision of any medical examination, treatment, service or investigation. This is also well established in ethical standards.

Requiring informed consent is an expression of respect for a person's autonomy (i.e. the ability to make decisions free from external influence) and the patient's right to bodily integrity. The doctrine of informed consent also recognises the right of individuals to weigh risks and benefits for themselves. For consent to be deemed valid, it must be voluntary and informed, and the person giving consent must have sufficient capacity to make the decisions at hand. As is the case in all other clinical contexts, pregnant women should be afforded the opportunity to make informed decisions about their maternity care.

The procedure for obtaining informed consent should follow a process of ongoing communication. It should arise through a discussion between healthcare professionals and their patients. Patients must be given sufficient information, in a way that they can understand, to enable them to exercise their right to make informed decisions. Information should be provided in a respectful way and free from the personal biases of healthcare professionals. The type of information provided should include:

- a description of relevant treatment/procedure;
- the associated (evidence-based) benefits and risks;
- the potential effects of the treatment/procedure on the baby and mother;
- a description of any reasonable alternatives; and
- details of the implications of not undergoing the treatment/procedure.

Pregnancy offers a significant window of opportunity during the antenatal period in which to inform women about foreseeable events and potential problems that might occur in labour and to ascertain their general preferences in a non-acute setting. Nevertheless, by its nature, labour can be unpredictable, and there might be situations where an unforeseen event takes place, and decisions must be made within very tight timelines. This underscores the value and importance of early communication and decision-making.

Cases might arise where a woman disagrees with the treatment recommended by her healthcare provider and may wish to refuse consent. There is asymmetry between consent to and refusal of treatment in pregnancy because it involves the care and treatment of a third-party, i.e. the baby. This means that refusal of treatment in this context is more ethically complex and requires more in-depth discussion and a higher standard of disclosure between the healthcare professional(s) and woman. It is also more legally complex, as Article 40.3.3 of the Constitution recognises the right to life of the unborn, with due regard

to the equal right to life of the mother. In the event that a woman refuses or wishes to discontinue a particular treatment, the healthcare professional's response should involve:

- an explanation of why the treatment/procedure is recommended;
- an explanation of the desired/expected outcome of the treatment/procedure and how effective the proposed treatment/procedure is likely to be;
- an explanation of what is involved and what other medical personnel (if any) would be involved in giving the recommended treatment or performing the procedure;
- a description of any known risks or side-effects for mother and baby of having the treatment and not having the treatment; and
- a description of alternatives (including postponing for a period of time) and how to obtain a second opinion.

Trust is necessary if such discussion and disclosure is to be constructive, and can most effectively be achieved following a process of ongoing communication between the pregnant woman and her healthcare providers throughout pregnancy.

There may be cases where, following such discussion and disclosure, a woman wishes to continue with her choice of informed refusal to proceed, or persist with a treatment/procedure, and that decision is based on her desire to achieve the best possible outcome for herself and her baby. Where an assessment is made that the informed refusal would not threaten the life of or have a deleterious effect on the baby, then the woman's choice of informed refusal should stand. However, where there are implications for the health or life of the baby, as defined by her team of healthcare professionals, then the HSE's National Consent Policy recommends that legal advice should be sought.

4.12 RESEARCH, INNOVATION AND TECHNOLOGY

Evidence for effectiveness of care provision is an ongoing requirement as healthcare innovates and technology advances. Ireland has an international reputation for high quality clinical and laboratory research in relation to maternity care. It is essential that researchers in maternity services and advances in medical research and technologies are developed and supported.

The Health Research Board (HRB) is the main national funding agency for health research. Since 2010, research funding has increasingly focused on health research of relevance to practice and policy that improves health and patient outcomes.

Individual researchers and research groups, whose interests focus on pregnancy, childbirth and neonates, have been successful in accessing this competitive HRB funding. Between 2007-2014, almost €13.5m has been awarded in the form of Network Grants, Cochrane Fellowships, PhD Health Professional or Midwifery Fellowships, and Clinical Scientist Awards amongst others. In addition, specific pregnancy related studies have been funded through more generic funding streams; for example the HRB-funded UCC Centre for Diet and Health is conducting studies on obesity and diabetes in pregnancy. Some of these awards[l] have facilitated linkages to large international studies so that Irish mothers and babies have participated in research that provides the evidence base for practice. The forthcoming HRB Strategic Plan 2016-2020 will progress further its support for research that informs the Irish health services through, for example, funding intervention studies or capacity building for evidence synthesis.

Also of note is Perinatal Ireland, a multi-centre, all-Ireland research consortium, funded through the HRB, which has focused on carrying out research into women's and children's health. This consortium

[l] E.g. UCC's *Screening for Pregnancy Endpoints* project

links seven maternity hospitals across the island of Ireland, harnessing the expertise of Ireland's leading maternal foetal medicine specialists, and has been uniquely positioned to carry out innovative and ground-breaking clinical and translational research.

Research has the potential to promote scientific advances, improve antenatal and maternity services, contribute to the wellbeing of individual patients, their babies and wider society and inform precision medicine. Maternity care in the future is likely to involve innovative early screening tests to detect biomarkers for potentially life-threatening conditions such as pre-eclampsia, and other pregnancies most at risk. Researchers should obtain the informed consent of pregnant women for planned research allowing sufficient time for consideration and discussion, preferably during the antenatal period. Where the research is planned to take place during labour, consent obtained during the antenatal period should be re-confirmed during labour. In respect of research that might only become relevant as a result of events during labour, consent should be obtained before active labour is established. In order to assist women with the decision, initial information about the research could be provided during the antenatal period, with access to further information if required.

4.13 SUMMARY

Leadership, governance, clinical commitment and clinical effectiveness approaches are required to deliver safe quality maternity care at national, regional and local level.

There is a need for investment in capacity development for quality and patient safety in our maternity services. It is essential that each maternity network should have, within its corporate responsibility, a defined patient safety and quality framework. This requires that each service/hospital has a dedicated patient safety and quality leadership and oversight function, which encompasses both the maternity quality (e.g. standards, clinical effectiveness guidelines, audit, KPIs) and maternity patient safety elements (e.g. complaints, advocacy, risk and adverse events/incident management).

4.14 ACTIONS

1. The independent national model for patient advocacy and the national patient safety surveillance function will include maternity services.
2. An annual survey of womens' experience in maternity services will be undertaken by HIQA in partnership with the HSE.
3. The NCEC will prioritise and quality assure National Clinical Audit and a set of National Clinical Guidelines for maternity services; guidelines on intrapartum care are a priority.
4. Safety and quality capacity will be developed across the maternity services to ensure that each network and service has a defined patient safety and quality operating framework.
5. Measurement and analysis for quality improvement and safety will occur at national, network and service level, based on an agreed minimum dataset.
6. Clinical leadership, support and resources will be provided for the development and implementation of National Clinical Guidelines and National Clinical Audit.
7. Building upon existing HRB-funded research programmes, the evidence base for safe, quality maternity care will be expanded, with promotion of research for maternity services and applied clinical research in obstetrics, midwifery, and health and social care professional fields for maternity patients.

CHAPTER 5
CHOICE

Priority 3:
Pregnancy and birth is recognised as a normal physiological process and, insofar as it is safe to do so, a woman's choice is facilitated.

5.1 INTRODUCTION

This Strategy aims to ensure that appropriate care pathways are in place in order that mothers, babies and families get the right care, at the right time, by the right team and in the right place. As distinct from most other models of healthcare, maternity care is intended to support a normal physiological process, involving pregnancy and childbirth. Also, uniquely, maternity care pathways cater for two people, and more in the case of multiple pregnancies. The majority of women who avail of our maternity services are healthy and well, and this concept should underpin all our considerations.

Any new model of maternity care must therefore be based on the premise that all women need a certain level of support but some need more specialised care. An integrated care model with capacity and ability to provide specialised and complex care quickly and responsively as required, and which encompasses all the necessary safety nets, including ongoing risk and need assessments, in line with patient safety principles, is outlined.

Women and their families are partners in their care and should be empowered to make informed choices. To this end, care pathways for antenatal, intrapartum and postnatal care should be clearly defined, evidence-based and publicly available. The model of care proposed in this Strategy promotes an integrated, evidence-based and multidisciplinary team-based approach across all care settings. Every woman should have a named lead professional who will have overall clinical responsibility for her care. If the level of care need changes, the named lead professional may need to change. At times, where the baby requires specialised care, there may be a need for two lead professionals, one for the mother and one for the baby.

> "Starting from a base of trying to normalise childbirth might be a way to frame the strategy process and influence how standards are written."
>
> Healthcare Professional

5.2 PRINCIPLES

STRATEGIC PRIORITY 1:
A health and wellbeing approach is adopted to ensure that babies get the best start in life. Mothers and families are supported and empowered to improve their own health and wellbeing.

- The mother's physical and mental health and wellbeing has an important impact on both the baby's and family's health.
- Mothers, partners and families should be supported and empowered to make positive lifestyle choices before, during and after the pregnancy, to promote a healthier future for baby and family.
- Maternity services should work in partnership with other services to support families with substance abuse issues.
- Pregnancy and birth are recognised as major life-changing events for expectant parents and the emotional aspects of adjusting to parenthood must be supported.
- The mental health of women during and after pregnancy must be supported.
- Women with a previous history of a mental health condition should be identified early to ensure that the right support is offered.
- Vulnerable families should be targeted for additional supports.
- Breastfeeding is important for mother and infant and should be actively promoted and supported across all sectors.

STRATEGIC PRIORITY 2:
Women have access to safe, high quality, nationally consistent woman-centred maternity care.

- Services will be woman, baby and family centred. A partnership approach will be taken and women will be encouraged to maintain regular contact with maternity services throughout pregnancy and following birth.
- Women will have access to all necessary information, in a readily understandable format, to allow them to make informed choices regarding their care. This will be underpinned by the principles of informed consent.
- Every woman will have a named lead professional who will have overall clinical responsibility for her care. The lead healthcare professional may change during the pregnancy depending on the latest risk assessment and the emerging needs of the woman and baby.
- In cases where mother or baby require more specialised care, it may be appropriate to identify two professionals – one leading the care for the mother and one leading the care for the baby. In such circumstances, a co-ordinated approach to care and clinical decision making is imperative, with a clear understanding of which of the two professionals retains overall responsibility for co-ordination of clinical care.
- The model of maternity care will provide the framework for a safe, high quality, woman-centred accessible maternity service. This will be underpinned by NCEC *National Clinical Guidelines, and guidance from the National Women & Infants Health Programme* and Critical Care Programme.
- The first antenatal visit should be undertaken by week 12.
- At the first antenatal visit, a standardised risk and needs assessment will be undertaken to define and ensure that the appropriate level of support and care is provided.

- All women must have equal access to standardised ultrasound services, to accurately date the pregnancy, to assess the foetus for ultrasound diagnosable anomalies as part of a planned Prenatal Foetal Diagnostic Service, and for other indications if deemed necessary during the antenatal period.
- At each subsequent contact with the maternity services, a woman's risk and needs profile will be reviewed to confirm that the appropriate level of support and care is provided.
- Where risk or needs profile changes, appropriate referral and transfer to an enhanced level of care will occur in line with standardised protocols and NCEC guidelines. Timely recognition of risk, the severity of the condition, accurate diagnosis, involvement of the correct senior staff from multiple disciplines, escalation, and prompt treatment and action can ensure optimum outcome.
- Continuity of care(r) will be a feature of all stages of care, care pathways and care settings.
- A maternal retrieval service will be provided to ensure the timely and appropriate transfer of a clinically deteriorating woman and/or baby to the most appropriate facility.
- The neonatal retrieval service will continue to provide timely and appropriate transfer of babies to the most appropriate facility; a retro-transfer service to return neonates to their local unit/hospital should be established.
- As far as possible, antenatal and postnatal care will be provided in community based settings.

STRATEGIC PRIORITY 3:
Pregnancy and birth is recognised as a normal physiological process and, insofar as it is safe to do so, a woman's choice is facilitated.

- A culture of normality will be fostered and promoted by suitable champions from within the multidisciplinary team across both community and hospital settings.
- Women will be offered choice regarding their preferred pathway of care, in line with their clinical needs and best practice.
- Pathways of care will be developed within and between maternity networks and with primary care.
- Women should continue to have the option to receive their antenatal care as part of a shared model of care with their GP under the *Maternity and Infant Care Scheme* and should be encouraged to avail of this scheme.
- All women booking for antenatal care should be encouraged to register with a GP.
- Normal-risk women can choose to receive care in an *Alongside Birth Centre* or in a *Specialised Birth Centre*. A home birth service, integrated within the maternity network, will be available to normal-risk women in line with national standards.
- High and medium-risk women and babies will receive their intrapartum care in specialised birth centres. Depending on clinical need, highly complex care may need to be provided in the most appropriate facility within the network or in another network.

STRATEGIC PRIORITY 4:
Maternity services are appropriately resourced, underpinned by strong and effective leadership, management and governance arrangements and delivered by a skilled and competent workforce, in partnership with women.

- Strong clinical and corporate governance is necessary to safeguard high standards of care and to create an environment in which excellence in clinical care will flourish.
- At all times across the care pathways there is a named lead professional with overall clinical

responsibility for the woman and baby, and a formal clinical handover process is in place.

- Maternity staff should be supported to maintain required competencies across the continuum from normal birth to recognition and management of clinical deterioration.
- Maternity services will be provided by an integrated multidisciplinary team comprising a core team supported by a wider team of health and social care professionals and specialist staff.
- An integrated maternity and neonatal workforce planning framework will be utilised to ensure that sufficient staff are available at the right time, with the right skills, diversity and flexibility, to deliver high quality care for women and babies.
- ICT connectivity between all contact points for maternity services is essential infrastructure across the maternity networks.

5.3 MODEL OF CARE – CHOICE

Care pathway options should be available across each managed clinical network. Each network should therefore provide a suite of maternity choices based on the risk profile and needs of the woman and baby.

