

Planned Home Births in Ireland

ANNUAL REPORT 2014



NATIONAL PERINATAL
EPIDEMIOLOGY CENTRE



Office of the
Nursing & Midwifery
Services Director



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Tús Áite do
Shábháilteacht 1 Othar
Patient Safety 1 First



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The Health Service Executive (HSE) in collaboration with NPEC is pleased to publish the 3rd Annual Report on planned home births in 2014. The Office of the Nursing and Midwifery Services Directorate, through its Director Dr. Michael Shannon supports the development of the home birth service. I wish to acknowledge his support.

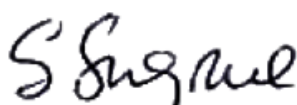
I wish to acknowledge the professionalism and expertise of the Designated Midwifery Officers in ensuring each woman approved for a home birth receives a quality home birth service on behalf of the HSE.

I would also like to thank the Self Employed Community Midwives who provide the home birth service on behalf of the HSE and hope to continue to work closely with them. They provide excellent quality care to low risk women across the country.

I also wish to acknowledge NPEC for continuing to support the provision of an Annual Report. The new online development has also assisted those who have been instrumental in collecting the data. To date the information collected has assisted the HSE by identifying good practice.

Since the last publication a HSE Clinical Governance Group was established and the terms of reference included the Group would maintain ongoing clinical review of the performance of the service and oversee the development of systems of clinical governance for home birth services.

The data presented in the Annual Report assists the Governance Group as well as health care professionals such as General Practitioners and Public Health Nurses to have confidence in the service and it is hoped this will continue so that further development of the services is progressed.



Sheila Sugrue
National Lead Midwife, Office of Nursing and
Midwifery Services Director, HSE

Welcome to the Planned Home Births Annual Report 2014 from the Health Service Executive (HSE) in collaboration with the National Perinatal Epidemiology Centre (NPEC). At the NPEC we endeavour to provide Irish maternity services with a facility to undertake in-depth reviews of its own medical practices, through monitoring outcomes and regular audit. As such it is not only valuable that the HSE is auditing these data but essential to ensure that standards of home birth in Ireland are met. It is intended that results of these clinical audits will be reported in successive annual reports into the future.

Studies across Europe indicate that home birth should be an option for low risk women. Measurement of the outcome of care is central to the development of safe and high quality health care services. Support from The Office of Nursing and Midwifery Services Director, the Designated Midwife Officers and the Self Employed Community Midwives has been crucial in order to ensure that the data from this audit can provide a transparent account of the national home birth service, as provided by the SECMs on behalf of the HSE.

I extend my sincere thanks and appreciation to the many midwives who have supported and contributed data to the NPEC. Their work is greatly acknowledged. An important advancement within the NPEC has been the development and implementation of the online home births database which will allow for data to be audited in an even timelier manner in the future.

Lastly, I would like to thank the staff of the NPEC for their hard work and dedication to the mission of the Centre. Assessing the outcomes of maternity care provided, learning from the data and working together, we have great potential to improve the care of mothers and babies in Ireland. On behalf of all the staff at the NPEC, we look forward to a challenging and fruitful future.



Richard A Greene, Director, NPEC
National Perinatal Epidemiology Centre

Background

In Ireland today 0.2% of births occur at home.¹ This rate is slightly lower than the home birth rate in the United States of America (0.7%)², much lower than England (2.2%) and Wales (3.1%)³ and significantly lower than the Netherlands where almost one quarter of births are reported to be in the home.⁴

The Royal College of Midwives (RCM) and the Royal College of Obstetricians and Gynaecologists (RCOG) support home birth for women with uncomplicated pregnancies.⁵ The World Health Organization (WHO) states that women may choose to deliver at home if they have a low risk pregnancy and receive appropriate care, however should complications arise during pregnancy, labour and delivery; a plan for transfer to a suitably equipped unit is necessary and should be in place in advance of the birth.⁶ There is ample evidence showing that labouring at home increases a woman's likelihood of a birth that is both satisfying and safe, with implications for her health and that of her baby.

Recent research into planned home birth found that for women having a second or subsequent baby, home birth appears to be safe for the baby and offer benefits for the mother. For these mothers home birth is as safe an option for women when it is supported and structured in a maternity care system with well-trained midwives and a good referral and transportation system.^{7,8} Findings indicate that home births have similar rates not only of perinatal mortality and morbidity but also maternal mortality and morbidity, compared to their counterparts who deliver in a hospital setting.⁴ Studies also indicate that mothers who birth at home are less likely to have medical interventions and have lower

rates of caesarean section compared to planned hospital births.⁴ Yet, a recent study has indicated that for women having their first baby women who had a planned home birth were almost twice as likely to experience adverse perinatal outcomes as women who had a planned birth in an obstetric unit.⁹

Home birth in Ireland

Up until the first half of the 20th Century, the majority of births in Ireland were home births. Following the establishment of the Department of Health, Comhairle na nOspideal (The National Hospital Advisory Council) was set up, in 1947, to decide where maternity services should be located. It advocated, as did the Peel Report in the UK, that a hospital was the safest place to give birth.⁹

During the 1950's and 1960's the construction and expansion of maternity hospitals brought about a rapid decline in home confinement. There were approximately 18,000 home births in 1957, by 1967 there were approximately 4,000 and by 1977, this figure was 265, representing less than 1% of the births in Ireland.¹⁰ The Department of Health provided a grant to women who wished to have a home birth, with which they could employ the services of Independent Midwives. In 2003, a two-year pilot project demonstrated that a home birth service provided by domiciliary community midwives for low risk women was effective, viable and provided high levels of satisfaction to both women and midwives.¹¹

The Domiciliary Birth Report of 2004 stated that 'home birth is a safe option for low risk women within an agreed criterion in Ireland'. It outlined that a safe outcome for the mother and baby is

1 Economic and Social Research Institute. (2012) Perinatal Statistics Report 2011. National Perinatal Reporting System. Dublin: ESRI

2 Rooks J. Midwifery and childbirth in America, Temple University Press, Philadelphia 1997.

3 <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcM%3A77-279449> Last accessed November 8th 2013

4 de Jonge A, van der Goes BY, Ravelli AC et al Perinatal mortality and morbidity in a nationwide cohort of 529,688 low-risk planned home and hospital births. BJOG. 2009 Aug;116(9):1177-84

5 Royal College of Obstetricians and Gynaecologists/Royal College of Midwives. Joint statement No.2, April 2007

6 Maternal and Newborn Health/Safe Motherhood Unit of the World Health Organization, Care in Normal Birth: A practical guide.

7 Lindgren HE, Rådestad IJ, Christensson K, et al. Perceptions of risk and risk management among 735 women who opted for a home birth. Midwifery 2010; 26:163.

8 Ackermann-Liebrich U, Voegeli T, Günter-Witt K, et al. Home versus hospital deliveries: follow up study of matched pairs for procedures and outcome. Zurich Study Team. BMJ 1996; 313:1313.