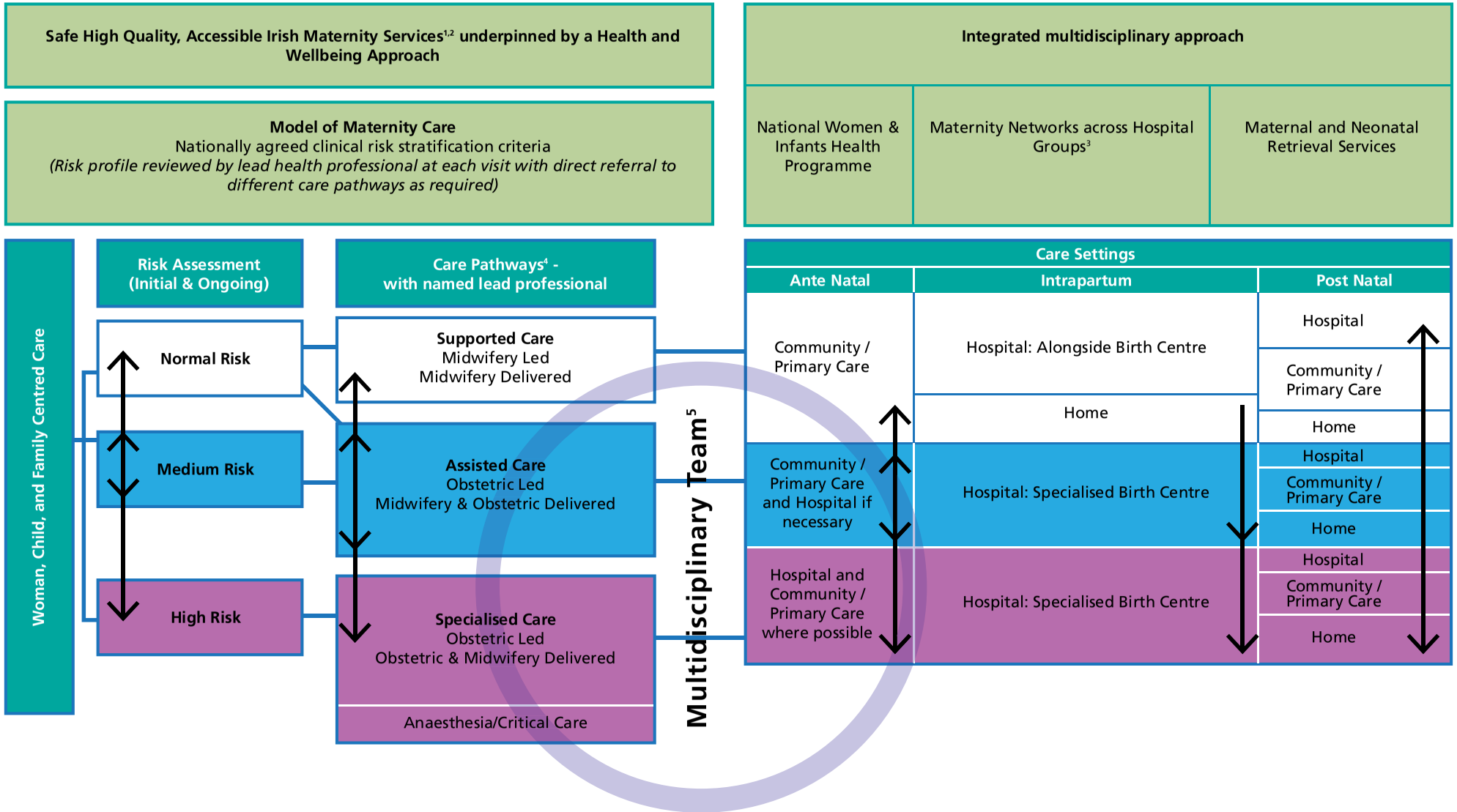
Women should be offered choice regarding their preferred pathway of care in line with safety, their clinical needs and best practice. To determine the appropriate care pathway in each individual case, an initial assessment of clinical risk/need will be carried out. This risk stratification approach will underpin the discussion between the women and the healthcare professional, and will help support the care pathway choice - see *Appendix C* for detail on selected research studies that have informed this model of care.

In determining the care pathway at individual level, the findings of the risk and need assessments should be discussed with the woman. This will provide her with all the necessary information to enable her to make an informed choice regarding her pathway of care. An individualised approach should be adopted, particularly where an assessment determines that a woman is a borderline candidate for a particular care pathway.

It is important to recognise that personal preferences may change during the pregnancy, and particularly during labour. Regardless of the driver for change, transitions between care pathways should be seamless and in accordance with NCEC early warning systems, clinical handover, intrapartum guidelines and Critical Care Programme *Care of the Critically Ill Woman* Guidelines.

Risk can escalate and de-escalate during the course of the pregnancy. The *Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK* report identifies the timely recognition of risk as critical to reducing morbidity and mortality within the maternity services. Therefore, at each interaction with the maternity service, the woman's risk profile should be reviewed. This process of continuous risk assessment will ensure that the level of care provided will match the woman's ongoing and emerging needs. A woman may need to move to a different model of care at any stage during her pregnancy. Transfers are likely to be bi-directional, to a higher or lower level risk category.

> **There is no continuity in so far as you do not see the same midwife or doctor each visit. A better system whereby midwives and or doctors are assigned a particular group of women to care for during their pregnancy would be of benefit as it allows the opportunity to build up a relationship with that professional.**
>
> **Service User**



1 In line with the overriding safety principle, a risk-based approach will be utilised. Practice will be evidence-based using national clinical guidelines and audit, and quality improvement approaches will be adopted.

2 Each birth centre should have access to an immediate emergency team response for clinical deterioration.

3 For high risk and complex women or babies specialist services outside the network may be required.

4 Within each of these care pathways, women can also avail of a shared model of care with the GP, as provided for by the *Maternity and Infant Care Scheme*.

5 Spanning the acute, primary and community sectors, modern maternity services are multidisciplinary in nature, and as such require the involvement of a range of health professionals. The input of the wider multidisciplinary team will be co-ordinated by the lead healthcare professional.

Figure 25: Recommended Model of Maternity Care.

5.4 MODEL OF CARE – DESCRIPTION

A model of care is a multifaceted concept, which broadly defines the way health services are delivered. It outlines best practice health care delivery through the application of a set of service principles across identified clinical streams and care pathways. The principles set out in this Strategy seek to promote an integrated, multidisciplinary, evidence-based and team-based approach across all care settings. The establishment of a community midwifery service, as an outreach service from the hospital, working alongside the PHN and general practice services, will provide the woman with integrated care as close to home as possible. A team of midwives, who will work as a part of a wider multidisciplinary team, will rotate between the community and hospital, and support the woman through all stages of her care continuum. This will facilitate continuity of care, an element that was found to be lacking in the public consultation.

Given the effect of culture and context on clinical practice, it is recommended that the new model of maternity care in each network is implemented within the context of robust evaluation and clinical governance frameworks.

The woman must be placed at the heart of the maternity service. Each family's interaction with, and journey through, the maternity service will differ depending on their clinical need. Some families may only require care from their named lead professional; others may need to see members of the extended multidisciplinary team, be they health and social care professionals or critical care staff, while others may need a higher level of support available only at a network or national level. Whatever the requirements, well defined, evidenced-based, care pathways will facilitate seamless transitions between healthcare professionals as well as the requisite collaborative working across all professional groups. These pathways should be supported by NCEC guidelines, the *National Women & Infants Health Programme* and Critical Care programme guidance and audit as required. Services will be provided on a maternity network basis with the exception of some very specific specialised clinical services which may need to be delivered on a national basis.

A woman will be supported to make an informed choice with regard to her care pathway and will have her care delivered by a particular team. Over the course of the pregnancy, the woman and her partner will be enabled to build a relationship with members of the team providing her care, and may be familiar with the member of the team on duty when she presents in labour. It is anticipated that this familiarity will assist in the provision of more effective person-centred care.

Most women experience a *normal-risk* pregnancy and birth. *Medium-risk* mothers/babies require a higher level of oversight, while *high-risk* mothers/babies require a more intensive level of care, either throughout or at particular stages of care. This risk-based approach to maternity service delivery proposed in this Strategy is similar to that outlined by NICE in their 2014 intrapartum guidelines[135]. Clinical deterioration can occur in any category; should the woman deteriorate, she enters the care pathway for the critically ill woman in obstetrics, as outlined in section 5.5 below. Should the baby require neonatal care that is not available on-site, the baby will be transferred by the National Neonatal Transfer Programme to the most appropriate facility - see section 5.6.7.

This Strategy therefore proposes three care pathways, each of which lend themselves to a shared model of care with the GP, provided for by the *Maternity and Infant Care Scheme*.

1. SUPPORTED CARE PATHWAY

This care pathway is intended for normal-risk mothers and babies, with midwives leading and delivering care within a multidisciplinary framework.

Responsibility for the co-ordination of a woman's care will be assigned to a named Clinical Midwife Manager, and care will be delivered by the community midwifery team, with most antenatal and postnatal care being provided in the community and home settings.

The woman can exercise a choice with her healthcare professional with regard to the birth setting, which may be in an *Alongside Birth Centre* in the hospital, or at home.

A woman may need to transfer, either temporarily or permanently, to another model of care because of an emerging risk. She may also choose to transfer to another care pathway, e.g. if she wants an epidural, or if she chooses to be under the care of an obstetrician.

---

2. ASSISTED CARE PATHWAY

The *Assisted Care Pathway* is intended for mothers and babies considered to be at medium-risk, and for normal-risk women who choose an obstetric service.

Responsibility for the co-ordination of a woman's care will be assigned to a named obstetrician, and care will be delivered by obstetricians and midwives, as part of a multidisciplinary team.

Care will be provided across both the hospital and community, and births will take place within a hospital setting in a *Specialised Birth Centre*.

Postnatal care will start in the hospital and transition to the community on discharge from hospital.

---

3. SPECIALISED CARE PATHWAY

The *Specialised Care Pathway* for high-risk mothers and babies will be led by a named obstetrician, and will be delivered by obstetricians and midwives, as part of a multidisciplinary team.

Care will, in the main, be provided in the hospital, and births will take place in the hospital, in a *Specialised Birth Centre.*

An individualised, multidisciplinary, multispecialty approach to care and care planning (for both hospital and woman) should be utilised. Where possible antenatal care should be provided in the community.

Postnatal care will start in the hospital and transition to the community on discharge from hospital.

Insofar as possible, all care pathways should support the normalisation of pregnancy and birth. However, as the needs of the mother and/or baby may change at any stage during the pregnancy, our services must be responsive to ensure that increased need is identified quickly and that the mother is placed in the correct care pathway. All women should benefit from best practice to support the initiation of breastfeeding and promote bonding of mother and baby such as skin to skin contact immediately after birth.

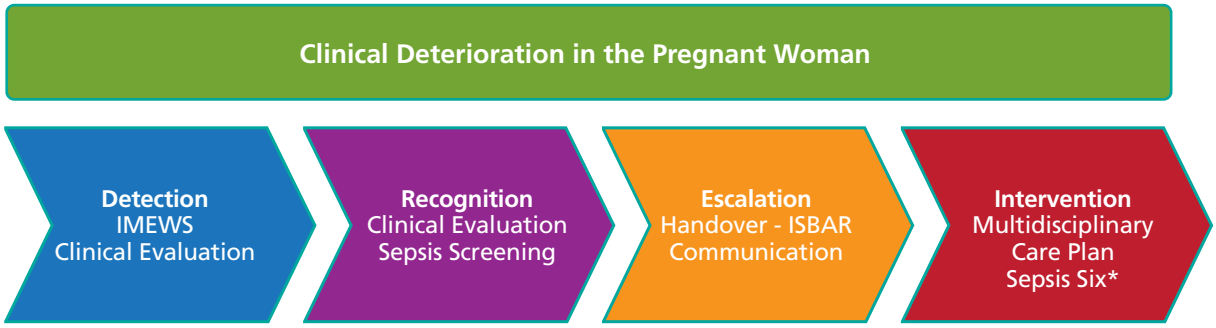
Within each of the three risk pathways, there may be a need for support from health and social care professionals including physiotherapists and dietitians. It is also recognised that in each of the risk categories, women may present with particular social needs and the support of medical social workers may be required. The input of the wider multidisciplinary team will be co-ordinated by the lead healthcare professional.

5.5 CLINICAL DETERIORATION

Clinical deterioration of a mother and baby can occur within any risk category. The early detection of clinical deterioration through the *Irish Maternity Early Warning System* (IMEWS) and clinical evaluation is a crucial first step. This is then followed by appropriate recognition, escalation and multidisciplinary intervention. All stages of this pathway require clear communication between health professionals. A pregnant woman may continue to deteriorate despite the processes of detection, recognition, escalation and intervention and will be managed according to the HSE *Guidelines for the Critically Ill Woman in Obstetrics*.

The process map (Figure 26) for the clinical deterioration of the mother describes the joined up process of detection (IMEWS), recognition/diagnosis, communication/escalation and intervention required by MBRRACE[55].

Figure 26: Process map for clinical deterioration in the pregnant woman

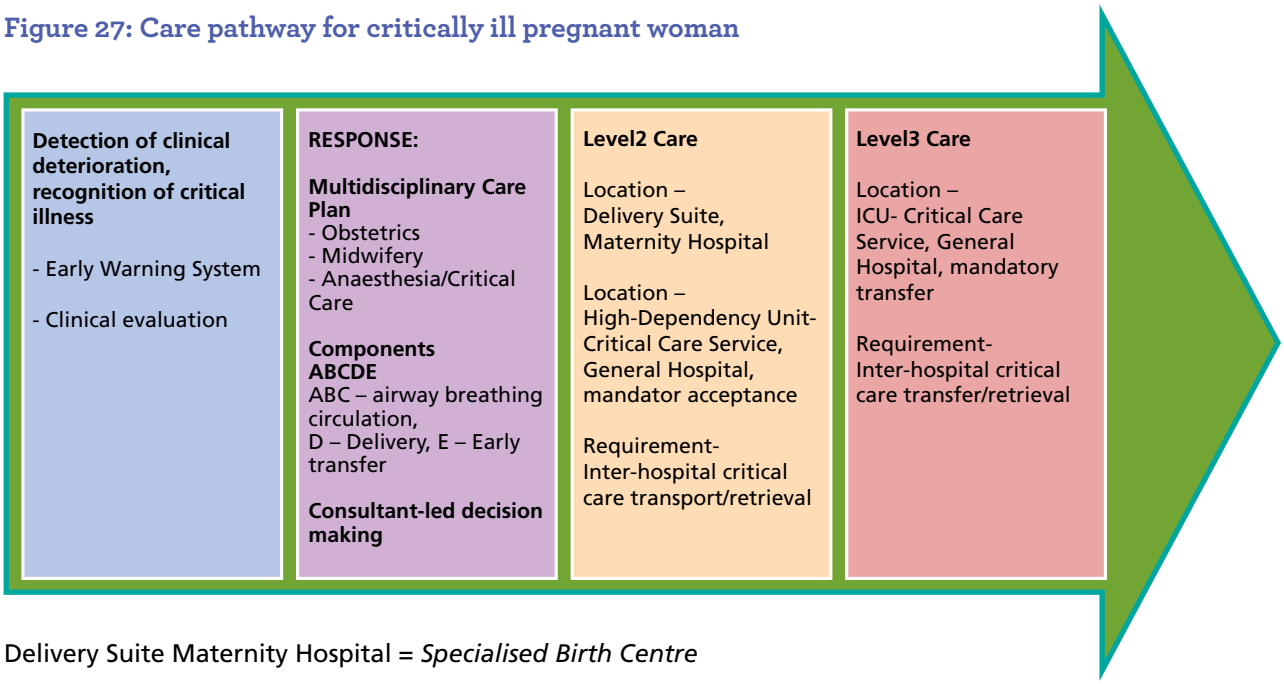


* Maternal Sepsis 6 as outlined in (NCEC) (2014) National Clinical Guideline No.4 IMEWS

The need for identification of risk and clinical deterioration of expectant mothers and babies should be highlighted throughout all maternity settings. This is in line with conclusions from the MBRRACE-UK Report[55] which recognises that timely recognition of risk, the severity of the condition, accurate diagnosis, involvement of the correct senior staff from multiple disciplines, escalation and prompt treatment and action can make the difference between life and death.

High-Dependency or Observation Units (Level 1) are required within *Specialised Birth Centres* in order to monitor, detect, communicate, escalate and intervene in the deterioration of the clinical condition of the mother (including pre-eclamptic toxaemia). Where a mother is critically ill, transfer/transport is required to a Critical Care Service (ICU and HDU) for Level 3 Critical Care (e.g. invasive ventilator support) or Level 2 Care (high-dependency care e.g. non-invasive CPAP support e.g. pneumonia).

Figure 27: Care pathway for critically ill pregnant woman



Delivery Suite Maternity Hospital = *Specialised Birth Centre*

> The speed at which a team respond in an emergency is absolutely amazing. Without doubt my daughter is alive because of this.