9 Department of Health and Social Security. (1970) Domiciliary midwifery and maternity bed needs (Peel Report). London: HMSO

10 St Leger A. Born in Cork; A history of Erinville Maternity Hospital, St Finbarr's Maternity Unit and Bon Secours Maternity Hospital. Health Services Executive, Dublin 2006

11 Southern Health Board (2003) Domiciliary Midwifery Project for Cork City and County; Evaluation for the Southern Health Board home birth pilot project. Cork: Southern Health Board.

the most important factor and that the need for continuity of care is essential.¹² The newly formed Health Services Executive (HSE) accepted this report as a dynamic working document and a National Implementation Committee was established to address the recommendations, progress the work and involve the wider stakeholders. The decisions of this Committee were informed by the deliberations of four sub-committees representing all stakeholders. During the course of deliberations of the committee and associated subgroups, it emerged that the Irish Nursing Organisation (INO) which insured Self Employed Community Midwives (SECMs) signalled its intent to withdraw its insurance provision to SECMs. In this context, and supported by the then Minister for Health Ms Mary Harney TD, future clinical indemnity cover was to be provided by the HSE through the Clinical Indemnity Scheme. The HSE has committed through the National Home Birth Service to provide midwifery services to low risk women in order to facilitate an informed choice by women.

The HSE provides planned home birth services to families choosing this model of maternity care predominantly in association with SECMs, along with two hospital-based services in Waterford Regional Hospital and the National Maternity Hospital, Dublin. Since 2008, SECM's (previously known as Independent Midwives) sign an annual Memorandum of Understanding (MOU) with the HSE, to provide planned home birth services to eligible women. The MOU was replaced with a contractual Agreement on 1st March 2014. In the Agreement 2014, the SECM is to be accompanied at the birth by a second self-employed community midwife who is also required to have an Agreement with the HSE. There was a nine month lead in period for the SECM to secure second midwives, so this requirement became mandatory on 1st December 2014. While it was acknowledged that this system did not provide for equity of access on a nationwide basis, "it is underpinned by a commitment to women centred care, an integrated model of service delivery and an overarching concern for the safety of mother, child and professionals involved."¹²

The National Steering Committee for Home Births was set up in 2010 to further review the 2008 MOU in order to advance the HSE National Home Birth Service with the introduction of Designated Midwifery Officers (Appendix A) in each region and the establishment of a national database for all planned home births.

Pathway of care in the Republic of Ireland

As illustrated in Figure 1 when an expectant mother enquires about having a home birth, she can contact a Designated Midwifery Officer (DMO) or the SECM directly. The expectant woman and the SECM discuss the criteria for home births and agree on eligibility for the service. An application form and consent is signed between the SECM and the woman, and then forwarded to the DMO to confirm eligibility, as some women may require an individual assessment by a Consultant Obstetrician. The DMO informs the Director of Public Health Nursing, Local Public Health Nurse, the expectant mothers GP and the Administration Department of the HSE, Local Health Office (LHO) about the forthcoming home birth. Expectant mothers intending to have a home birth are advised by the SECM to register with a GP and also to register and avail of antenatal services with their local maternity hospital. The SECM will be the primary carer for the mother and child up to the age of 14 days.¹²

Purpose of this report

The primary aim of this report is to present an overview and national statistics on the home births service in the Republic of Ireland for the year 2014. This clinical audit is a national record of planned home births in the Republic of Ireland for 2014. The purpose of the audit is to examine both the maternal and fetal outcomes of planned home births, including outcomes whereby the care of the woman is transferred for hospital care in the antenatal period, during labour or the postnatal period. Consequently this report aims to provide data to firstly ascertain adherence to the national evidence based guidelines, protocols and standards and, secondly, to provide evidence which facilitates maternity healthcare providers to review practice in the home setting, where appropriate.

¹² Health Service Executive (2004) Report to the Chief Executive Officers of the Health Boards / Domiciliary Births Group. Dublin: HSE.

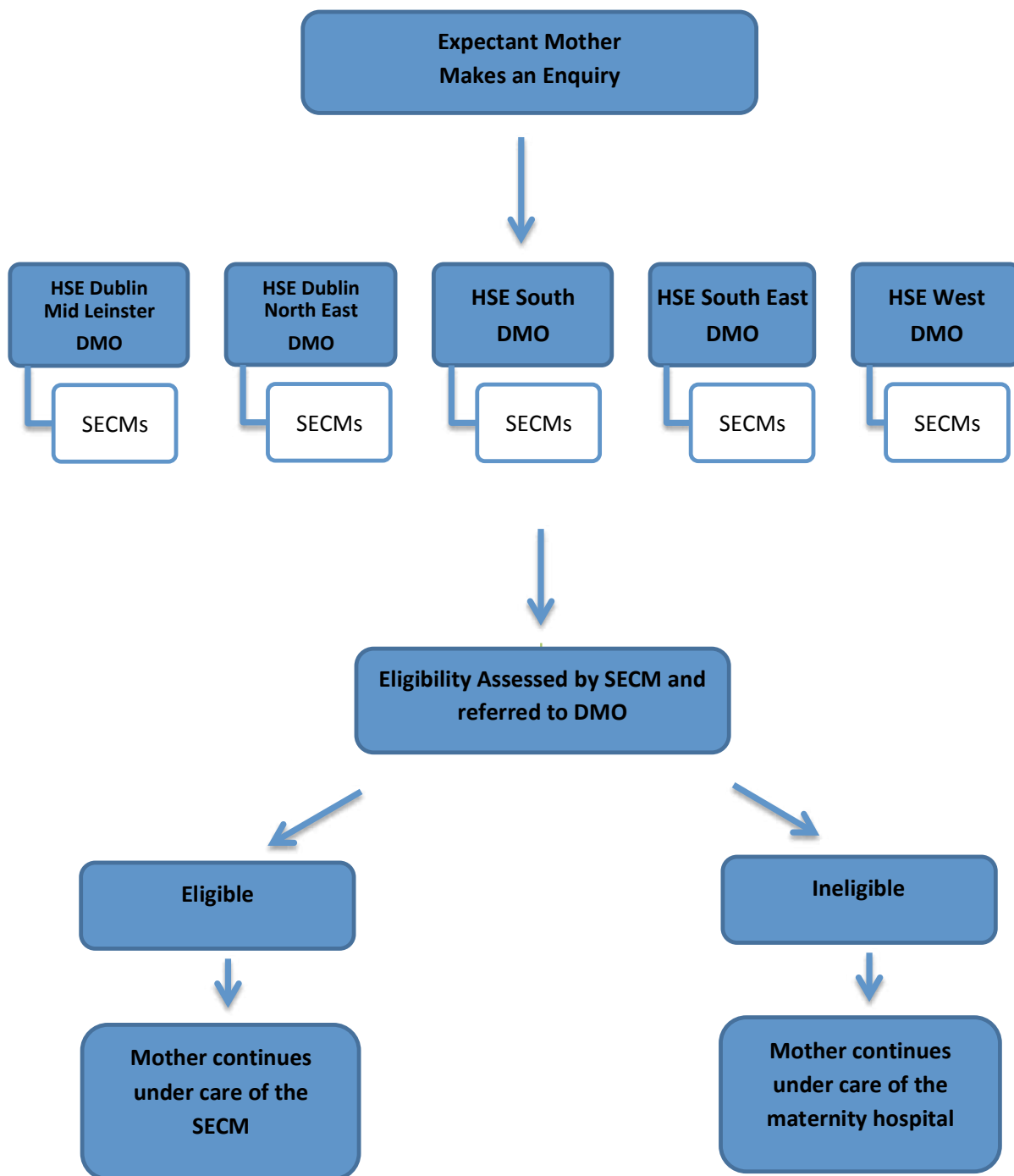
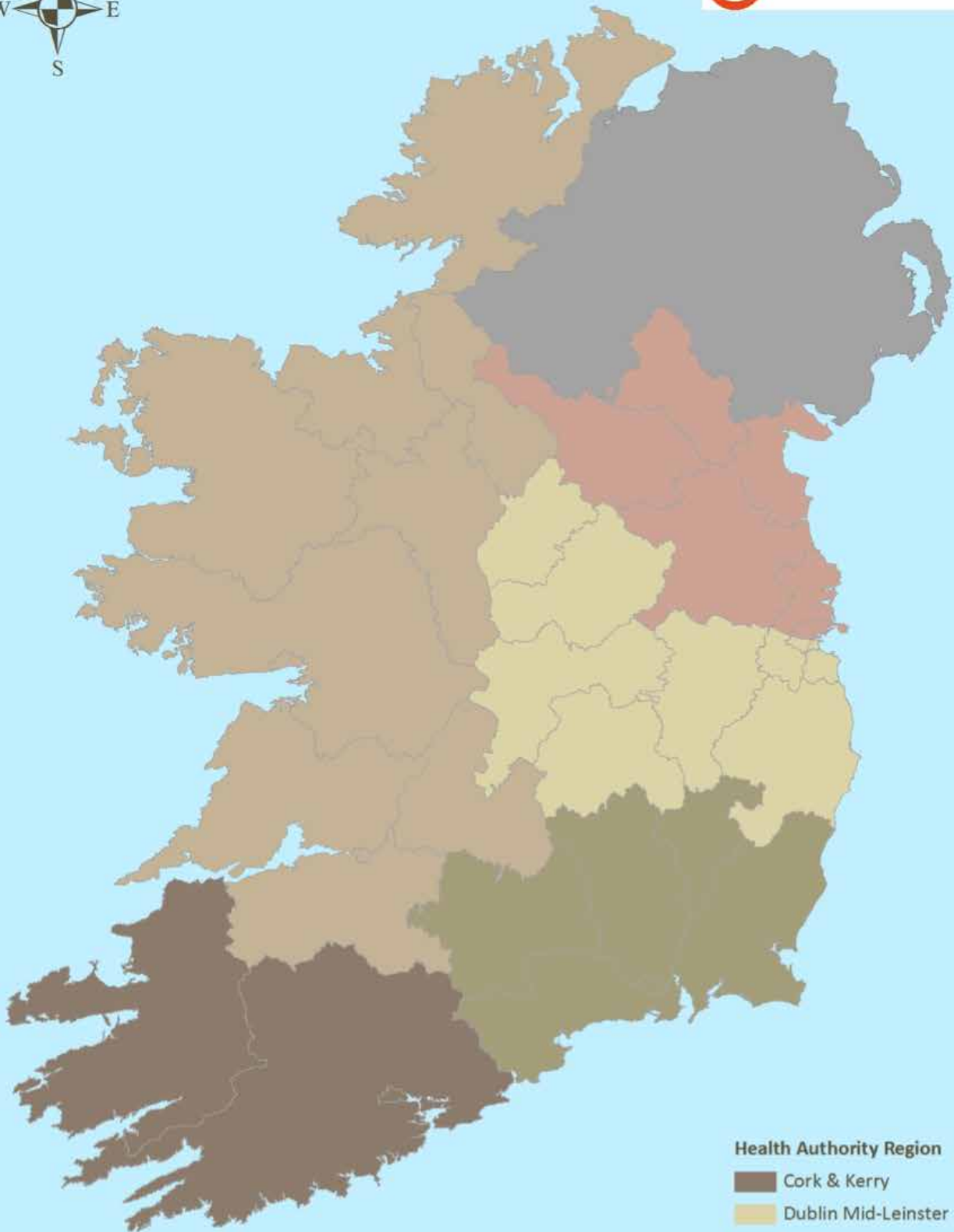


Figure 1: Pathway of care for planned home birth enquiries



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Health Authority Region

- Cork & Kerry
- Dublin Mid-Leinster
- Dublin North East
- South East
- West
- HSCNI

Methods

Data recording

In 2014, 20 primary Self Employed Community Midwives (SECMs) in Ireland provided a home birth service on behalf of the Health Service Executive (HSE). As outlined in the MOU between HSE and the SECMs, each SECM is required to partake in clinical audit. Maternity records of midwifery care are sent by the SECM to the Designated Midwifery Officer (DMO) in their respective HSE area. The DMO reviews the maternity records then collates the data using a standardised audit tool and that data are forwarded to the National Perinatal Epidemiology Centre (NPEC) for analysis. Data on all of the women who registered with the home birth service between January 1 and December 31 2014 were collected from all DMOs using a standardised NPEC data collection form. Figure 1 illustrates the flow of

information. Each SECM forwards case notes to the DMO in their respective HSE area.

Missing data

To ensure accuracy of information, missing or incomplete data were sought from respective SECM and maternity units by the DMO. For analysis purposes, cases with missing data were excluded from calculations. However, the extent of missing data is reported in the results section.

Comparison to national statistics

Comparisons are made with the most recent publications available including the Central Statistics Office's Vital Statistics Fourth Quarter and Yearly Summary report as well as from the Healthcare Pricing Office.

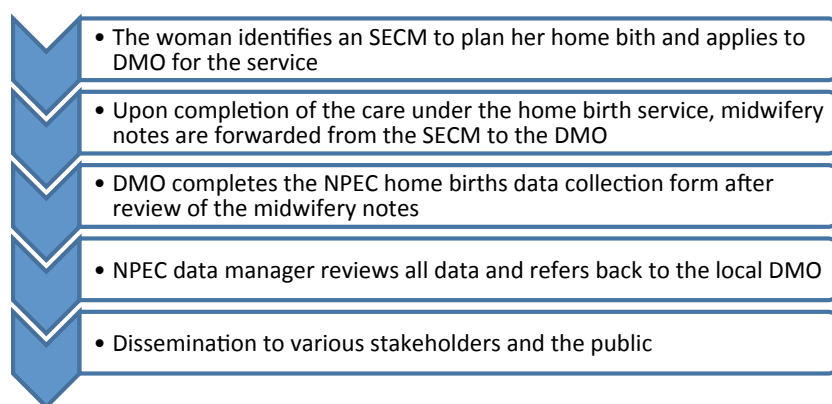


Figure 2: Flow of information in the NPEC data collection process.

Definitions and terminology

Women who are considered low risk, within an agreed criterion, are eligible for home birth in Ireland. To ensure comparison the DMO and the NPEC used the following definitions which are included in this report:

Exclusion Criteria: Table 1 and Table 2 of the HSE MOU/Agreement for home birth services outline medical and other factors requiring planned birth in an obstetric unit (Appendix

B). Table 3 and Table 4 of the HSE MOU/Agreement for home birth services outline medical and other conditions requiring referral to consultant obstetrician by the midwife for final assessment when planning place of birth.

Antepartum Referrals: Referral to hospital due to complications which have arisen during pregnancy.

Intrapartum Transfer: Hospital transfer during labour. Table 5 of the HSE MOU/Agreement for home birth services outlines indications for intrapartum transfer (Appendix D).