Service User

5.6 STAGES OF CARE

5.6.1 PRECONCEPTION CARE

The importance of health and wellbeing are set out in Chapter 3. Women, particularly those with pre-existing conditions, should be encouraged to engage with their GP for preconception care and advice as early as possible, and for onward referral to maternity services as required. In that regard, any review of the *Maternity and Infant Care Scheme* should consider the feasibility of extending coverage of the scheme to include a preconception consultation.

> All women should be offered a first scan by the public service in a timely manner. Patients attending antenatal clinics complain that they do not feel they have enough time during the consultation to raise their concerns and ask questions, often do not know the name of the doctor or nurse they were seen by, they are seen by a different person each time, and there is lack of continuity of care.

Service User

5.6.2 ANTENATAL CARE

Antenatal care ensures that all pregnant women receive individualised care that is appropriate to their needs. Antenatal care should encompass a holistic approach to the woman's healthcare needs including her physical, social, lifestyle and mental health needs. It should be responsive and timely with the woman seeing the most appropriate professional at the most appropriate time in the most appropriate setting.

Antenatal care should be provided as close to home as possible and should be accessible to all, including those with disabilities. Primary care and community settings should be utilised as far as possible and maternity services should be integrated across both community and hospital, for booking visits, antenatal care, health and social care professional input and for ultra-sonography. Women should continue to have the option to receive their antenatal care as part of a shared model of care with the GP under the *Maternity and Infant Care Scheme* and should be encouraged to avail of this scheme. The current situation whereby the majority of women attend their GP for shared antenatal care should continue.

Many women and pregnancies considered normal-risk to begin with will require consultation or transfer of care to the wider multidisciplinary team at some point during the antenatal period. The bi-directional transfer of care between professionals and between care pathways should be seamless. At all stages, the need and rationale for consultation with another professional, or the transfer to a different care model, should be discussed with the woman. Some high-risk mothers and babies may be referred to a medical or multidisciplinary team clinic e.g. for diabetes, where an individuated, agreed, multidisciplinary, multispecialty care plan is agreed in order to ensure that the woman's care is appropriately integrated and structured. Should the mother and baby deteriorate and become critically ill, the mother enters the *Care Pathway for the Critically Ill Woman in Obstetrics*.

Women considering epidural analgesia for labour should have the opportunity to consult with an anaesthetist. The benefits and risks can ideally be discussed in an outpatient setting with dedicated obstetric anaesthesia slots. The service could also be used by expectant mothers who have particular concerns about their labour and delivery and the need for analgesia/anaesthesia or those who may wish to discuss previous problems they may have experienced. Having the time and space to discuss these matters in a suitable environment can do much to allay fears, and empower women in their decision making. In addition, when such discussions are facilitated early, the process of informed consent is enhanced.

> **The system is very much like a conveyor belt and not a very efficient one at that. For example as a public patient there were frequently three hour waits to be seen at the ante-natal clinic. To me that is unacceptable and there must be a more efficient way to run an ante-natal clinic. There was never any apology for this wait - it is just a given that this is the way the system is.**
>
> Service User

5.6.2.1 ANTENATAL EDUCATION

A comprehensive antenatal education programme benefits women and their partners, helps them through pregnancy and prepares them for childbirth and parenthood. Information provided should be standardised and should focus on the promotion, protection and supports available for women. In an attempt to build resilience and preparedness, women should be educated about the complications which might arise later in pregnancy, as well as through the intrapartum and postnatal period. Participation by the anaesthesia department in antenatal education is essential for the provision of information on issues such as pain relief in labour, including the indications for, and possible complications of, the various procedures offered. In addition, the inclusion of health and social care professionals such as dietitians, physiotherapists or continence promotion specialists, are of particular benefit, and can be cost-effective in the prevention of long term problems.

Antenatal education should also prepare parents for the transition to the postnatal period, promote breastfeeding and the importance of good nutrition, parent-child bonding and child development. Specific groups may need focused attention, for example, teenage parents, women with disabilities, people in disadvantaged areas and women who have previously had a caesarean section.

Antenatal education should be interactive and participative. Providing education in small groups in local communities helps foster the development of new social networks and provides parents with peer support during pregnancy and parenthood. It is important that any education classes are provided in partnership with the various professions and agencies.

5.6.3 INTRAPARTUM CARE

Women must be supported to make their birth experience as positive as possible. They should have the opportunity to make informed decisions about their care in partnership with their healthcare professionals. Good communication, compassion and support are very important and will contribute to a positive birth experience for the woman.

Intrapartum care should be delivered in line with NCEC intrapartum guidelines. Clinical responsibility should continue under the named lead healthcare professional, unless needs and/or preferences dictate otherwise. Clear pathways and communication between healthcare professionals must be in place to assist in the delivery of an appropriate care plan in line with need.

Particular emphasis should be given to designing services, including settings, to reflect the fact that pregnancy and birth are essentially normal physiological processes. For all care pathways, the physical infrastructure should be of a high standard, providing a homely environment and respecting the woman's dignity and need for privacy during childbirth. While it is recognised that more medical equipment is required in a *Specialised Birth Centre*, as far as possible all birth centres should be conducive to providing a calm and relaxing environment, such that they can best support a physiological process. Modern facilities including, where appropriate, birthing aids and birthing pools should be available.

It is recommended that intrapartum care for women in the *Supported Care* pathway should be provided in an *Alongside Birth Centre*; women in this pathway may also choose a homebirth. Women in the *Assisted Care and Specialised Care* pathways have increased potential to require intrapartum intervention based on clinical need, and therefore should have their care in a *Specialised Birth Centre*.

A comprehensive maternity service across our 19 units requires the dedicated support of an anaesthetic/critical care service to provide an immediate response to a scenario such as a category one caesarean section, a haemorrhaging or a deteriorating critically ill patient as outlined in Figure 27. The anaesthesia resource must also provide a 24 hour epidural analgesia for labour service, and anaesthesia for elective caesarean sections.

> I spent the early part of my labour in a large ward with approximately 11 other women also labouring. It made me feel like I wasn't much better than an animal that was just being waited on to give birth next.

Service User

5.6.3.1 BIRTH CENTRES

Alongside Birth Centres should ideally be situated immediately alongside and contiguous to a *Specialised Birth Centre* (current labour ward). These will provide comfortable, low tech birth rooms; labour aids such as birthing balls and pools and complementary therapy will be welcome alongside natural coping strategies. An *Alongside Birth Centre* will not routinely offer interventions such as epidural analgesia, electronic foetal monitoring or syntocinon; a woman requiring/choosing such interventions will transfer to the *Specialised Birth Centre*. However, in an emergency, the necessary critical services will be brought to the woman in that setting. Where a woman is required, or chooses, to move from an *Alongside Birth Centre* to a *Specialised Birth Centre*, every effort should be made to ensure continuity of carer. In that regard, the attending midwife should accompany the woman and continue caring for her in the *Specialised Birth Centre*.

From a risk and patient safety management perspective, all staff should be aware of the shortest and fastest route to the theatre and regular emergency 'dry runs' should be conducted.

It is recommended that each maternity network prepare a plan to provide *Alongside Birth Centres* across their respective networks. Central to this Strategy is the need to provide a woman with choice in her model of maternity care. It is therefore recommended that, in determining the priority for the roll out of *Alongside Birth Centres*, each maternity network should have regard to the need to ensure a reasonable geographic spread for birth centres within the network.

Pending the development of *Alongside Birth Centres*, or where it is determined that, given the small size and/or level of activity, a discrete *Alongside Birth Centre* cannot be justified, it is recommended that a designated space is established within a *Specialised Birth Centre*, with an appropriate environment and processes to ensure that, as far as possible, women in the *Supported Care* pathway are provided with a natural childbirth experience. Such enablers would, for example, include the provision of designated rooms where women could labour, give birth and have their hospital-based postnatal care, prior to discharge.

The Steering Group noted that freestanding birth centres are available in some jurisdictions; such birth centres are not co-located with an obstetric unit. It is not proposed to recommend the provision of such centres in this Strategy. The Group considers that at this early stage in the development of the new model of care, it will be necessary to monitor and evaluate the implementation of *Alongside Birth Centres* in an Irish context. This work should be undertaken by the *National Women & Infants Health Programme.*

> **Disregard for the absolute terror and fear experienced by first time mothers in labour. Many pregnant women feel very vulnerable and petrified, and there is a need for a specific care professional, possibly counsellor, to take sole responsibility for giving support before, during and after birth. Right of expectant women to refuse internal exams and that right to be respected and no guilt trips to be given to woman. That aspect is shockingly absent. Traumatic experiences often result in postnatal depression.**
>
> **Service User**

5.6.3.2 HOMEBIRTHS

While current demand for homebirth services is relatively low, it is acknowledged that a demand exists for such services. Women in the *Supported Care* pathway should, where feasible, have the option to birth at home, with care provided by the community midwifery team and the lead healthcare professional. Thus, homebirth services will be integrated with the community midwifery and the wider maternity service as part of the maternity network. Care will be provided in line with agreed national standards, with clear care pathways identified for any change in the woman's risk profile.

5.6.4 POSTNATAL CARE

As identified in the public consultation, continuity of care(r) should transition through to the postnatal period. In addition, particular attention is required in the postnatal period to promote health and wellbeing for the mother and baby, for breastfeeding support, and to identify and support those at risk. Referral to health and social care professionals may be required, for example, a woman may need to be referred to a physiotherapist, who specialises in women's health, for pelvic floor rehabilitation or treatment for obstetric anal sphincter injury. It is also important that the sexual health and wellbeing needs of the mother are addressed. This should include information on contraception options, and, in this regard, women should be encouraged to attend their GP for contraception advice. During the postnatal phase, a particular emphasis should be placed on perinatal mental health awareness and signs of postnatal depression or a recurrence of an existing mental health condition.

A multidisciplinary integrated approach should be provided, in line with the needs of the woman and baby. The community midwifery team should provide postnatal care to support the mother and family's transition home. Thus, continuity of care with the identified lead health professional will continue into the postnatal period. Providing a more intensive and better resourced service in the early postnatal period will present a challenge to ensure continuity of care between community midwifery and PHN services, so that families experience care that is both connected and coherent over time. It will therefore be necessary to consider the impact of, and the interface with, the current PHN and GP services, in order to ensure that all such services complement and enhance each other. In particular, the statutory obligation of the PHN service to visit mother and baby post discharge from the maternity service is noted. Women should be encouraged to attend a six week postnatal check with her GP under the *Maternity and Infant Care Scheme*.

The new *National Women & Infants Health Programme* will have a remit across the HSE Directorates and so will be best placed to ensure that the community midwifery and PHN services work together to ensure a co-ordinated service and provide support to families in the community. This could also be supported through enhanced integration of educational experiences at under and postgraduate education levels.

A woman's maternity care is generally completed six weeks after birth. However, it is considered that discharge from the maternity service and the handover to the general practice and PHN services should not be set by any particular timeframe but, instead, be determined by the needs of the woman and baby.

Any review of the *Maternity and Infant Care Scheme* should consider the need to extend coverage of the scheme to include additional visits to the GP in the event that additional pregnancy related needs arise. In particular, the scheme should provide for a check at between three and four months to address any ongoing pregnancy-related concerns. Such a safety check has particular merit in terms of early intervention for pelvic floor, nutrition and perinatal mental health issues, which may not be apparent at the six week appointment.

Postnatal care should have a specific focus on breastfeeding support as outlined in Chapter 3.

5.6.5 BEREAVEMENT AND PALLIATIVE CARE

Perinatal and Neonatal Palliative Care is an ethos of care that can be provided in any care setting. The HSE is developing a programme of work to support hospitals to develop comprehensive plans for palliative, end-of-life and bereavement care. Under this programme of work, each maternity unit will identify how it can best support the palliative care needs of babies and their families. To improve and standardise bereavement care, the HSE will implement *Standards for Bereavement Care Following Pregnancy Loss and Perinatal Death* 2016 and establish trained bereavement teams in each maternity unit/hospital.

The structures set out in the 2009 Department of *Health National Policy on Palliative Care for Children with Life-Limiting Conditions in Irelan*d are designed to meet the palliative care needs of babies born with a life-limiting condition and their families. This includes the support provided to the maternity hospitals by the consultant paediatrician with a special interest in paediatric palliative medicine and the specialist paediatric palliative care team, currently based at Our Lady's Children's Hospital Crumlin, and also the national network of children's outreach nurses for children with life-limiting conditions.

Caregivers play an important role in supporting parents following pregnancy and perinatal loss[136]. Accordingly, staff caring for families at this time should take account of the particular circumstances of the bereavement, in order to determine and provide an appropriate level of support. The findings of the consultation highlighted the need for greater staff sensitivity and support with particular need for compassion, empathy and kindness. A need was also identified for better facilities to afford families privacy when receiving news of, or experiencing, bereavement. Access to perinatal pathology services is not consistent around the country and this is an issue that must be addressed.

Women who experience miscarriage or receive bad news should be cared for in a private room or a medical/surgical/gynaecology ward, and should not be put in the same ward as pregnant women or newborns. While this practice is sometimes unavoidable at present, the capital investment in new maternity hospitals in the coming years should make it possible to stop this from happening at all in the future.

5.6.5.1 PREGNANCY LOSS

It is noted that since 2011, improvements in the management of miscarriage have been implemented with the development of ultrasound training programmes, the establishment and enhancement of Early Pregnancy Assessment Units (EPAUs), the purchase of new ultrasound equipment and software, and the development and dissemination of national clinical guidelines for the diagnosis and management of miscarriage and ectopic pregnancy. It is important that services for couples experiencing early pregnancy loss continue to be enhanced and that clinical outcomes are audited locally and nationally.

All couples who experience pregnancy loss should be supported psychologically by hospital staff and have access to bereavement counselling either in a hospital or primary care setting. Women with recurrent miscarriage should be offered a follow-up appointment for further investigations to help identify possible preventable causes of miscarriage.

5.6.6 MATERNITY STANDARDS

As noted in Chapter 3, HIQA has commenced the development of *National Standards for Safer Better Maternity Services.* These standards, which will follow the eight themes in the *National Standards for Safer Better Healthcare*, will set specific standards against which maternity services will be monitored. It is recommended that the specific service issues raised during the public consultation e.g. the need to be allocated specific appointment times, be considered in the context of the development of the Standards.

5.6.7 NEONATAL CARE

The *Model of Care for Neonatal Services in Ireland* aims to ensure sustainability in neonatal services and defines how neonatal services should be delivered, so that babies get the right care, at the right time, in the right place, all by the right staff. The type and amount of care needed depends on background health and wellbeing, and ranges from routine care in a local unit to neonatal intensive care in a tertiary unit.

It is considered that expertise and clinical activity should be concentrated in a small number of centres to ensure that clinical skills are maintained in the management of all complex eventualities. Studies show that neonatal units with the highest levels of activity have better outcomes. The 2014 British Association of Perinatal Medicine framework document emphasised that neonatal intensive care should only be undertaken in large neonatal units.

The differing levels of neonatal care require a multidisciplinary workforce with the necessary skills to provide safe and effective care. A named lead health professional should have overall responsibility for the baby. The establishment of maternity networks across hospital groups will facilitate the further integration of neonatal services. To continue the integration of services, neonatal ambulance retrieval services should be maintained on a 24 hour, seven days per week roster, to provide babies with safe and efficient transfers for specialist neonatal care as required. Pre-term low birth weight infants should be transferred in utero, whenever possible. It is also important that an efficient and effective retro-transfer service be developed to facilitate the transfer of stable infants from the tertiary neonatal units back to the local or regional units

Parents of babies receiving specialist neonatal care should be encouraged and supported to be involved in planning and providing care for their baby. Regular communication between parents and clinical staff should be a feature throughout the neonatal care pathway. As such, all neonatal units should be responsive to concerns raised by parents about the care of their infants. During the neonatal admission, mothers of babies should be supported to continue breastfeeding, including being supported to express

milk. Identifying staff early for this key role is an important component of overall care for the mother and baby. Wherever possible, the hospital should provide accommodation for the mother. The transition of mother and baby from the hospital back into the community is a potentially difficult changeover, and social worker input may be required to address any non-medical issues that may arise. The current situation whereby GPs undertake a two week and six week check for babies through the *Maternity and Infant Care Scheme* should continue.

5.7 ACTIONS

1. Maternity services will be integrated, with a multidisciplinary and evidence-based approach across all care settings.
2. Women will be empowered to make informed decisions about their care, in partnership with their healthcare professionals, across the trajectory of the care pathway.
3. Information will be delivered in a readily understandable format and an assessment of the individual's level of understanding of that information will be considered good practice for all healthcare professionals.
4. Pregnant women will be offered choice in the selection of an appropriate pathway of care, based on safety, risk profile and needs; individual risk/need profiles will be reviewed at each interaction with the maternity service.
5. Three care pathways – *Supported Care, Assisted Care and Specialised Care* – will be provided; all pathways will promote the normalisation of birth.
6. Care pathways will be clearly defined, evidenced-based and publicly available.
7. A lead healthcare professional will be responsible for the co-ordination of a woman's care.
8. A 1:1 midwife to woman ratio will apply during all stages of labour in all care pathways.
9. A hospital outreach, community midwifery service will be developed; this service will be provided by a team of midwives, within a broader multidisciplinary team, and will rotate between the community and hospital, offering continuity of care(r) that supports the woman through all stages of pregnancy, childbirth and postnatal care.
10. The *National Women & Infants Health Programme* will ensure a co-ordinated approach between the community midwifery team and the public health nursing and general practice services, to support postnatal women and new babies in the community.
11. Each maternity network will provide discrete *Alongside Birth Centres*, ideally contiguous to a *Specialised Birth Centre*. Where this is not feasible, in the case of some small size/low activity units, a designated space for 'supported care' birthing will be provided within the *Specialised Birth Centre.*
12. Each maternity network will develop a plan for the provision of *Alongside Birth Centres* over the lifetime of this Strategy. In prioritising developments, there is a need to provide a reasonable geographic spread of *Alongside Birth Centres*.
13. In the medium term, the *National Women & Infants Health Programme* will evaluate the implementation of *Alongside Birth Centres*; service users will have an input into this evaluation.
14. *Specialised Birth Centres* will have Level 1 High-Dependency or Observation Units to monitor, detect and respond to the at-risk, deteriorating or critically ill pregnant woman.

15. All birth centres will have an emergency team available to provide an immediate response to obstetric emergencies.

16. For all care pathways, the physical infrastructure will be of a high standard, providing a calm, relaxing and homely environment that will support a physiological process and respect the woman's dignity and need for privacy during childbirth; theatres will be baby friendly. Modern facilities including, where appropriate, birthing aids and birthing pools will be available.

17. Birth centres will have appropriate settings to afford privacy for families when receiving news of, or experiencing, bereavement.

18. The forthcoming HSE *Standards for Bereavement Care following Pregnancy Loss and Perinatal Death* will be implemented nationally.

19. The *National Women & Infants Health Programme* will ensure that all women have easy and appropriate access in early pregnancy to both emergency obstetric care and well-resourced Early Pregnancy Assessment Units in all maternity units.

20. Home birth services, integrated within the maternity network, will be available in the *Supported Care* pathway, with care from the lead healthcare professional and the hospital-based community midwifery team, and in line with national standards.

21. Retrieval services for neonates and the clinically deteriorating woman, and in utero transfer services in the maternal and/or foetal interest, will be available for timely and appropriate transfer; retro-transfer services to return neonates to their local hospital/unit will also be available.

22. A national hip screening programme and a national screening service for retinopathy of prematurity will be developed.

23. Comprehensive and standardised antenatal education will be provided to prepare women for any complications that might arise and for the transition to motherhood.

24. Each maternity network will scope the necessity for the development of enhanced services at network level including dietetics, perinatal psychiatry, psychology, perinatal pathology, endocrinology, drug liaison, physiotherapy and medical social work. Access to microbiology, haematology and laboratory services will be standardised.

25. A specialised Perineal Clinic will be available within each maternity network for the specialist assessment and treatment of women with obstetric anal sphincter injury. Onward referral pathways will be in place to specialist pelvic floor/colo-rectal clinics with a full multidisclipinary team, where necessary.

26. Maternity services will be integrated across both community and hospital for antenatal booking visits, antenatal care including health and social care professional input and antenatal diagnostics, so that antenatal care is provided as close to home as possible.

27. HIQA standards for maternity services, when finalised, are implemented.

28. Specific service issues raised during the public consultation, e.g. the need to be allocated specific appointment times, will be considered in the context of the development of the standards.

29. Women will continue to have the option to receive their antenatal care as part of a shared model of care with their GP under the *Maternity and Infant Care Scheme* and will be encouraged to avail of this scheme.

30. A review of the *Maternity and Infant Care Scheme* will be undertaken and any necessary adaptations made to reflect the new Model of Care proposed in this Strategy.

31. Any review of the *Maternity and Infant Care Scheme* will consider the feasibility of extending coverage to include a preconception consultation and postnatal check at three-four months and/or additional postnatal GP visits where further pregnancy related needs have been identified.

32. The reimbursement of GPs under the *Maternity and Infant Care Scheme* will be centralised in the Primary Care Reimbursement Service in line with other fee payments under the funded health sector contracted schemes.

33. A detailed national standardised dataset will be introduced, to support the effective monitoring and evaluation of the *Maternity and Infant Care Scheme.*

34. The Maternal and Newborn Clinical Management System will be implemented across all maternity hospital/units as a priority and extended to the community as early as possible.

CHAPTER 6
GOVERNANCE AND WORKFORCE

Priority 4:

Maternity services are appropriately resourced, underpinned by strong and effective leadership, management and governance arrangements, and delivered by a skilled and competent workforce, in partnership with women.

6.1 INTRODUCTION

Strong and effective leadership, management and governance arrangements are essential to create and sustain a safe and high quality maternity service. While an identified individual should have overall accountability, responsibility and the authority for the delivery of the maternity services, everyone within these services should be aware of their responsibilities, authority and accountability and work towards achieving improved outcomes.

The Mastership system, unique to the three Dublin maternity hospitals, was first established some 260 years ago and has served the country well. While the system may evolve over time with the changing governance structures for maternity services, there are no plans to change the Mastership system at present. The Mastership system demonstrates a sound governance model, operating with clear lines of accountability and responsibility. The Master is both CEO and Lead Consultant Obstetrician and Gynaecologist, with overall corporate and clinical responsibility. The Master reports directly to the Board of each of the three Dublin maternity hospitals.

6.2 HOSPITAL GROUPS

In line with the Government's programme for reform of the health service, Hospital Groups have now been established across the country. Pending the establishment of Hospital Trusts, the Groups have been established on a non-statutory administrative basis. It is intended to progress legislation to facilitate the establishment of Trusts, subject to operational readiness. Consequently, the Group Boards will be replaced in due course by Trust Boards established on a statutory basis.

Pending the enactment of the necessary legislation, Hospital Groups must continue to operate within the policy and accountability frameworks of the Department of Health and the HSE. As outlined in the HSE's Accountability Framework, the Service Arrangement will continue to be the contractual mechanism governing the relationship between the HSE and each Section 38 and Section 39 agency.

A Memorandum of Agreement will describe the respective roles, responsibilities, accountabilities and relationships of the Department of Health, the HSE, the Hospital Group Boards and the Hospital Group Academic Partners in the implementation of Hospital Groups during this transitional stage to Trust status.

6.3 MATERNITY SERVICE GOVERNANCE STRUCTURES

The governance structure for Irish maternity services is currently being remodelled following the decision to establish a *National Women & Infants Health Programme* and managed clinical maternity networks within hospital groups. This Strategy provides the high level framework for the governance and delivery of the maternity service; it is a matter for the *National Women & Infants Health Programme* to operationalise the framework. This will involve examining existing arrangements and putting the necessary architecture and processes in place to ensure the delivery of safe services in line with the vision articulated in this Strategy.

6.4 NATIONAL WOMEN & INFANTS HEALTH PROGRAMME

As part of the response to the HIQA *Report of the investigation into the safety, quality and standards of services provided by the Health Service Executive to patients in the Midland Regional Hospital, Portlaoise*, the Minister decided to establish a *National Women & Infants Health Programme*, to lead the management, organisation and delivery of maternity, gynaecological and neonatal services within the HSE. The Programme will span obstetrics, gynaecology and neonatal services, across the spectrum of primary, community and secondary care.

The Programme will strengthen maternity services by bringing together work that is currently undertaken across a number of divisions. This cross-linking approach will ensure that all maternity, gynaecological, obstetric anaesthesia, and neonatal services, whether at individual hospital, maternity network, or Community Healthcare Organisation (CHO) level, will be developed in a coherent and co-ordinated manner. To that end, all development funding for maternity services will be ring-fenced and allocated through the Programme. The Programme, with its wide remit and dedicated expertise, will therefore facilitate greater oversight and support for service providers and will ensure the appropriate allocation and targeting of new resources. Given the remit of the new Programme, the Programme Director will be a member of the HSE National Leadership Team.

6.5 CLINICAL GOVERNANCE

This Strategy proposes a new model of maternity care and, with it, a requirement for strong and effective clinical leadership at national, maternity network, and individual maternity unit level. This will enable us to create and sustain a safe maternity service across the hospital, the community and into the home.

Strong clinical governance is necessary to safeguard high standards of care and to create an environment in which excellence in clinical care will flourish. It is evident that strong clinical leadership will be required to support the *National Women & Infants Health Programme* to commit to excellence and good team working and interprofessional communication. Such leadership will ensure appropriate oversight for the clinical management of women and infants, foster a culture of safety and quality, and provide strategic direction in terms of maintaining a balanced competent workforce.

It is important that those who occupy critical leadership positions at network or maternity unit level are supported to fulfil their roles and responsibilities effectively. Persons who hold responsibility and/or accountability must have the authority, the tools, capabilities, and sustained supports they require in order to carry out their responsibilities. There will be clarity with regard to relationships within and between maternity services at local, network and national level.

The *National Women & Infants Health Programme*, working with the maternity networks and HSE Human Resources, should ensure that leadership capacity is developed through the establishment of a developmental programme, such that those staff with leadership potential, and who aspire to a leadership role, are provided with an education and training pathway to enable them develop the skills and experiences they need to fulfil such roles.

The Programme should engage with universities and professional bodies including medical training bodies to ensure that, within undergraduate and postgraduate medical, nursing, midwifery and allied professional training pathways, there is recognition of the need to cultivate leadership. It is also necessary to ensure that newly appointed Masters, CEOs, General Managers, Directors of Nursing/Midwifery and Clinical Directors are provided with a structured and intensive programme of support in the initial period of their appointment, and with ongoing access to high calibre coaching and mentoring as a basic support throughout their tenure.

6.6 MATERNITY NETWORKS

Smaller maternity services cannot, and should not, operate in isolation as stand-alone entities. They cannot sustain the breadth and depth of clinical services that the populations they serve require without formal links to larger units. It is envisaged that through the establishment of maternity networks within hospital groups, and the sharing of expertise within those networks, the operational resilience of smaller units can be strengthened and such units can be supported to provide safe quality services. Key components for these networks include:

- A clinical service under a single governance framework;
- A common system of clinical governance; clinical and management policies, audit meetings, quality assurance, incident reporting, incident management, risk management etc.;
- Quality assurance on the basis of one single maternity service, although operating at different geographical sites; this will require data to be pooled across the network;
- Risk stratification of mothers attending the managed clinical network to ensure that higher risk pregnancies are dealt with at the most appropriate facility within the network;
- The ability for all medical and midwifery staff working within the network to rotate between sites to meet training and service requirements;
- The ongoing training of all doctors and midwives takes place at all sites within the network on a rotational basis;
- A co-operative approach to service delivery which ensures that each hospital site within the network delivers care appropriate to the resources, facilities and services available on that site.

6.7 IMPLEMENTATION OF MATERNITY NETWORKS

In March 2015, as recommended in the Department of Health Chief Medical Officer report, *HSE Midland Regional Hospital*, Portlaoise Perinatal Deaths (2006-date), an MOU was signed between the Coombe Women & Infants University Hospital and the HSE to establish the country's first managed clinical maternity network in the Dublin Midlands Hospital Group. The network will provide a single women and infants service over the two sites, with the Coombe Women & Infants University Hospital assuming responsibility for the governance, management and delivery of these services.

Maternity networks are now being established across the other regional hospital groups and this work will be overseen by the *National Women & Infants Health Programme*. The governance arrangements for these networks is currently under consideration, and will be agreed between the Programme and the Hospital Group CEOs. Attention will need to be given to the size of individual networks in order to ensure efficiency in the provision of highly specialised services.

Careful consideration is required to develop robust governance arrangements in each network to ensure the effective governance and operation of a high quality, safe and reliable maternity service, which is optimally designed to deliver the most accessible service, in the most cost effective and clinically effective way, within the resources available, and in keeping with national policy as outlined in this Strategy. In that context, the importance of clear governance lines, roles and responsibility, underpinned by a strengthened accountability framework, are paramount.

At present, maternity services are delivered in both HSE and voluntary hospitals. Within the voluntary hospitals, the CEO or Master is accountable to the Board of the hospital. While recognising that the governance arrangements within the HSE are evolving and the operating model may differ from network to network, it is intended that:

- Hospital Group CEOs will be ultimately accountable to the National Director of Acute Hospitals for all services delivered within the maternity network;
- The *National Women & Infants Health Programme* will assist and collaborate with the National Director of Acute Hospitals in relation to performance oversight of the networks;
- One individual – the Master or Network Manager – will be clearly identified as the person charged with the responsibility for the provision of a safe, high quality service to women and their infants;
- Responsibility for corporate and clinical governance will rest with the Master or Network Manager;
- The Master or Network Manager will hold responsibility for the network budget;
- The Master or Network Manager will be accountable to the Group CEO and, in due course, to the Group Board;
- All development funding will be allocated through the *National Women & Infants Health Programme*;
- Corporate and clinical governance will be integrated;
- Reporting lines within and across the network will be clear and unambiguous;
- Roles and responsibilities at hospital/unit and network level will be clearly defined;
- Governance processes will provide for a set of high level performance assurance indicators against which performance in relation to access, quality and safety, finance and workforce is monitored and reported;
- Maternity networks will be implemented as quickly as possible.

6.8 WORKFORCE PLANNING

Workforce planning can be defined as an evidence-based process of determining the right number, mix and distribution of the skills, competencies and capabilities within a workforce[137]. Such a process should entail a number of key activities such as recruitment, tracking staff numbers and skills, workforce deployment, learning, training and development. Effective maternity service delivery requires processes to ensure that there will be sufficient staff available at the right time, with the right skills, diversity and flexibility to deliver high quality care for women and babies i.e. appropriate skill mix.