Postpartum Transfer: Hospital transfer following birth. Table 6 of the HSE MOU/Agreement for home birth services outlines indications for postpartum transfer (Appendix E).

Booking: Data sought by the NPEC Home Births Data Collection Form relate to the time of booking with both the maternity hospital and/or the SECM. For the purposes of this report, booking relates to the mother's first antenatal visit with the Self Employed Community Midwife.

Parity: The number of completed pregnancies, whether live birth or stillbirth, of at least 24 weeks gestation or with a birthweight $\geq 500\text{g}$; prior to the home birth in 2014.

Gravida: The number of times the mother has been pregnant, irrespective of duration; prior to the home birth in 2014.

Results

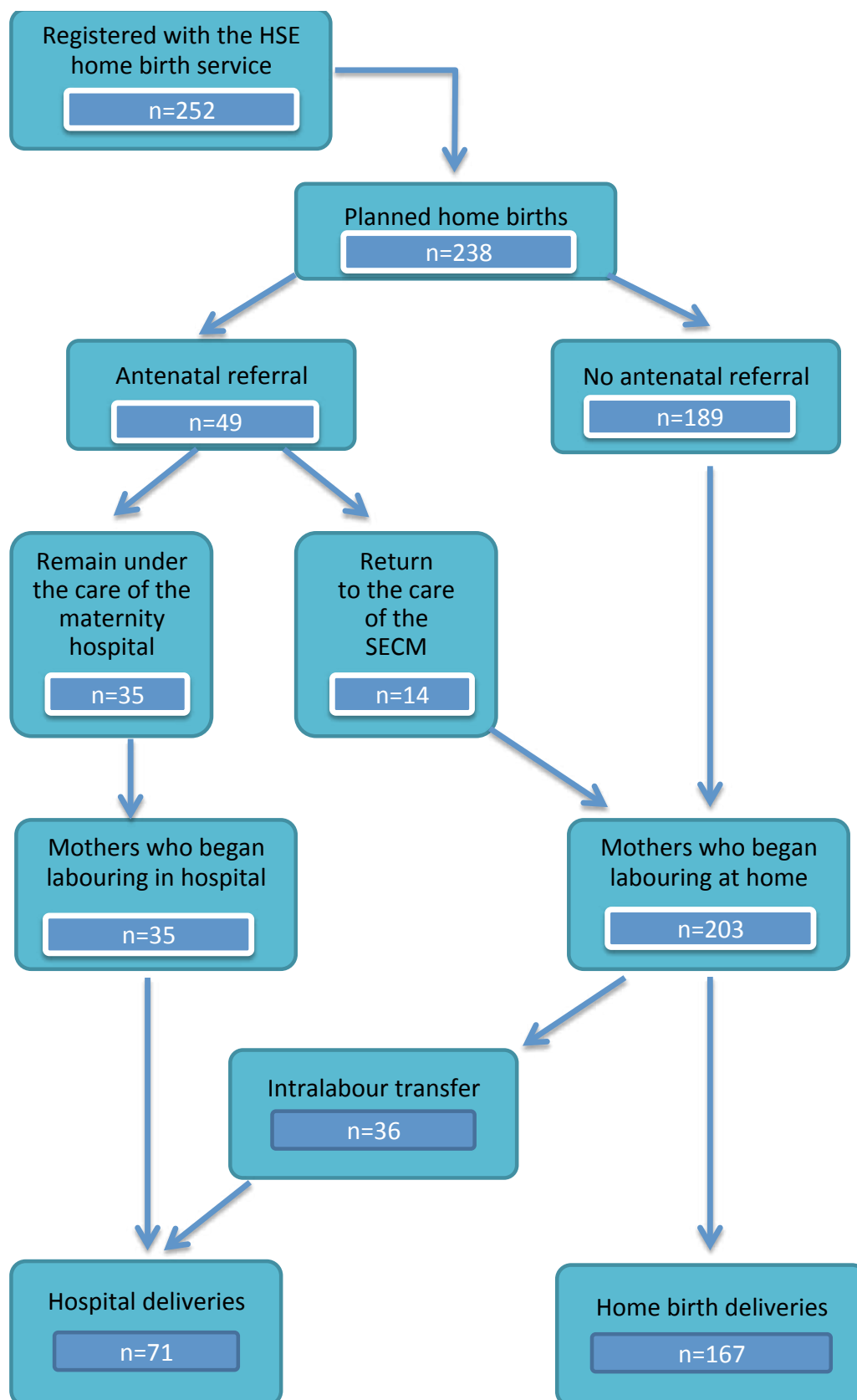


Figure 3: Flowchart of planned home births, 2014

For the period from January 1st to December 31st 2014, there were 252 mothers who intended on having a home birth. During this same period 67,462 births were recorded in the 19 maternity units throughout the Republic of Ireland.¹ The distribution of home births by Health Service Executive (HSE) region is markedly different to the overall

distribution of births. The percentage of home births ranged from 15.1% in HSE Dublin North East, 19.8% in HSE Dublin Mid Leinster, 17.5% in HSE West and 47.6% in HSE South (Table 1). These figures are consistent with the distribution of home births from 2013. The overrepresentation of home births in HSE South persists from 2013 in 2014 (47.6%).

Table 1: Distribution of mothers intending on having a home birth by HSE area, 2013 and 2014

| HSE area | Home births (2013) | Home births (2014) |
|---------------------|--------------------|--------------------|
| Dublin North East | 40(15.5) | 38(15.1) |
| Dublin Mid Leinster | 50(19.4) | 50(19.8) |
| West | 51(19.8) | 44(17.5) |
| South | 117(45.3) | 120(47.6) |

Note: Values are shown as n (%) unless otherwise stated.

As outlined in Figure 4, home births were relatively evenly spread throughout the year, with the lowest number of births occurring in

December (6.4%) and the highest occurring in March (10.8%).

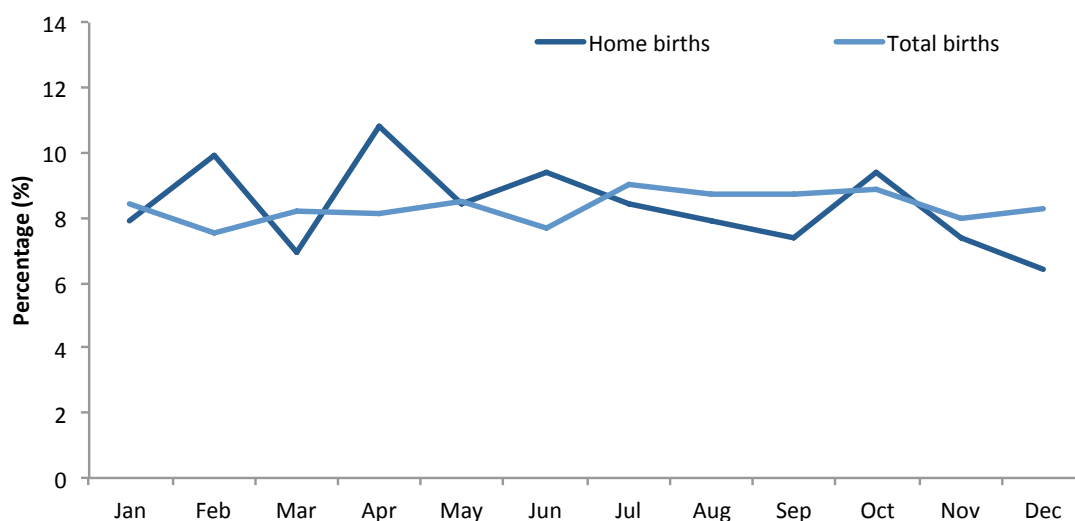


Figure 4: Percentage of births by month, for all births in 2013 and home births 2014

1. Central Statistics Office. (2013) Vital Statistics Fourth Quarter and Yearly Summary 2012. Cork: CSO.

Maternal Characteristics

Age

The age range of the mothers who booked in for a home birth was 18-45 years. Consistent with data from 2013, home birth women tended to be older than all mothers who gave birth in Ireland (Table 2). Over three quarters of women (77.3%) intending to give birth at home were aged 30-39 years compared to 63.1% of all women.