The Department of Health, in its *Statement of Strategy 2015-2017*, has committed to developing a national integrated strategic framework for health workforce planning, including maternity services. It is planned that a Cross-Sectoral Working Group will be established early in 2016 to develop the national framework and that the workforce planning framework will be submitted to the Minister for Health by the end of 2016, including a high-level implementation plan and associated deliverables.

6.9 BUILDING CAPACITY

The changes recommended in this Strategy will have a significant impact on workforce requirements. There is a clear need therefore for the *National Women & Infants Health Programme* to work, as appropriate, with the HSE HR Division to scope out the staffing requirement arising from the new model of care, and prepare a workforce plan to incrementally build capacity in the maternity services workforce.

The workforce planning implications of the implementation of this Strategy and the establishment of the maternity networks provides the future scenarios for planning and analysis of the staffing required across all disciplines. Consideration may need to be given to increasing intake to third level colleges at undergraduate level or to provide more postgraduate training opportunities.

Much work is already underway within the HSE in relation to maternity services workforce planning. The Clinical Programme for Obstetrics and Gynaecology has examined the workforce requirement, and, based on the ratio of obstetricians/gynaecologists per 1,000 births in the UK, estimates a requirement for an additional 100 obstetricians/gynaecologists (based on numbers in place June 2015). The Programme proposes that the numbers of obstetricians/gynaecologists should increase over a phased period, rather than recruiting a large number of consultants from developing countries.

Work is also underway in relation to midwifery staffing levels. A project based on the UK Birthrate Plus is close to conclusion and will recommend appropriate clinical midwifery staffing ratios across care settings and stages of care. This will provide a very useful tool to measure the midwifery requirement into the future. In terms of numbers, it has been recommended that provision of a woman centred service will require a 1:1 midwife to woman ratio to apply during all stages of labour in all care pathways. Additionally, the changing role of the midwife as lead professional for women in the *Supported Care* pathway, as well as the development of the hospital outreach community midwifery service, will require the recruitment of more midwives. However, the need to build capacity in the midwifery workforce is not only in terms of numbers, but also in relation to capability to deliver the new model of service across the home, the community and the hospital settings. There will be a need to ensure that undergraduate programmes respond to the changing nature of midwifery practice.

Workforce planning in maternity services will of course need to go beyond the core requirement of obstetricians and midwives, and apply across the entire multidisciplinary team. It is necessary therefore to utilise an integrated maternity and neonatal workforce planning framework across the wider team disciplines such as anaesthesia, critical care, perinatal, psychiatry, perinatal pathology, general practice services, PHNs, dietetics, physiotherapy, speech and language, social work etc.

As outlined in Chapter 5, an emergency team should be available in all birth centres to provide an immediate response to obstetric emergencies. The traditional model of one consultant anaesthetist and one non-consultant hospital doctor (NCHD) on call cannot deliver this level of care. In order to ensure that the maternity service is not in competition for the anaesthesia resource with other theatre emergencies, critical care, ED, or transfer of critically ill patients, the minimum level of service for a hospital with a co-located maternity unit needs to be defined. In that setting this is likely to require two consultants and two NCHDs on call. However, a review of anaesthesia staffing for each maternity unit should be undertaken as a priority on publication of this Strategy.

The *Model of Care for Neonatal Services* which was developed by the HSE Clinical Programme for Paediatrics and Neonatology and the RCPI identified that consultant staffing in neonatology is low by international standards and has not kept pace with the increasing birth numbers and consequent increase in clinical demand. National workforce planning for neonatology must address these historic staffing difficulties, ensuring that the four tertiary neonatal units are adequately staffed. An increased number of neonatal nurses is also required to meet recommended ratios of 1:1 in intensive care, 1:2 in high dependency care and 1:4 in special care.

6.9.1 DEVELOPING MATERNITY NETWORK CAPACITY

With the establishment of maternity networks within hospital groups, women with higher care needs in the *Assisted Care* and more especially the *Specialised Care* pathways will be referred to the most appropriate facility within the network for their care. In this regard the establishment of managed clinical networks should assist with the provision of a more effective use of limited specialist resources. This concept is in line with best practice where clinical competence is maintained through exposure to the appropriate range, scale and number of complex clinical scenarios.

It is accepted that there is a need to build capacity at network level in a number of specialties. This will ensure that those women who present with additional care needs can have those needs addressed. This Strategy recommends that each maternity network provide perinatal psychiatry, perinatal pathology and endocrinology services. The endocrinology consultant services should be linked with dietetic services and provide access to clinical nurse/midwife specialists, to provide education and self-management support to pregnant women with diabetes and pre-diabetes. The particular staffing needs for each of these services will require examination by the *National Women & Infants Health Programme*.

It is intended that in future staff will be appointed to the maternity networks rather than to individual hospitals. This will facilitate the rotation of staff within the network to meet training and service requirements. The capacity for staff rotation within the maternity network may mitigate some of the recruitment difficulties currently being experienced by smaller hospitals. Within the new model of care envisioned in this Strategy, there is a need to ensure that midwives rotate between the *Alongside* and *Specialised Birth Centres*, in order to ensure best practice.

6.9.2 TRAINING

An analysis of the training needs associated with the implementation of the new model of care should be undertaken by the *National Women & Infants Health Programme* to ensure that the current and future maternity workforce has the necessary skills and competencies to deliver safe high quality maternity care. A programme of support should then be put in place for the maternity workforce to meet training and education requirements. In particular, mentoring support should be in place for all newly qualified staff. Additional training opportunities and simulations should be provided to staff within smaller hospitals with smaller caseloads.

It is essential that healthcare professionals at both under and postgraduate training levels build knowledge and skills in essential patient safety principles and concepts. All bodies responsible for the training and continuing professional development of healthcare professionals should review their curricula to ensure that both technical and human factors in relation to safety and quality are incorporated into their education modules. Education and training suite and modules on patient safety need to be developed and implemented in collaboration with the professional regulatory and training bodies and the HSE.

The *National Women & Infants Health Programme* should take the opportunity to engage international expertise as appropriate in order to build patient safety capacity and training.

The Irish Multidisciplinary Obstetric Emergency Training (IMOET) group examined the extent of multidisciplinary training in Ireland and found that although some training was ongoing, it was inconsistent and not in accordance with HIQA or HSE recommendations. Fostering and developing a culture of cooperation is essential to strengthening the maternity service[138] and in that regard, multidisciplinary training within the maternity workforce is recommended. Such training should take place in a number of ways, including on-site, in clinical settings and within third level institutions etc.

It is critically important that all maternity staff have the appropriate skills to deal with a deteriorating mother and baby. The IMOET skills course provides and maintains the knowledge base to care for the deteriorating mother and has a significant role to play in strengthening the capability of the maternity service. The Strategy therefore proposes that such training should be included on all relevant undergraduate and postgraduate curricula.

6.10 ACTIONS

1. The *National Women & Infants Health Programme* will provide strategic direction and leadership, drive improvement and foster a learning culture in maternity services that focuses on quality and patient safety.

2. The *National Women & Infants Health Programme* will oversee the establishment of maternity networks within each Hospital Group as a priority; networks will have robust governance arrangements, clear roles and responsibilities and a strong accountability framework.

3. The *National Women & Infants Health Programme* will ensure that the new model of maternity care is implemented in each network within the context of robust evaluation and clinical governance frameworks.

4. The *National Women & Infants Health Programme* will scope out the multiprofessional staffing requirement arising from the new model of care, and prepare a workforce plan to build capacity and a training needs analysis to build capability to deliver the new model of service; a review of obstetric anaesthesia staffing will be undertaken as a priority.

5. The staffing requirement for the new model of care will be determined using an evidence-based methodology.

6. A culture of learning will be promoted. The *National Women & Infants Health Programme* will develop and deliver, either solely or in partnership with key bodies, relevant multidisciplinary under and postgraduate training and ongoing professional development including patient safety and quality.

> **Robust mechanisms are needed to adequately investigate and respond to quality issues, including appropriate resource allocation, workforce planning and training.**
>
> Organisation

CHAPTER 7
DELIVERING THE STRATEGY

Realising the vision for maternity services outlined in this Strategy will provide challenges, especially against a landscape of economic and resource constraints. The Strategy will therefore be implemented on an incremental basis, in line with the implementation plan, and as resources allow. It is recommended that the Government commit to providing annual development funding to the HSE which will be ringfenced to implement this Strategy.

Implementation of this Strategy will not be achieved without proactive leadership at HSE corporate and clinical level. It is considered that the new *National Women & Infants Health Programme* is best placed to provide clear and effective management structures and leadership at a system level to implement the Strategy. The Programme will therefore lead implementation and work with maternity networks and individual maternity units to ensure that maternity service provision is remodelled on the lines proposed, and that a culture of learning and continuous improvement is fostered throughout the service. As a first step, the Programme will be required to develop and manage a detailed implementation plan and timetable to deliver the Strategy's actions.

The implementation plan will address actions that can be initiated and implemented within a short timeframe while working towards the achievement of the longer term vision. The Plan therefore will detail short-term and long-term goals. The focus initially will be to provide choice in pathway of care at maternity network level while building capacity to roll out the Strategy across all maternity units over the 11 year lifetime of the Strategy.

The Department of Health will retain overall responsibility for the oversight of the implementation of the Strategy, as well as direct responsibility with the *National Women & Infants Health Programme* for the timely delivery of the NCEC intrapartum guidelines. Progress on implementation will form part of the performance dialogue between the Department and the HSE, and in those circumstances it will be necessary for the Programme, in consultation with the Department, to develop key performance indicators against which performance can be measured.

In addition, the *National Women & Infants Health Programme* will be required to submit an annual report to the Minister detailing:

- the progress made against the implementation plan in each maternity network;
- the extent to which initiatives have been achieved;
- how existing resources have been reconfigured in support of the Strategy and how new funding allocated for the implementation of the Strategy has been utilised;
- any barriers to progress that require coordinated action;
- any policy implications which should be considered by the Department;
- the plan and resource requirements for the coming year.

The report to the Minister will be published on the Department's website.

7.1 ACTIONS

1. Within six months of the date of publication of this Strategy, the *National Women & Infants Health Programme* will develop a detailed implementation plan and timetable for the delivery of this Strategy, including the assignment of responsibility for required actions.
2. Government should commit to providing annual development funding for this Strategy.
3. Key performance indicators, against which progress on implementation can be measured, will be developed and monitored.
4. An annual report on the progress of the implementation of this Strategy will be submitted to the Minister.
5. The Department of Health will publish the annual report on its website.

CHAPTER 8
LIST OF ACTIONS

HEALTH AND WELLBEING

THE DEPARTMENT OF HEALTH WILL

1. ensure that a health and wellbeing approach underpins both maternity policy and service delivery.
2. engage with the education sector to ensure that a proactive approach to health and wellbeing begins early during school years.
3. ensure that the WHO International Code of Marketing of Breast Milk Substitutes and subsequent relevant WHA resolutions are implemented.

THE HSE WILL ENSURE THAT

4. the upcoming Breastfeeding Action Plan 2016-20 is resourced and implemented.

THE NATIONAL WOMEN & INFANTS HEALTH PROGRAMME WILL ENSURE THAT

5. antenatal care encompasses a holistic approach to the woman's healthcare needs including her physical, social, lifestyle and mental health needs.
6. postnatal care promotes health and wellbeing for the new mother and baby, supports breastfeeding and identifies and supports those at risk with a particular emphasis on mental health.
7. additional supports are provided to pregnant women from vulnerable, disadvantaged groups or ethnic minorities, and take account of the family's determinants of health, e.g. socio-economic circumstances.
8. an online resource for maternity services is developed, to act as a one-stop shop for all maternity-related information; any information provided will be understandable and culturally sensitive.
9. midwives, obstetricians and GPs are alert to the heightened risk of domestic violence during pregnancy and postpartum. Women will be asked about domestic violence at antenatal and postnatal visits, when appropriate. This will be supported by appropriate training for frontline staff to ensure that all such enquiries and disclosures are handled correctly, and that referral pathways and support options for women who disclose domestic violence are clear.
10. a dietetic service is available in each maternity network, so that the needs of women with type 1, type 2 and gestational diabetes, as well as those with other nutritional issues, are addressed.
11. improved support for breastfeeding is provided both within the hospital and the community.
12. all maternity hospitals/units comply with the *Baby Friendly Health Initiative*.
13. breastfeeding promotion campaigns are tailored and targeted to help the wider community to play their role in improving Ireland's breastfeeding initiation and duration rates.
14. maternity hospitals/units are tobacco-free campuses and have an on-site smoking cessation service available for pregnant women.
15. midwives and other frontline healthcare professionals have formalised and documented training in smoking cessation.
16. maternity hospitals/units strengthen their methods of detecting alcohol abuse and supporting women to reduce their intake.

17. a consistent approach to informing women about the risks of alcohol consumption during pregnancy is developed.
18. the need to provide drug liaison midwives and specialist medical social workers in all maternity networks is examined.
19. access to mental health supports are improved to ensure appropriate care can be provided in a timely fashion.
20. all healthcare professionals involved in antenatal and postnatal care are trained to identify women at risk of developing or experiencing emotional or mental health difficulties, including an exacerbation of previous mental health issues, in the perinatal period.
21. a multidisciplinary approach to assessment and support is adopted for women at risk of developing or experiencing emotional or mental health difficulties in the perinatal period.
22. women with a history of a mental health condition are identified early and midwives will work collaboratively with mental health and other services to ensure that the appropriate support is provided.
23. mother-baby bonding is facilitated and supported at all times, and every effort will be made to keep the mother and baby together, if clinically appropriate.
24. access to perinatal psychiatry and psychology services is standardised, and as a minimum provided on a maternity network basis.
25. additional support is available for women who have experienced traumatic birth or the loss of a baby.

SAFETY AND QUALITY

THE NATIONAL PATIENT SAFETY OFFICE, DEPARTMENT OF HEALTH WILL ENSURE THAT

26. the independent national model for patient advocacy and the national patient safety surveillance function includes maternity services.
27. an annual survey of women's experience in maternity services is undertaken by HIQA in partnership with the HSE.
28. the NCEC prioritises and quality assures National Clinical Audit and a set of National Clinical Guidelines for maternity services; guidelines on intrapartum care are a priority.

THE NATIONAL WOMEN & INFANTS HEALTH PROGRAMME WILL ENSURE THAT

29. safety and quality capacity is developed across the maternity service to ensure that each network and service has a defined patient safety and quality operating framework.
30. measurement and analysis for quality improvement and safety occur at national, network and service level, based on an agreed minimum dataset.
31. clinical leadership, support and resources are provided for the development and implementation of National Clinical Guidelines and National Clinical Audit.

32. building upon existing HRB-funded research programmes, the evidence base for safe, quality maternity care is expanded, with promotion of research for maternity services and applied clinical research in obstetrics, midwifery, and health and social care professional fields for maternity patients.

MODEL OF CARE

THE NATIONAL WOMEN & INFANTS HEALTH PROGRAMME WILL ENSURE THAT

33. maternity services are integrated with a multidisciplinary and evidence-based approach across all care settings.

34. women are empowered to make informed decisions about their care, in partnership with their healthcare professionals, across the trajectory of the care pathway.

35. information is delivered in a readily understandable format and an assessment of the individual's level of understanding of that information will be considered good practice for all healthcare professionals.

36. pregnant women are offered choice in the selection of an appropriate pathway of care, based on safety, risk profile and needs; individual risk/need profiles will be reviewed at each interaction with the maternity service.

37. three care pathways – *Supported Care, Assisted Care and Specialised Care* – are provided; all pathways will promote the normalisation of birth.

38. care pathways are clearly defined, evidenced-based and publicly available.

39. a lead healthcare professional is responsible for the co-ordination of a woman's care.

40. a 1:1 midwife to woman ratio applies during all stages of labour in all care pathways

41. a hospital outreach, community midwifery service is developed; this service will be provided by a team of midwives, within a broader multidisciplinary team, and will rotate between the community and hospital, offering continuity of care(r) that supports the woman through all stages of pregnancy, childbirth and postnatal care.

42. a co-ordinated approach between the community midwifery team and the public health nursing and general practice services is in place, to support postnatal women and new babies in the community.

43. each maternity network provides discrete *Alongside Birth Centres*, ideally contiguous to a *Specialised Birth Centre*. Where this is not feasible, in the case of some small size/low activity units, a designated space for 'supported care' birthing will be provided within the *Specialised Birth Centre*.

44. each maternity network develops a plan for the provision of *Alongside Birth Centres* over the lifetime of this Strategy. In prioritising developments, there is a need to provide a reasonable geographic spread of *Alongside Birth Centres*.

45. in the medium term, the implementation of *Alongside Birth Centre*s is evaluated; service users will have an input into this evaluation.

46. *Specialised Birth Centres* have Level 1 High-Dependency or Observation Units to monitor, detect and respond to the at-risk, deteriorating or critically ill pregnant woman.

47. all birth centres have an emergency team available to provide an immediate response to obstetric emergencies.

48. for all care pathways, the physical infrastructure is of a high standard, providing a calm, relaxing and homely environment that will support a physiological process and respect the woman's dignity and need for privacy during childbirth; theatres will be baby friendly. Modern facilities including, where appropriate, birthing aids and birthing pools will be available.

49. birth centres have appropriate settings for families to afford privacy when receiving news of, or experiencing, bereavement.

50. the forthcoming HSE Standards for *Bereavement Care following Pregnancy loss and Perinatal Death* are implemented nationally.

51. all women have easy and appropriate access, in early pregnancy, to both emergency obstetric care and well-resourced Early Pregnancy Assessment Units, in all maternity units.

52. home birth services, integrated within the maternity network, are available in the *Supported Care* pathway, with care from the lead healthcare professional and the hospital-based community midwifery team, and in line with national standards.

53. retrieval services for neonates and the clinically deteriorating woman, and in utero transfer services in the maternal and/or foetal interest, are available for timely and appropriate transfer; retro-transfer services to return neonates to their local hospital/unit will also be available.

54. a national hip screening programme and a national screening service for retinopathy of prematurity is developed.

55. comprehensive and standardised antenatal education is provided to prepare women for any complications that might arise and for the transition to motherhood.

56. each maternity network scopes the necessity for the development of enhanced services at network level including dietetics, perinatal psychiatry, psychology, perinatal pathology, endocrinology, drug liaison, physiotherapy and medical social work. Access to microbiology, haematology and laboratory services should be standardised.

57. a specialised Perineal Clinic is available within each maternity network, for the specialist assessment and treatment of women with obstetric anal sphincter injury. Onward referral pathways will be in place to specialist pelvic floor/colo-rectal clinics, with a full multidisciplinary team, where necessary.

58. maternity services are integrated across both community and hospital for antenatal booking visits, antenatal care including health and social care professional input and antenatal diagnostics, so that antenatal care is provided as close to home as possible.

59. the Maternal and Newborn Clinical Management System is implemented across all maternity hospital/units as a priority and extended to the community as early as possible.

60. HIQA standards for maternity services, when finalised, are implemented.

HIQA WILL ENSURE THAT

61. standards for maternity services are finalised; specific service issues raised during the public consultation, e.g. the need for specific appointment times, will be considered in the context of the development of the standards.

THE HSE WILL ENSURE THAT

62. women continue to have the option to receive their antenatal care as part of a shared model of care with the GP under the *Maternity and Infant Care Scheme* and will be encouraged to avail of this scheme.

63. a review of the *Maternity and Infant Care Scheme* is undertaken, and any necessary adaptations made, to reflect the new Model of Care proposed in this Strategy.

64. any review of the *Maternity and Infant Care Scheme* considers the feasibility of extending coverage to include a preconception consultation and postnatal check at three to four months and/or additional postnatal GP visits where further pregnancy related needs have been identified.

65. the reimbursement of GPs under the *Maternity and Infant Care Scheme* is centralised in the Primary Care Reimbursement Service in line with other fee payments under the funded health sector contracted schemes.

66. a detailed national standardised dataset is introduced, to support the effective monitoring and evaluation of the *Maternity and Infant Care Scheme*.

GOVERNANCE AND WORKFORCE

THE NATIONAL WOMEN & INFANTS HEALTH PROGRAMME WILL

67. provide strategic direction and leadership, drive improvement and foster a learning culture in maternity services that focuses on quality and patient safety.

68. oversee the establishment of maternity networks within each Hospital Group as a priority; networks will have robust governance arrangements, clear roles and responsibilities and a strong accountability framework.

69. ensure that the new model of maternity care is implemented in each network within the context of robust evaluation and clinical governance frameworks.

70. scope out the multiprofessional staffing requirement arising from the new model of care, and prepare a workforce plan to build capacity and a training needs analysis to build capability to deliver the new model of service; a review of obstetric anaesthesia staffing will be undertaken as a priority.

71. ensure that an evidence-based methodology is used to determine staffing requirements for the new model of care.

72. promote a culture of learning. The Programme will develop and deliver, either solely or in partnership with key bodies, relevant multidisciplinary undergraduate and postgraduate training, and ongoing professional development including patient safety and quality.

IMPLEMENTATION

THE NATIONAL WOMEN & INFANTS HEALTH PROGRAMME WILL

73. within six months of the date of publication of this Strategy, develop a detailed implementation plan and timetable for the delivery of this Strategy, including the assignment of responsibility for required actions.

74. develop and monitor key performance indicators, against which progress on implementation can be measured.

75. submit an annual report to the Minister on the progress of the implementation of this Strategy.

THE DEPARTMENT OF HEALTH WILL

76. publish the annual progress report on the Department of Health's website.

THE GOVERNMENT SHOULD

77. commit to providing annual development funding for this Strategy.

> **Having a baby is a very personal and private affair and each woman knows what is best for her and her baby. No one size fits all. Women and their families should have the option of deciding which service is most appropriate for her and her family's needs, be that obstetric led or midwife led or sometimes a combination of both.**

BIBLIOGRAPHY

1. Health Service Executive (2014) Healthcare Data Report [online], available: http://www.hse.ie/eng/services/publications/corporate/performancereports/d14mdr.pdf [accessed 9th December 2015].
2. Healthcare Pricing Office (2014) Perinatal Statistics Report 2013, Dublin, Health Service Executive.
3. Audit Commission for Local Authorities and the National Health Service in England and Wales (1997) Anaesthesia Under Examination: The Efficiency and Effectiveness of Anaesthesia and Pain Relief Services in England and Wales (Health Studies), London: Audit Commission.
4. National Programme for Paediatrics and Neonatology, Health Service Executive (2015) Model of Care for Neonatal Services in Ireland, Dublin: Health Service Executive.
5. Central Statistics Office (2015) Number of Births, Deaths and Marriages [online], available: http://www.cso.ie/multiquicktables/quickTables.aspx?id=vsa02_vsa09_vsa18 [accessed 10th December 2015].
6. National Clinical Programme: Obstetrics and Gynaecology (2015) Consultant Workforce Planning 2015 Supplementary Report, Dublin: National Clinical Programme: Obstetrics and Gynaecology.
7. Hanafin, S. and Dwan O'Reilly, E. (2016) "International review of literature on models of care across selected jurisdictions to inform the development of a National Strategy for Maternity Services in Ireland", Dublin, Department of Health.
8. Central Statistics Office (2012) "This is Ireland, Highlights from Census 2011, Part 1", Dublin: Central Statistics Office
9. Ireland, Department of Health (2015), Health in Ireland: Key Trends, Dublin: Department of Health.
10. Central Statistics Office (2013) Population and Labour Force Projections 2016-2046, Dublin: CSO.
11. Ireland, Department of Health (2014), Health in Ireland: Key Trends, Dublin: Department of Health.
12. Eurostat (2015), Fertility Statistics [online], available: http://ec.europa.eu/eurostat/statistics-explained/index.php/Fertility_statistics [accessed 5 January 2015].
13. Koo, Y., Ryu, H., Yang, J., Lim, J., Kim, M. and Chung J. (2012) "Pregnancy outcomes according to increasing maternal age", Taiwanese Journal of Obstetrics and Gynaecology, (51)1, 60-65.
14. Central Statistics Office (2015), Vital Statistics Yearly Summary [online], available: http://www.cso.ie/en/releasesandpublications/ep/p-vsys/vitalstatisticsyearlysummary2014/ [accessed 7 December 2015].
15. Central Statistics Office (2014) Vital Statistics Fourth Quarter and Yearly Summary 2013, Dublin: Central Statistics Office
16. Poulose, T., Richardson, R., Ewings, P. and Fox R. (2006) "Probability of early pregnancy loss in women with vaginal bleeding and a singleton live fetus at ultrasound scan", Journal of Obstetrics and Gynaecology 26(8):782-4
17. Health Service Executive (2011) National Miscarriage Misdiagnosis Review April 2011 [online], available: http://www.hse.ie/eng/services/publications/hospitals/miscarriagemisdiagnosis.pdf [accessed 7 January 2015]
18. Holohan, T. (2014) HSE Midland Regional Hospital, Portlaoise Perinatal Deaths (2006-date). Dublin: Department of Health. Available at: http://www.lenus.ie/hse/bitstream/10147/313524/1/portlaoiseperinataldeaths.pdf.
19. O'Hare, M., Manning, E., O'Herlihy, C. and Greene, R. (2015) Confidential Maternal Death Enquiry in Ireland, Report for 2009 – 2012, MDE Ireland, Cork.

20. United Kingdom, Department of Health (2015) Report on Abortion Statistics, England and Wales: 2014 [online] , available: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/433437/2014_Commentary__5_.pdf [accessed 7 December 2015].

21. Chen, X-K., Wen, S.W., Fleming, N., Demissie, K., Rhoads, G. and Walker, M. (2007) "Teenage pregnancy and adverse birth outcomes: a large population based retrospective cohort study". International Journal of Epidemiology, 36(2):368-373.

22. Gupta, N., Kiran, U. and Bhal, K. (2008) "Teenage pregnancies: obstetric characteristics and outcome". European Journal of Obstetrics, Gynaecology and Reproductive Biology, 137(2):165-171.

23. de Vienne C., Creveuil, C. and Dreyfus, M. (2009) "Does young maternal age increase the risk of adverse obstetric, foetal and neonatal outcomes: a cohort study", European Journal of Obstetrics, Gynaecology and Reproductive Biology,147(2):151-156.

24. Luke, B. and Brown, M. (2007) "Elevated risks of pregnancy complications and adverse outcomes with increasing maternal age", Human Reproduction, 22(5):1264-1272.

25. Delbaere, I., Verstraelen, H., Goetgeluk, S., Martens, G., De Backer, G. and Temmerman, M. (2007) "Pregnancy outcome in primiparae of advanced maternal age". European Journal of Obstetrics, Gynaecology and Reproductive Biology; 135(1):41-46.

26. Biro, M., Davey, M., Carolan, M. and Kealy, M. (2012) "Advanced maternal age and obstetric morbidity for women giving birth in Victoria, Australia: A population-based study". The Australian and New Zealand Journal of Obstetrics Gynaecology. 52(3):229-234.

27. Central Statistics Office (2006), Report on Vital Statistics 2005, Dublin: Central Statistics Office.

28. Central Statistics Office (2015), Vital Statistics Fourth Quarter 2014 [online], available: http://www.cso.ie/en/releasesandpublications/ep/p-vs/vitalstatisticsthirdquarter2014/ [accessed 7 December 2015].

29. Health and Research Information Division, Economic and Social Research Unit (2008), Perinatal Statistics Report 2005, Dublin: Economic and Social Research Unit.

30. All-Ireland Traveller Health Study Team (2010) All-Ireland Traveller Health Study: Our Geels. Summary of Findings. Dublin: School of Public Health, Physiotherapy and Population Science, University College Dublin. Available at: www.dohc.ie/publications/aiths2010/ExecutiveSummary/AITHS2010_SUMMARY_LR_All.pdf?direct=1

31. Williams, J., McNally, S., Murray, A. and Quail, A. (2010) Growing Up in Ireland National Longitudinal Study of Children: The Infants and their Families, Dublin: The Stationery Office.

32. Centre for Disease Control and Prevention, US Department of Health and Human Services (2007) Preventing Smoking and Exposure to Secondhand Smoke Before, During, and After Pregnancy [online], available: http://www.cdc.gov/nccdphp/publications/factsheets/prevention/pdf/smoking.pdf, [accessed 8 December 2015].

33. Mullally, A., Cleary, B., Barry, J., Fahey, T., and Murphy, D. (2011) "Prevalence, predictors and perinatal outcomes of peri-conceptional alcohol exposure-retrospective cohort study in an urban obstetric population in Ireland", BMC Pregnancy and Childbirth (11)27, [Online]. Available from: http://www.drugsandalcohol.ie/15475/1/pregnancy1471-2393-11-27%5B1%5D.pdf [Accessed: 9th December 2015].

34. Barry, S., Kearney, A., Daly, S., Lawlor, E., McNamee, E. and Barry, J. (2007). Coombe Women's Hospital study of alcohol, smoking and illicit drug use 1987-2005. Dublin: Coombe Women's Hospital & Department of Health & Children.

35. National Council for the Professional Development of Nursing and Midwifery (2010) Profiles of Advanced Nurse / Midwife Practitioners and Clinical Nurse / Midwife Specialists in Ireland, Dublin: National Council for the Professional Development of Nursing and Midwifery.

36. McKeating, A., Maguire, P., Daly, N., Farren, M., McMahon L. and Turner, M.(2015) "Trends in maternal obesity in a large university hospital 2009-2013", Acta Obstetricia et Gynecologica Scandinavica, 94(9), 969-975.

37. Dennedy, M. and Dunne, F. (2010) "The maternal and fetal impacts of obesity and gestational diabetes on pregnancy outcome", Best Practice and Research.Clinical endocrinology & metabolism, 24(4), 573-589.

38. Leddy, M., Power, M. and Schulkin, J. (2008) "The impact of maternal obesity on maternal and fetal health", Reviews in Obstetrics and Gynecology, 1(4), 170-178.

39. Oken, E. (2008) "Maternal and child obesity: the causal link", Obstetrics and Gynecology Clinics of North America, 36(2), 361-377.

40. Catalano, P. and Ehrenberg, H. (2006) "The short- and long-term implications of maternal obesity on the mother and her offspring", BJOG: An International Journal of Obstetrics and Gynaecology, 113(10), 1126-1133.