Table 2: Age distribution of mothers intending on having a home birth, 2013 and 2014

| Age group | Home births (2013*) | Home births (2014*) | All births, CSO 2013 (%) ² |
|-----------|---------------------|---------------------|---------------------------------------|
| <20yrs | 0(0) | 1(0.4) | 1.9 |
| 20-24yrs | 7(2.7) | 8(3.2) | 9.3 |
| 25-29yrs | 33(12.8) | 33(13.1) | 20.0 |
| 30-34yrs | 115(44.6) | 100(39.8) | 37.1 |
| 35-39yrs | 89(34.5) | 94(37.5) | 26.0 |
| >40yrs | 14(5.4) | 15(6.0) | 5.7 |

Note: Values are shown as n (%) unless otherwise stated. *Maternal age unknown for one mother. Abbreviation: CSO, Central Statistics Office

Marital status

As outlined in Table 3 almost all the women who intended on having a home birth were either married (71.4%; n=180) or with a partner (11.5%; n=29).

Table 3: Marital status of mothers intending on having a home birth, 2013 and 2014

| Marital status | Home births (2013) | Home births (2014) |
|----------------|--------------------|--------------------|
| Married | 174(67.4) | 180(71.4) |
| Partner | 58(22.5) | 29(11.5) |
| Never Married | 16(6.2) | 31(12.3) |
| Separated | 2(0.8) | 1(0.4) |
| Divorced | 2(0.8) | 0(0) |
| Widowed | 0(0) | 0(0) |
| Unknown | 6(2.3) | 11(4.4) |

Ethnicity

Three-quarters of the mothers who booked for a home birth were of white Irish ethnicity which is consistent with the percentage of white Irish who booked for a home birth in 2013 (76.5% versus 74.1%). The proportion of women with another white background is

over representative of those in the female population aged 15-49 years in 2014 (Table 4). The numbers of Black/Black Irish and Other Mixed ethnicities are small but appear under representative of the population.

Table 4: Ethnicity of mothers intending on having a home birth, 2013 and 2014

| Ethnicity | Home births (2013*) | Home births (2014**) | 15-49 year old female population 2011 |
|------------------------|---------------------|----------------------|---------------------------------------|
| White Irish | 189(74.1) | 192(76.5) | 80.4% |
| Irish Traveller | 0(0) | 0(0) | 0.7% |
| Other white background | 60(23.5) | 55(21.9) | 12.5% |
| Asian/Asian Irish | 2(0.8) | 2(0.8) | 2.4% |
| Black/Black Irish | 4(1.6) | 1(0.4) | 1.6% |
| Other/mixed | 0(0) | 1(0.4) | 1.0% |

Note: Values are shown as n (%) unless otherwise stated. Population data from the National Census 2011. *Ethnicity unknown for three mothers **Ethnicity unknown for one mother

Distance of the mother's residence to services

Data related to the distance of the mother's residence to the SECM and the nearest maternity hospital were available for 170 women. As outlined in Figure 5, over half of

the women were within 30 kilometres of the SECM (54.1%; n=92). Almost two thirds were within 30 kilometres of the maternity hospital (61.2%; n=104).

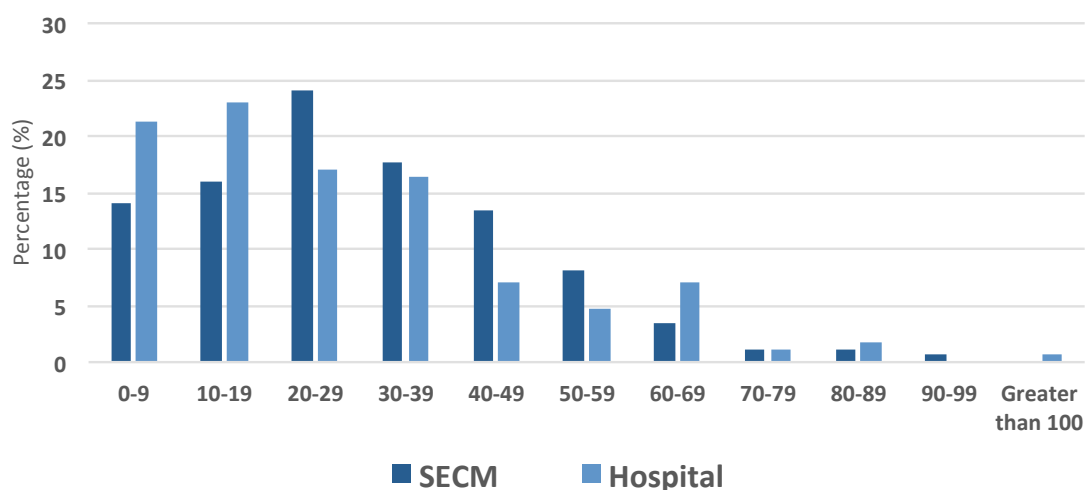


Figure 5: Distance (km) of woman from the SECM and the Maternity Hospital, 2014

Gestation at booking

Gestation at the time of the women's antenatal scan was unrecorded in 9.6% of the cases (n=24). Of those recorded (n=227) almost two thirds of the women booked with the SECM

between 12 and 19 weeks gestation and one-fifth booked at 20 weeks gestation or later (Table 5).

Table 5: Weeks gestation at date of booking, 2013 and 2014

| Gestation at booking | Home births (2013*) | Home births (2014**) |
|---------------------------|---------------------|----------------------|
| Less than 12 Weeks | 44(20.8) | 43(18.9) |
| 12-19 Weeks | 109(51.4) | 139(61.0) |
| 20 Weeks or Later | 59(27.8) | 46(20.2) |

Note: Values are shown as n [%] unless otherwise stated. * Gestation at booking unknown for 46 mothers. ** Gestation at booking unknown for 24 mothers.

Body mass index

Body mass index (BMI) was available for 55.0% (n=138) of women (Table 6). The BMI in almost two thirds of women (63.8%; n=88) was in

the healthy range (18.5-24.9kgm⁻²). Almost one third (29.0%; n=40) were classified as overweight (25.0-29.9kgm⁻²).