41. Haugen, M., Brantsæter, A., Winkvist, A., Lissner, L., Alexander, J., Oftedal, B., Magnus, P. and Meltzer, H. (2014) "Associations of pre-pregnancy body mass index and gestational weight gain with pregnancy outcome and postpartum weight retention: a prospective observational cohort study", BMC Pregnancy and Childbirth, 14(201) available: http://download.springer.com/static/pdf/912/art%253A10.1186%252F1471-2393-14-201.pdf?originUrl=http%3A%2F%2Flink.springer.com%2Farticle%2F10.1186%2F1471-2393-14-201&token2=exp=1450692399~acl=%2Fstatic%2Fpdf%2F912%2Fart%25253A10.1186%25252F1471-2393-14-201.pdf%3ForiginUrl%3Dhttp%253A%252F%252Flink.springer.com%252Farticle%252F10.11%252F1471-2393-14- 201*~hmac=f0be37d58ae9121d2f3fb643505430a683459b626c54eb81477defa943f1c70b [accessed 9th December 2015].

42. Freeman, V., van't Hof, M and Haschke, F. (2000) "Patterns of milk and food intake in infants from birth to age 36 months: the Euro-growth study", Journal of pediatric gastroenterology and nutrition, 31(1), 76-85.

43. Organisation for Economic Co-Operation and Development, Social Policy Division (2009), Family Database, CO1.5: Breastfeeding Rates [online], available: http://www.oecd.org/els/family/43136964.pdf [accessed 9th December 2015].

44. Owen, C., Martin, R., Whincup, P., Smith, G. and Cook, D. (2005) "Effect of Infant Feeding on the Risk of Obesity Across the Life Course: A Quantitative Review of Published Evidence", Pediatrics, 115(5), 1367-1377.

45. Jackson, K. and Nazar, A. (2006) "Breastfeeding, the Immune Response, and Long-term Health", The Journal of the American Osteopathic Association, 106(4), 203-207.

46. Slusser, W. (2007) "Breastfeeding and Maternal and Infant Health Outcomes In Developed Countries", AAP Grand Rounds, 18(2), 15-16.

47. Health Information and Research Division, ESRI (2012) Perinatal Statistics Report 2011. Dublin: Economic and Social Research Institute.

48. Australia, Australian Institute of Health and Welfare (2011), 2010 Australian National Infant Feeding Survey: Indicator Results, Canberra, Australian Institute of Health and Welfare.

49. United Kingdom, National Health Service (2011) Infant Feeding Survey 2010. NHS Health & Social Care Information Centre: London.

50. Health Service Executive (2015) Healthcare Data Report [online], available: http://www.hse.ie/eng/services/publications/corporate/performancereports/march15data.pdf [accessed 9th December 2015].

51. Health Service Executive (2011) Child Protection and Welfare Practice Handbook, available: http://www.tusla.ie/uploads/content/CF_WelfarePracticehandbook.pdf [accessed 21 December 2015].

52. European Agency for Fundamental Rights (2014) Violence against women: an EU wide survey, Main Results, Luxembourg: European Agency for Fundamental Rights.

53. Womens Health Council (2009) "Translating Pain into Action, A Study of Gender Based Violence and Minority Ethnic Women in Ireland", available http://www.womensaid.ie/download/pdf/whc_gender_based_violence.pdf [accessed 21 December 2015].

54. Mezey, G. and Bewley S. (1997)"Domestic violence and pregnancy", British Journal of Obstetrics and Gynaecology, 104(5):528–31.

55. Knight, M., Brocklehurst, P., Neilson, J., Shakespeare, J., Kurinczuk, JJ (Eds.) on behalf of MBRRACEUK (2014). "Saving Lives, Improving Mothers' Care - Lessons learned to inform future maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2009–12", Oxford: University of Oxford.

56. Kim, C (2010) "Gestational diabetes: risks, management, and treatment options", International Journal of Women's Health, 7(2), 339-351.

57. Kinsley, B. (2007) "Achieving better outcomes in pregnancies complicated by type 1 and type 2 diabetes mellitus", Clinical Theraputics, 29 (Supplementary D), S153-S160.

58. Metzger B,. Lowe L., Dyer A., Trimble E., Chaovarindr U., Coustan D., Hadden D., McCance D., Hod M., McIntyre H., Oats J., Persson B., Rogers M. and Sacks D. (2008), "Hyperglycemia and adverse pregnancy outcomes". The New England Journal of Medicine 358(19): 1991–2002.

59. Ali, F., Farah, N., O'Dwyer, V., O'Connor, C., Kennelly, M. and Turner M. (2013) "The Impact of New National Guidelines on Screening for Gestational Diabetes Mellitus", Irish Medical Journal, 106(2), 57-59.

60. Ananth, C., Peedicayil, A. and Savitz, D. (1995) "Effect of hypertensive diseases in pregnancy on birthweight, gestational duration, and small-for-gestational-age births", Epidemiology, 6(4):391-395.

61. Bayliss H., Churchill D., Beevers M. and Beevers D. (2002) "Anti-hypertensive drugs in pregnancy and fetal growth: evidence for "pharmacological programming" in the first trimester?", Hypertension in Pregnancy, 21(2), 161-174.

62. Podymow T. and August P. (2007) "Hypertension in Pregnancy", Advances in Chronic Kidney Disease, 14(2), 178-190.

63. Wallis A., Saftlas A., Hsia J. and Atrash H. (2008) "Secular Trends in the Rates of Preeclampsia, Eclampsia, and Gestational Hypertension, United States, 1987–2004", American Journal of Hypertension, 21(5), 521-526.

64. Coombe Women and Infants University Hospital (2014) Coombe Women and Infants University Hospital Annual Clinical Report 2013 [online], available: http://www.drugsandalcohol.ie/23761/1/COOMBE%20ANNUAL%20REPORT%202013.pdf [accessed 10th December 2015].

65. Martins, C. (2000). "Effects of early maternal depression on patterns of infant–mother attachment: A meta-analytic investigation", Journal of Child Psychology and Psychiatry and Allied Disciplines. 41(6):737-748.

66. Beck, C. (1999) "Maternal depression and child behaviour problems: A meta-analysis". Journal of Advanced Nursing. 29(3):623-629.

67. Wen, S., Demissie K., Yang Q., Walker M (2009). "Maternal morbidity and obstetric complications in triplet pregnancies and quadruplet and higher-order multiple pregnancies". American Journal of Obstetrics and Gynecology,191(1):254-258.

68. Elster, N. (2000) "Less is more: the risks of multiple births", Fertility and Sterility,74(4):617-623.

69. Kogan, M., Alexander, G., Kotelchuck, M., MacDorman, M., Buekens, P., Martin, J. and Papiernik, E. (2000). "MDTrends in Twin Birth Outcomes and Prenatal Care Utilization in the United States, 1981-1997". The Journal of the American Medical Association,284(3):335-341.

70. American Society for Reproductive Medicine, (2012) Multiple Pregnancy and Birth: Twins, Triplets, and High-order Multiples[online], available: https://www.asrm.org/uploadedFiles/ASRM_Content/Resources/Patient_Resources/Fact_Sheets_and_Info_Booklets/multiples.pdf [accessed 23 December 2015]

71. Health Service Executive (2015). 2015 Performance Reports, [online], available:

http://www.hse.ie/performanceassurancereports/ [accessed 30 December 2015]

72. Organisation for Economic Co-operation and Development. Health Status Database, [online], available: http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_ [accessed 30 December 2015]

73. Menacker, F. and Hamilton, B. (2010). "Recent trends in cesarean delivery in the United States". NCHS Data Brief,(35):1-8.

74. Barber, E., Lundsberg, L., Belanger, K., Pettker, C., Funai, E. and Illuzzi, J. (2011) "Contributing Indications to the Rising Cesarean Delivery Rate". Obstetrics and gynecology. 118(1):29-38.

75. Johanson, R., Newburn, M. and Macfarlane A. (2002) "Has the medicalisation of childbirth gone too far?" British Medical Journal,324(7342):892-895.

76. Organisation for Economic Co-operation and Development (2015), Health at a Glance 2015, Paris: Organisation for Economic Co-operation and Development.

77. Barker, D. and Osmond C. "Infant mortality, childhood nutrition, and ischaemic heart disease in England and Wales", Lancet.1(8489):1077-1081.

78. Almond, D., Chay, K. and Lee, D. (2005) "The Costs of Low Birth Weight". Quarterly Journal of Economics.120(3):1031-1083.

79. Conley, D., Strully, K. and Bennett N. (2003) "A Pound of Flesh or Just Proxy? Using Twin Differences to Estimate the Effect of Birth Weight on Life Chances". The Starting Gate: Birth Weight and Life Chances. NBER Working Paper No.9901: Berkeley: University of California Press.

80. McIntire, D. and Leveno, K. (2008) "Neonatal Mortality and Morbidity Rates in Late Preterm Births Compared With Births at Term". Obstetrics & Gynecology. 111(1):35-41.

81. Moster, D., Lie, R. and Markestad T.(2008)"Long-Term Medical and Social Consequences of Preterm Birth", The New England Journal Medicine of English,359(3),262-273.

82. Keilthy, P., McAvoy, H. and Keating, T. (2015) Consultation on the development of the National Maternity Strategy for Ireland. Dublin: Institute of Public Health in Ireland.

83. Atrash, H., Johnson, K., Adams, M., Cordero J. and Howes J. (2006) "Preconception Care for improving Perinatal Outcomes: The Time to Act", Maternal and Child Health Journal, 10(5), 3-11.

84. Singh S., Sedgh G. and Hussain R. (2010) "Unintended pregnancy: worldwide levels, trends, and

Outcomes", Studies in Family Planning, 41(4), 241–250.

85. Williams J. (2003) "Overview of the care of pregnant women with pre-existing diabetes". Journal of Diabetes Nursing; 7(1):12-16.

86. Koletzko B., Brands B. and Demmelmair H. (2011) "Early Nutrition Programming Project". The American Journal of Clinical Nutrition. 94(6):1749-1753.

87. Tarrant, R., Younger, K., Sheridan-Pereira, M. and Kearney, J. (2011). "Maternal Health Behaviours During Pregnancy in an Obstetric Population and Their Associations with Socio-Demographic and Infant Characteristics". European Journal of Clinical Nutrition 65(4):470-479.

88. McDonnell, R., Delany, V., O' Mahony, M., Mullaney C., Lee, B. and Turner, M. (2014) "Neural tube defects in the Republic of Ireland in 2009–11", Journal of Public Health, 37(1), 57-63.

89. McKeating, A., Farren, M., Cawley S., Daly, N., McCartney, D. and Turner, M. (2015) "Maternal folic acid supplementation trends 2009-2013", Acta Obstetricia et Gynecologica Scandinavica, 94(7), 673-793.

90. Kelly, F., Gibney, E., Boilson, A., Staines, A. and Sweeney, M. (2015) "Folic acid levels in some food staples in Ireland are on the decline: implications for passive folic acid intakes?" Journal of Public Health (Oxford, England), March 8 2015, 1-6.

91. Cawley, S., Mullaney, L. McKeating, A., Farren, M., McCartney, D. and Turner, M. (2015) "An analysis of folic acid supplementation in women presenting for antenatal care", Journal of Public Health, March 1 2015, doi:10.1093/pubmed/fdv019#sthash.tkMXUnVU.dpuf.

92. Jones, N., McFall, B. and Diego, M. (2004) "Patterns of brain electrical activity in infants of depressed mothers who breastfeed and bottle feed: The mediating role of infant temperament", Biological Psychology 67(1-2), 103-124.

93. Schwarz, E., McClure, C., Tepper, P., Thurston, R., Janssen, I., Mathews, K. and Sutton-Tyrrell, K. (2010) "Lactation and maternal measures of subclinical cardiovascular disease", Obstetrical and Gynaecological Surveys 115(1), 41-48.

94. Hatsu, I., McDougland, D, and Anderson, A (2008) "Effect of infant feeding on maternal body composition", International Breastfeeding Journal 3 (18).

95. Gunderson E., Hurston S., Dewey, K., Faith M., Charvat-Agullar N., Khoury V., Nguyen V. and Quesenberry C. (2015) "The study of women, infant feeding and type 2 diabetes after GDM pregnancy and growth of their offspring (SWIFT Offspring study): prospective design, methodology and baseline characteristics", BMC Pregnancy and Childbirth, 15(150)

96. Wilson, A., Forsyth, J., Greene, S., Irvine, L., Hau, C. and Howie, P. (1998). "Relation of infant diet to childhood health: seven year follow up of cohort of children in Dundee infant feeding study". British Medical Journal 316:21-25

97. Aniansson, G., Alm, B., Andersson, B., Hakkansson, A., Larsson, P., Nylen, O., Peterson, H., Rigner, P., Svanborg, M., and Sabharwal, H. (1994). "A prospective cohort study on breastfeeding and otitis media in Swedish infants". The Pediatric Infectious Disease Journal, 13(3), 183-188.

98. Golding, J., Emmet, P., and Rogers, I. (1997). "Gastroenteritis, diarrhoea and breastfeeding". Early Human Development, 49, 83-103.

99. Oddy, W., Sly, P., de Klerk, N., Landau, L., Kendell, G., Holt, P. and Stanley, F. (2003) "Breastfeeding and respiratory morbidity in infancy: a birth cohort study", Archive of Diseases in Childhood, 88(3), 224-228.

100. Stettler, N. (2007) "Nature and strength of epidemiological evidence for origins of childhood and adulthood obesity in the first year of life", International Journal of Obesity, 31(7), 1035-1043.

101. Yan, J., Lin, L, Zhu, Y., Huang, G. and Peizhong, PW. (2014) "The association between breastfeeding and childhood obesity: a meta-analysis" Biomed Central Public Health, 14, 1267, available: http://www.biomedcentral.com/1471-2458/14/1267

102. Health Information and Research Division, ESRI (2011) Perinatal Statistics Report 2009. Dublin: Economic and Social Research Institute

103. Tarrant, R., Younger, K., Sheridan-Pereira, M. and Kearney, J. (2011)"Factors associated with duration of breastfeeding in Ireland: potential areas for improvement". Journal of Human Lactation 27(3), 262–271

104. Layte R. and McCrory C. (2014) "Maternal Health Behaviours and Child Growth In Infancy", Dublin: Stationery Office

105. Whitaker R. (2004) "Predicting preschooler obesity at birth: the role of maternal obesity in early pregnancy". Pediatrics, 114(1), 29-36.

106. Reilly, J., Armstrong, J., Dorosty, A., Emmett, P., Ness, A., Rogers, I., Steer C. and Sheriff A. (2005) "Early life risk factors for obesity in childhood: cohort study". British Medical Journal; 330(7504), 1357-1359

107. Catalano, P. and Ehrenberg, H. (2006) "The short-and long-term implications of maternal obesity on the mother and her offspring". British Journal of Obstetrics and Gynaecology, 113(10), 1126-1133

108. Oken, E. (2009) "Maternal and child obesity: the causal link". Obstetrics and Gynaecology Clinics of North America: 36(2), 361-377

109. McGowan, C., Walsh, J., Byrne, J., Curran, S. and McAuliffe, F. (2013) "The influence of a low glycemic index dietary intervention on maternal dietary intake, glycemic index and gestational weight gain during pregnancy: a randomized controlled trial." Nutrition Journal, 12(1), available: http://www.nutritionj.com/content/12/1/140 [accessed 23 December 2015]

110. World Health Organisation (2010) Global recommendations on physical activity for health, Geneva, World Health Organisation

111. United States of America, U.S. Department of Health and Human Services (2014). The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General, Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

112. Graham, H. and Der, G. (1999) "Patterns and Predictors of Smoking Cessation Among British Women", Health Promotion International 14(3), 231-239.

113. Dejin-Karlsson, E., Hanson, B., Ostergren, P., Ranstam, J., Isacsson, S. and Sjoberg, N. (1996) "Psychosocial Resources and Persistent Smoking in Early Pregnancy: A Population Study of Women in Their First Pregnancy in Sweden", Journal of Epidemiology and Community Health, 50(1), 33-39.