Table 6: Body mass index of mothers intending on having a home birth, 2013 and 2014

| BMI of mothers intending on having a home birth, 2012 (kgm ⁻²) | Home births (2012*) | Home births (2013**) | 2007 SLÁN ^{††} % |
|--|---------------------|----------------------|---------------------------|
| Underweight (<18.5) | 1(1.0) | 3(2.2) | 2 |
| Healthy (18.5-24.9) | 64(61.0) | 88(63.8) | 44 |
| Overweight (25.0-29.9) | 32(30.5) | 40(29.0) | 31 |
| Obese (>30.0) | 8(7.6) | 7(5.1) | 23 |

Note: Values are shown as n [%] unless otherwise stated. * BMI unknown for 153 mothers **BMI unknown for 114 mothers
^{††}SLÁN, Survey of Lifestyle, Attitudes and Nutrition

Smoking and alcohol consumption

Smoking status of the mothers at their time of booking was recorded for 240 (95.2%) of the 252 women. Ten women (4.0%) were smokers at the time, seven of whom gave up during pregnancy. These figures suggest a 70% (7 of 10) cessation rate although this estimated rate is based on small numbers. Thus, three of the 240 (1.3%) women smoked throughout their pregnancy. The prevalence of smoking during pregnancy or in the last trimester is not routinely known for all Irish pregnancies

but rates of 12%, 15%, 16% and 19% have been reported for England, Northern Ireland, Wales and Scotland, respectively.

Alcohol consumption was known for 226 of the 252 women (90.0%). Of these the vast majority of mothers (208 of 226, 92.0%) did not consume alcohol during pregnancy. Of the 18 who drank alcohol during pregnancy 17 drank alcohol monthly and 1 drank alcohol 4 or more times a week.

Previous pregnancy

As indicated in Table 7 almost three quarters of the women who intended on having a home birth had a previous birth (188 of 252, 74.6%). Table 8 specifies gravida/parity for 241 of the 252 women who intended on having a home birth in 2014. A quarter of women (n=64, 25.5%) were never pregnant before (gravida=0). Of the women who had been pregnant (gravida > 0), two thirds (n=122 of 178, 65.2%) had completed pregnancies (gravida = parity, indicated by green shading);

23% (n=41, 23.0%) experienced completed pregnancies but also experienced at least one pregnancy less than 24 weeks gestation and under 500g birthweight (gravida > parity > 0, indicated by orange shading) and 8% (n=15, 8.4%) experienced pregnancies which resulted in miscarriages i.e. their previous pregnancies never exceeded 24 weeks gestation or 500g birthweight (gravida > parity = 0, indicated by red shading).

Table 7: Distribution of parity of mothers intending on having a home birth, 2014

| Parity | Home births (2014*) | All Births 2013 ² |
|--------------------|------------------------|---------------------------------|
| Nulliparous | 64(25.4) | 26,665(38.5) |
| Parous | 188(74.6) | 42,602(61.5) |

Note: Values are shown as n (%) unless otherwise stated.

Table 8: Gravida/parity of mothers prior to pregnancy in 2014

| Gravida | Parity | | | | | | | | Total |
|--------------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 0 | 64 | | | | | | | | 64 |
| 1 | 9 | 56 | | | | | | | 65 |
| 2 | 1 | 8 | 41 | | | | | | 50 |
| 3 | 0 | 4 | 11 | 17 | | | | | 32 |
| 4 | 0 | 0 | 2 | 3 | 4 | | | | 9 |
| 5 | 5 | 0 | 0 | 5 | 2 | 4 | | | 16 |
| 6 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | | 4 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 11 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | 79 | 68 | 54 | 28 | 7 | 5 | 0 | 1 | 242 |

Note: We refer to gravida and parity prior to the pregnancy in 2014. Green represents women with previous pregnancies that were always complete; orange represents women who had experienced complete pregnancy and pregnancy <24 weeks gestation and birthweight <500g; and red represents women whose previous pregnancies were always <24 weeks gestation and birthweight <500g

Obstetric and medical conditions

All but two women registered during pregnancy with their general practitioner and all women registered with their local maternity unit.

Of the 188 women who had a previous pregnancy, 4 (2.1%) were reported to have had medical or obstetric problems as outlined in Appendix B which included discectomy surgery, previous caesarean section, previous miscarriage and risk factors associated with Group B streptococcus whereby antibiotics in labour were recommended.

Of the total 252 women who intended on having a home birth, 41 mothers (16.3%) were reported to have a medical or an obstetric problem as outlined in Appendix B and or Appendix C (Table 9 & 10). All of these women were reviewed by a consultant obstetrician in a maternity unit.

Table 9: Medical conditions and other factors requiring planned birth in an obstetric unit

| | N=5 |
|---------------------------------------|-----|
| Gestational diabetes | 1 |
| Gallbladder inflammation | 1 |
| Previous caesarean section | 1 |
| Polyhydramnios | 1 |
| Pregnancy induced hypertension | 1 |

Note: Factors are not mutually exclusive and therefore percentages add up to over 100%.

Table 10: Medical conditions and other factors requiring referral to consultant obstetrician by the midwife for final assessment when planning place of birth

| | N=36 |
|---|------|
| Age over 40 at booking | 9 |
| History of a large loop excision of the transformation zone procedure | 7 |
| Cardiac disease without intrapartum complications | 1 |
| Obstetric cholestasis | 1 |
| Cone biopsy | 1 |
| History of previous baby more than 4.5kgs | 1 |
| Uterine fibroid | 4 |
| Hypothyroidism | 4 |
| History of postnatal depression | 1 |
| Previous postpartum haemorrhage | 1 |
| Spinal abnormalities | 1 |
| Extensive vaginal, cervical or third-degree or fourth-degree perineal trauma | 1 |
| High body mass index | 1 |
| Under current outpatient psychiatric care | 3 |
| Seven previous deliveries | 1 |
| Retained products of conception | 1 |

Note: Factors are not mutually exclusive and therefore percentages add up to over 100%.

Planning for the delivery

It was reported that 2.4% of the women (n=6) did not have an ultrasound scan. The estimated date of delivery were calculated by last menstrual period in 80 of 252 (31.7%) of cases and confirmed or provided by scan in 228 of 252 (90.5%) of cases.

The number of antepartum visits by the midwives to women intended on having a home birth ranged from one to 37 visits. The average number of visits to the women was seven. As indicated in Table 11, over three quarters of attendances by the midwife for both nulliparous and parous women were between four and nine (79.7% and 75.7%).

Table 11: Number of antenatal visits to the SECM, 2014

| | Nulliparous (n=64) | Parous (n=181*) |
|----------------------------|-----------------------|--------------------|
| Up to 3 visits | 7(10.9) | 9(5.0) |
| 4-6 visits | 25(39.1) | 80(44.2) |
| 7-9 visits | 26(40.6) | 57(31.5) |
| 10-12 visits | 4(6.3) | 29(16.0) |
| 13-15 visits | 1(1.6) | 5(2.8) |
| More than 15 visits | 1(1.6) | 1(0.6) |

Note: Values are shown as n (%) unless otherwise stated. *Data missing for 7 women

Women who left the HSE home birth service

Of the 252 women intending to have a home birth, 14 (5.6%) left the home birth service. Of these women 5 experienced a miscarriage. One woman, informed the DMO that she had

relocated to the United Kingdom. The preferred SECM was unavailable for 8 women who made alternative arrangements.