114. Gilman, S., Breslau, J., Subramanian, S., Hitsman, B. and Koenen, K. (2008) "Social Factors, Psychopathology and Maternal Smoking During Pregnancy". American Journal of Public Health 98(3):448-453.

115. Jones, K. and Smith, D. (1973) "Recognition of the Fetal Alcohol Syndrome in Early Infancy", Lancet, 302(7836), 999-1001.

116. McCarthy, F., O' Keeffe, L., Khashan, A., North R., Poston, L., Mc Cowan, L., Baker, P. Dekker, G., Roberts, C., Walker J. and Kenny L. (2013) "Association between Maternal Alcohol Consumption in Early Pregnancy and Pregnancy Outcomes", Obstetrics and Gynaecology, 122(4), 830-837

117. O' Kane, V. (2013) "Mental health: Identification of perinatal depression", Module 194, October 2013, Forum Distance Learning Programme: Irish College of General Practitioners.

118. Witt, W., DeLeire, T., Hagen, E., Wichmann, M., Wisk, L., Spear, H., Cheng, E., Maddox, T. and Hampton, J. (2010) 'The prevalence and determinants of antepartum mental health problems among women in the USA: A nationally representative population-based study', Archives of Women's Mental Health, 13(5), 425-437.

119. Cornsweet Barber, C. (2009) 'Perinatal Mental Health Care in New Zealand: The Promise of Beginnings', New Zealand Journal of Psychology, Vol. 38, No. 1, pp. 32-38. Available at: http://www.psychology.org.nz/wp-content/uploads/NZJP-Vol381-2009-5-Barber.pdf

120. Franko, D., Blais, M., Becker, A., Delinsky, S., Greenwood, D., Flores, A., Ekeblad, E., Eddy, K. and Herzog D. (2001) "Pregnancy complications and neonatal outcomes in women with eating disorders", The American Journal of Psychiatry, 158(9):1461-6.

121. Leahy-Warren, P. (2012) "Post natal depression – Role of the practice nurse", Nursing in General Practice, 6(5), 25-29 Available at: http://www.lenus.ie/hse/bitstream/10147/257044/1/PagesfromNURSINGINGENERALPRACTICENOV122.pdf

122. Stramrood, C., Paarlberg, K., Huis In'd Veld, E., Berger, L., Vingerhoets, A., Schultz, W. and van Pampus, M. (2011) 'Posttraumatic stress following childbirth in homelike- and hospital settings', Journal of Psychosomatic Obstetrics and Gynaecology, 32(2), 88-97.

123. Postnatal Depression Ireland, (2014) Possible Causes of PND [online], available: http://www.pnd.ie/main/causes.php [accessed 11th December 2015]

124. Kearns, N., Coen, L. and Canavan, J. (2008) Domestic Violence in Ireland: an overview of national strategic policy and relevant international literature on prevention and intervention initiatives in service provision, Galway: Child and Family Research Centre, NUI Galway.

125. Health Service Executive, National Communications Unit (2010) Policy on Domestic, Sexual and Gender Based Violence [online], available: http://www.hse.ie/eng/services/Publications/Children/HSE%20Policy%20on%20Domestic,%20Sexual%20and%20Gender%20Based%20Violence.pdf [accessed 31 December 2015]

126. National Clinical Effectiveness Committee (NCEC) (2014) National Clinical Guideline No.5 Clinical Handover in Maternity Services. Department of Health, Dublin.

127. National Clinical Effectiveness Committee (NCEC) (2014) National Clinical Guideline No.4 Irish Maternity Early Warning System (IMEWS). Department of Health, Dublin.

128. State Claims Agency (2015) Clinical Incidents and claims report in Maternity and Gynaecology services; a five year review, 2010-2014, Dublin: State Claims Agency.

129. Ireland, Department of Health (2015) National Healthcare Quality Reporting System: First Annual Report, Dublin: Department of Health.

130. Rafter, N., Hickey, A., Condell, S., Conroy, R., O' Connor, P., Vaughan, D. and Williams, D. (2015) "Adverse events in healthcare, learning from mistakes", Monthly Journal of the Association of Physicians, 108(4), 273-277

131. Institute for Healthcare Improvement (2016) IHI Global Trigger Tool for Measuring Adverse Events [online], available: http://www.ihi.org/resources/Pages/Tools/IHIGlobalTriggerToolforMeasuringAEs.aspx [accessed 5 January 2016]

132. Slattery, D. (2016) RE: re points for chapter 3 as discussed at strategy meeting, email to Joan Regan (joan.regan@health.gov.ie), 4 Jan [accessed 4 Jan 2016]

133. United States of America, Department of Health and Human Services, Office of Inspector General (2012) Hospital Incident Reporting Systems Do Not Capture Most Patient Harm, Washington DC, Department of Health and Human Services USA

134. National Treasury management Agency (Amendment) Act, 2000, Ireland. No 39 of 2000. Available from http://www.irishstatutebook.ie/acts/2000/no39

135. National Institute for Health and Care Excellence (2015) Intrapartum care for healthy women and babies, London: National Institute for Health and Care Excellence

136. Koopmans, L. Wilson, T., Cacciatore, J. and Flenady V. (2013) "Support for mothers, fathers and families after perinatal death", The Cochrane Library, 6, available: https://www.researchgate.net/profile/Joanne_Cacciatore/publication/265863864_Meeting_the_needs_of_parents_after_a_stillbirth_or_neonatal_death/links/54b6f5e70cf2e68eb2800504.pdf

137. HSE and Department of Health and Children (2009) An Integrated Workforce Planning Strategy for the Health Services. Dublin: Health Service Executive and Department of Health and Children.

138. Rowland, T., McLeod, D. and Froese-Burns, N. (2013) Comparative study of maternity systems. Wellington: Ministry of Health.

APPENDIX A
HSE REPORTED BIRTHS BY LOCATION

Births	2014	2013	2012
Ireland East Hospital Group	**15470**	**15260**	**15934**
Midland Regional Hospital Mullingar	2415	2461	2712
National Maternity Hospital Holles Street	9261	8994	9142
St Luke's Hospital Kilkenny	1812	1815	1907
Wexford General Hospital	1982	1990	2173
Dublin Midlands Hospital Group	**10656**	**10192**	**10680**
Coombe Women's & Infants University Hospital	8829	8209	8621
Midland Regional Hospital Portlaoise	1827	1983	2059
RCSI Hospital Group	**14136**	**14406**	**14615**
Our Lady of Lourdes Hospital Drogheda	3385	3648	3653
Cavan General Hospital	1771	1915	1916
Rotunda Hospital	8980	8843	9046
South/SouthWest Hospital Group	**12737**	**13261**	**13667**
Cork University Maternity Hospital	8062	8344	8563
Kerry General Hospital	1450	1500	1676
South Tipperary General Hospital	1100	1202	1170
University Hospital Waterford	2125	2215	2258
University of Limerick Hospital Group	**4540**	**4652**	**4926**
University Maternity Hospital Limerick	4540	4652	4926
Saolta University Hospital Group	**9808**	**10224**	**10701**
Galway University Hospitals	2992	3141	3377
Letterkenny General Hospital	1684	1798	1872
Mayo General Hospital	1744	1697	1788
Portiuncula Hospital General & Maternity Ballinasloe	1984	2044	2056
Sligo General Hospital	1404	1544	1608
National Total	**67347**	**67995**	**70523**

APPENDIX B
MEMBERS OF THE NATIONAL MATERNITY STRATEGY STEERING GROUP

1) Ms Sylda Langford (Chairperson)
2) Professor Cecily Begley, Chair of Nursing & Midwifery, Trinity College Dublin
3) Ms Mary Brosnan, Director of Midwifery, National Maternity Hospital
4) Ms Teresa Cody, Principal Officer, Primary Care, Department of Health
5) Professor Colette Cowan, CEO, UL Hospital Group
6) Ms Sinead Curran, Dietitian, Professional Bodies Alliance Ireland
7) Dr Miriam Daly, Director, Women's Health Programme, Irish College of General Practitioners
8) Professor Declan Devane, Professor of Midwifery, NUI Galway
9) Ms Mary Gorman, CMM11, Our Lady of Lourdes Hospital, Drogheda
10) Dr Colm Henry, National Clinical Advisor & Group Lead for Acute Hospitals, HSE
11) Ms Dawn Johnston, Group Director of Midwifery, Saolta Hospital Group
12) Ms Susan Kent, Deputy Chief Nursing Officer, Department of Health
13) Ms Shauna Keyes, Service User Representative
14) Dr Krysia Lynch, Chair, AIMS Ireland
15) Dr Kathleen Mac Lellan, Director of Patient Safety and Clinical Effectiveness, Department of Health
16) Ms Roisin Molloy, Service User Representative
17) Dr John Murphy, Clinical Lead, National Clinical Programme for Paediatrics and Neonatology
18) Dr Meabh Ní Bhuinneain, Consultant Obstetrician and Gynaecologist
19) Mr Pat O Dowd, Assistant National Director, Primary Care, HSE
20) Dr Michael Power, Clinical Lead, National Critical Care Programme
21) Ms Joan Regan, Principal Officer, Acute Hospitals, Department of Health
22) Ms Mary Reilly, CMM11, Cavan General Hospital
23) Ms Grace Rothwell, Hospital Manager, South Tipperary General Hospital
24) Professor Jane Sandall, Chair in Social Science and Women's Health, King's College London
25) Ms Monica Sheehan, Director of Public Health Nursing, Kerry Community Care Services
26) Dr Sharon Sheehan, Master, Coombe Women & Infants University Hospital
27) Dr Dubhfeasa Slattery, Head of Clinical Risk, State Claims Agency
28) Dr Jeremy Smith, Clinical Lead, National Clinical Programme of Anaesthesia
29) Ms Sheila Sugrue, National Lead for Midwifery, HSE
30) Ms Pauline Treanor, Secretary & General Manager, Rotunda Hospital
31) Professor Michael Turner, Clinical Lead, National Clinical Programme for Obstetrics and Gynaecology

Secretariat: Emma Bradley, Assistant Principal Officer; Stephen Casey, Administrative Officer; and, Bryan King, Executive Officer – Department of Health.

APPENDIX C
KEY EVIDENCE TO INFORM MODEL OF CARE

Study	Methodology	Main Points
Midwife-led continuity of care models versus other models of care for childbearing women (2015) by J. Sandall, H. Soltani, S. Gates, A. Sheenan and D. Devane	Random allocation of women at trials	• 15 trials involving 17,674 women at both low and mixed risk of complication randomly allocated to midwife-led continuity models of care or other models of care. • Women should be offered midwife-led continuity of care although caution is urged if the woman has substantial medical or obstetric complications. • Women with significant maternal disease and substance abuse were excluded from the study. • Women receiving midwifery-led care were less likely to experience regional analgesia, episiotomy and instrumental birth • Women were more likely to experience spontaneous vaginal birth, attendance at birth by a known midwife and a longer mean length of labour (hours); • Women who were randomised to receive midwife-led continuity models of care were less likely to experience preterm birth and foetal loss before 24 weeks' gestation; • The majority of included studies reported a higher rate of maternal satisfaction in the midwife-led continuity care model. Similarly, there was a trend towards a cost-saving effect for midwife-led continuity care compared to other care models.
Comparison of midwife-led and consultant-led care of healthy women at low risk of childbirth complications in the Republic of Ireland: a randomnsed trial (2011) by C. Begley, D. Devane, M. Clarke, C. McCann, P. Hughes, M. Reilly, R. Maguire, S. Higgins, A. Finan, S. Gormally and M. Doyle	Randomised trial of 1,653 women comparing 9 outcomes	• Compared alongside MLU care to CLU care for women who were determined to be low risk. • Main limitation was the lack of blinding of participants and carers as all women attending MLU were known to be participating. Those in the CLU were not masked. • High transfer rates to CLU during the ante natal period (45%). 13% in intrapartum and 0.5% post natal. • Found to be as safe as CLU but with less interventions and less likely to receive continuous EFM.

Study	Methodology	Main Points
Perinatal and maternal outcomes by planned place of birth for healthy women with low risk pregnancies: the Birthplace in England national prospective cohort study (2011) by Birthplace in England Collaborative Group	Prospective cohort study across UK	• Study consisted of over 64,000 low-risk births including 17,000 planned low-risk home births, 28,000 planned low-risk midwifery units (freestanding and alongside) and 20,000 planned low-risk obstetric units. • For 'low-risk' women the incidence of adverse perinatal outcomes (intrapartum stillbirth, early neonatal death, neonatal encephalopathy, meconium aspiration syndrome, and specified birth related injuries including brachial plexus injury) was low (4.3 events per 1000 births) • For planned births in freestanding midwifery units and alongside midwifery there were no significant differences in adverse perinatal outcomes compared with planned birth in an obstetric unit. • Women who planned birth in a midwifery unit (AMU or FMU) had significantly fewer interventions, including substantially fewer intrapartum caesarean sections, and more 'normal births' than women who planned birth in an obstetric unit. • For multiparous women, there were no significant differences in adverse perinatal outcomes between planned home births or midwifery unit births and planned births in obstetric units. • For multiparous women, birth in a non-obstetric unit setting significantly and substantially reduced the odds of having an intrapartum caesarean section, instrumental delivery or episiotomy. • For nulliparous women, there were 9.3 adverse perinatal outcome events per 1000 planned home births compared with 5.3 per 1000 births for births planned in obstetric units, and this finding was statistically significant. • For nulliparous women, the peripartum transfer rate was 45% for planned home births, 36% for planned FMU births and 40% for planned AMU births. • For women having a second or subsequent baby, the proportion of women transferred to an obstetric unit during labour or immediately after the birth was 12% for planned home births, 9% for planned FMU births and 13% for planned AMU births.
Midwifery and quality care: findings from a new evidence informed framework for maternal and newborn care (2014) by M. Renfrew, A. McFadden, M. Bastos, J. Campbell, A. Channon, N. Fen Cheung, D. Audebert Delage Silva, S. Downe, H. Powell Kennedy, A. Malata, F. McCormick, L. Wick & E. Declecq	A study of 461 Cochrane Reviews	• 461 systematic Cochrane reviews were analysed to develop a new evidence based framework. • It was found that 56 outcomes can be improved by practices that lie within the scope of midwifery. • Midwifery is associated with cost effective use of resources. • Midwives are most effective when integrated into the overall health service.

Study	Methodology	Main Points
Comparing midwife-led and doctor-led maternity care: A systematic review of reviews (2012) by Sutcliffe, K., Caird, J., Kavanagh, J., Rees, R. Oliver, K. Dickson, K., Woodman, J., Barnett-Paige, E. and Thomas, J.	Systematic Review of Reviews	• A systematic review of reviews comparing midwife-led and doctor-led maternity care including three meta-analytic reviews. • Midwife-led care for low-risk women was found to be better for a range of maternal outcomes, reduced the number of procedures in labour and increased satisfaction with care • The authors found no evidence of adverse outcomes associated with midwife-led care.
Findings	**Midwifery-led care is as safe as consultant-led care for low-risk women.** **Women are more likely to be satisfied with their care if led and delivered by a midwife.** **Midwifery-led care is cost effective.** **Midwifery-led care results in fewer interventions.** **Home Births appear safe for multiparous women provided appropriate transfer arrangements are in place.**	


An Roinn Sláinte
DEPARTMENT OF HEALTH