Antenatal referrals

Of the 238 remaining women intending to have a home birth, 49 (20.6%) were referred to a maternity hospital due to complications arising during the antenatal period. Nulliparous women were more likely to be referred to the maternity hospital in the antenatal period than

parous women (22.9% versus 19.6%; Table 10). Over one quarter of women transferred to the maternity hospital in the antenatal period were associated with post maturity (28.6%; n=14; Table 13).

Table 12: Antenatal referral by parity, 2014

| | Nulliparous (n=70) | Parous (n=168) |
|------------------------------|-----------------------|-------------------|
| No antenatal referral | 54(77.1) | 135(80.4) |
| Antenatal referral | 16(22.9) | 33(19.6) |

Note: Values are shown as n (%) unless otherwise stated.

Table 13: Reasons for antepartum transfer, 2014

| | Nulliparous (n=16) | Parous (n=33) |
|---|-----------------------|------------------|
| Post maturity | 6(37.5) | 8(24.2) |
| Induction of labour (unspecified reason) | 2(12.5) | 1(3.0) |
| Induction of labour – pre eclampsia | - | 1(3.0) |
| Maternal request | 1(6.3) | 2(6.1) |
| Hypertension | - | 2(6.1) |
| Obstetric Cholestasis | 1(6.3) | 1(3.0) |
| Anaemia | - | 2(6.1) |
| Review following road traffic accident | - | 1(3.0) |
| Urinary tract infection | - | 2(6.1) |
| Antepartum haemorrhage | - | 1(3.0) |
| Pyrexia | - | 1(3.0) |
| Polyhydramnios | - | 2(6.1) |
| Spontaneous rupture of the membranes | - | 3(9.1) |
| Congenital anomaly | - | 1(3.0) |
| Prolonged rupture of the membranes | 2(12.5) | - |
| Small for gestational age | 1(6.3) | - |
| Breech presentation | 1(6.3) | - |
| Transverse lie | - | 1(3.0) |
| Oligohydramnios | - | 2(6.1) |
| Gestational diabetes | 1(6.3) | - |
| Prophylactic anti d (29 weeks) | - | 1(3.0) |
| Dehydration | 1(6.3) | - |
| Increased liver function tests & inflamed gallbladder | - | 1(3.0) |

Over two thirds of all women who were referred to the maternity hospital during the antenatal period had a spontaneous vertex delivery (65.3%; n=32). Nulliparous women were more likely to have a caesarean section delivery than parous women (Table 14).

Table 14: Mode of delivery for women with an antenatal transfer, 2014

| | Nulliparous (n=16) | Parous (n=33) |
|--------------------|-----------------------|------------------|
| Spontaneous vertex | 8(50.0) | 24(72.7) |
| Vaginal breech | 0(0.0) | 0(0.0) |
| Ventouse | 0(0.0) | 0(0.0) |
| Forceps | 0(0.0) | 0(0.0) |
| Caesarean section | 6(37.5) | 2(6.1) |
| Unknown | 2(12.5) | 7(21.2) |

Note: Values are shown as n (%) unless otherwise stated.

Of the 49 women referred to the maternity hospital for antenatal care 14 (28.6%) women were returned to the care of the SECM. There were three adverse outcomes identified for women who initially registered with the home

birth service and who subsequently transferred to the maternity hospital during antenatal care. Of the three, one was reported to the HSE and two were reported to the States Claim Agency.

One white Irish para 2⁺¹ woman, intending on having a home birth, presented to a maternity hospital with antepartum haemorrhage. On examination it was concluded that the stillborn male infant delivered vaginally and weighing greater than 2000 grammes, was not alive on

admission to the maternity unit. An external physical examination of the baby and placental histology were undertaken at the maternity hospital. Placental abruption at 34⁺⁰ weeks gestation was confirmed.

Intrapartum transfers

Of the 203 women who began labouring at home 37 (18.2%) were transferred to a maternity hospital. Of these women 46% were transferred by ambulance (n=17). As

demonstrated in Table 15, nulliparous women were seven times more likely to transfer during labour than parous women (45.6% versus 6.5%).

Table 15: Intrapartum transfer rates by parity, 2014

| | Nulliparous (n=57) | Parous (n=146) |
|-----------------------------------|-----------------------|-------------------|
| Home birth not transferred | 31(54.4) | 136(93.5) |
| Intrapartum transfer | 26(45.6) | 10(6.5) |

Note: Values are shown as n (%) unless otherwise stated.

Over three quarters of intrapartum transfers occurred during the first stage of labour (78.4%; n=29). As outlined in Table 16, three

women required transfer during the 3rd stage of labour.

Table 16: Stage of labour when transferred, 2014

| | Nulliparous (n=26) | Parous (n=11) |
|------------------|-----------------------|------------------|
| 1st Stage | 22(84.6) | 7(63.6) |
| 2nd Stage | 4(15.4) | 1(9.1) |
| 3rd Stage | 0(0.0) | 3(27.2) |

Note: Values are shown as n (%) unless otherwise stated.

Medical interventions

As indicated in Table 17 38% of intrapartum transfers to the maternity unit were associated with failure to progress in labour (n=14).

Over one in 10 women were transferred with meconium stained liquor.

Table 17: Reasons for intrapartum transfer, 2014

| | Nulliparous (n=26) | Parous (n=11) |
|--|-----------------------|------------------|
| Failure to progress in labour | 11(42.3) | 3(27.2) |
| Maternal request for analgesia | 6(23.1) | - |
| Meconium stained liquor | 3(11.5) | 1(9.1) |
| Spontaneous rupture of the membranes > 18HRS | 1(3.8) | - |
| Retained placenta | - | 3(27.2) |
| Vaginal bleeding in early labour | - | 1(9.1) |
| Preterm labour | 1(3.8) | - |
| Polyhydramnios | - | 1(9.1) |
| Late decelerations in second stage | 1(3.8) | - |
| Fetal tachycardia | 1(3.8) | - |
| High presenting part in labour | - | 1(9.1) |
| Fetal distress | 1(3.8) | - |
| Dehydration | - | 1(9.1) |
| Deflexed head in first stage of labour | 1(3.8) | - |

As indicated in Table 18, the mode of delivery was unknown for one woman who transferred during labour to the maternity unit. Of the 36 recorded, over half of women had a spontaneous vaginal delivery (58.3%; n=21).

Table 18: Mode of delivery for women with an intrapartum transfer, 2014

| | Nulliparous (n=26) | Parous (n=11) |
|---------------------------|-----------------------|------------------|
| Spontaneous Vertex | 14(53.8) | 7(63.6) |
| Vaginal Breech | 2(7.7) | 0(0.0) |
| Ventouse | 1(3.8) | 0(0.0) |
| Forceps | 2(7.7) | 0(0.0) |
| Caesarean Section | 7(26.9) | 3(27.2) |
| Unknown | 0(0.0) | 1(9.1) |

Note: Values are shown as n (%) unless otherwise stated.

Of the 37 women who transferred during labour, 19 (51.4%) had either an epidural or a spinal. Three women (8.1%) had a general anaesthetic and one woman (2.7%) had a blood transfusion.

Of the babies who were born in hospital following an intrapartum transfer, two (5.4%) were admitted to the neonatal unit. Four of the 37 babies (10.8%) needed resuscitation. Of these one baby was resuscitated with suction only, one received oxygen, one baby was

resuscitated by intermittent positive pressure ventilation and one baby was resuscitated with cardiac massage.

A total of seven adverse incidents were documented for women who had an intrapartum transfer to the maternity hospital. Of these three met the criteria for reporting to the HSE and the States Claims Agency. Two were reported to the HSE only and two was reported to States Claims Agency only.

Home birth deliveries

Delivery

The distribution of home births by HSE region was similar to the distribution of planned home births (Table 19).

Table 19: Distribution of mothers intending on having a home birth by HSE area, 2014

| | Home births | Planned home births |
|----------------------------|-------------|---------------------|
| Dublin North East | 24(14.5) | 38(15.1) |
| Dublin Mid Leinster | 32(19.3) | 50(19.8) |
| West | 27(16.3) | 44(17.5) |
| South | 83(50.0) | 120(47.6) |

Note: Values are shown as n (%) unless otherwise stated.

Of the women who birthed at home, rupture of membranes occurred spontaneously in the vast majority of cases (Table 20). Liquor was clear in almost all cases (Table 19) however,

parous women were more likely to have meconium stained liquor than nulliparous women (6.6% versus 0.0%).

Table 20: Rupture of membranes, 2014

| | Nulliparous | | Parous | |
|--------------------|-------------|----------|-----------|----------|
| | Home | Hospital | Home | Hospital |
| Spontaneous | 31(100) | 20(51.3) | 127(93.4) | 8(25.8) |
| Artificial | 0(0) | 6(15.4) | 1(0.7) | 3(9.8) |
| Unknown | 0(0) | 13(33.3) | 8(5.9) | 20(64.5) |

Note: Values are shown as n (%) unless otherwise stated.

Table 21: Liquor colour, 2014

| | Nulliparous | | Parous | |
|-----------------|-------------|-----------------------|-----------|-----------------------|
| | Home | Hospital [†] | Home | Hospital [†] |
| Clear | 30(96.8) | 34(91.9) | 125(91.9) | 22(84.6) |
| Meconium | 0(0) | 2(5.1) | 9(6.6) | 3(11.5) |
| Other | 1(3.2) | 1(2.6) | 2(1.5) | 1(3.8) |

Note: Values are shown as n (%) unless otherwise stated. [†]Data missing for 4 women.

A Self Employed Community Midwife (SECM) was present at the vast majority of births (96.4%). A second midwife was present at almost three quarters of births (72.5%). However, women were more likely to have a second midwife at the birth if they were registered to have the home birth with HSE

South or the HSE West (Table 22). Of the 167 women who birthed at home, five babies were born before the arrival of either an SECM or a second midwife (3.0%).

Table 22: Who was present at the birth by HSE area, 2014

| | Overall (n=167) | Dublin North East (n=24) | Dublin Mid- Leinster (n=33) | West (n=27) | South (n=83) |
|-----------------------|--------------------|-----------------------------|--------------------------------|----------------|-----------------|
| SECM | 161(96.4) | 23(95.8) | 31(96.9) | 25(92.6) | 82(98.8) |
| Second Midwife | 121(72.5) | 6(25.0) | 10(31.3) | 24(88.9) | 81(97.6) |
| Doula | 5(3.0) | 1(4.2) | 1(3.1) | 0(0) | 3(3.6) |
| Partner | 146(88.0) | 19(79.2) | 31(96.9) | 24(88.9) | 72(86.7) |
| Other | 24(14.5) | 4(16.7) | 12(37.5) | 3(11.1) | 5(6.0) |

Note: Values are shown as n (%) unless otherwise stated.

Duration of labour

Almost half of all the women laboured between three and six hours (mean duration 4.9 hours). The longest labour for women who birthed at home was 19 hours. As expected (Figure 6), parous women laboured faster with almost one third of those women having laboured for less than three hours (31.3%).

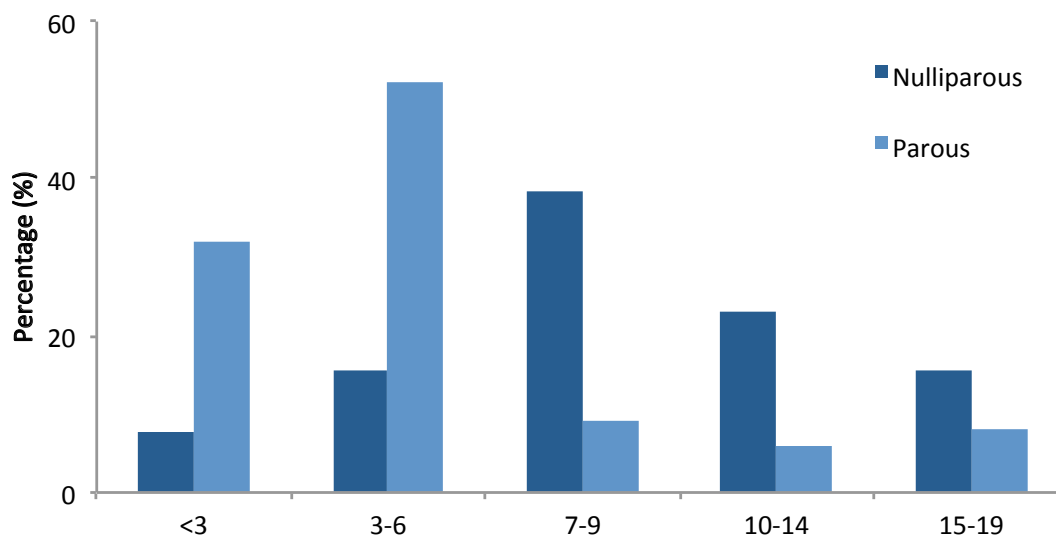


Figure 6: Duration of labour (hours completed) by parity, 2014

As documented in Table 23 there was some variation in maternal position for birth. Three out of every 10 women birth while kneeling (30.3%; 72). One quarter of parous women birthed on all fours (24.5%; n=46).

Table 23: Maternal position for birth by parity, 2014

| | Nulliparous | | Parous | |
|-------------------------|-------------|----------|----------|-----------------------|
| | Home | Hospital | Home | Hospital ⁺ |
| Kneeling | 9(29.0) | 3(7.7) | 59(43.4) | 1(3.3) |
| All fours | 10(32.3) | 2(5.1) | 44(32.4) | 2(6.7) |
| Standing | 0(0) | 0(0) | 11(8.1) | 0(0) |
| Squatting | 2(6.5) | 0(0) | 4(2.9) | 1(3.3) |
| Sitting | 6(19.4) | 5(12.8) | 7(5.1) | 4(13.3) |
| Lateral position | 0(0) | 0(0) | 0(0) | 0(0) |
| Other | 4(12.9) | 12(30.8) | 11(8.1) | 4(13.3) |
| Unknown | 0(0) | 17(43.6) | 0(0) | 18(60.0) |

Note: Values are shown as n (%) unless otherwise stated. +Missing data on three women

Management of the third stage of labour

The vast majority of women who gave birth at home had a physiological third stage of labour (80.2%; n=134). Over a quarter of nulliparous women had active management at home (22.6%; Figure 7). Of the women who birthed in a maternity unit management of the third stage of labour was recorded in 44 of the 71

cases (62.0%). Of these women two thirds (65.9%; n=29) had active management. Of the 62 women who had active management, either in the hospital or in the home, syntocinon and/or syntometrine was administered in 54 cases.

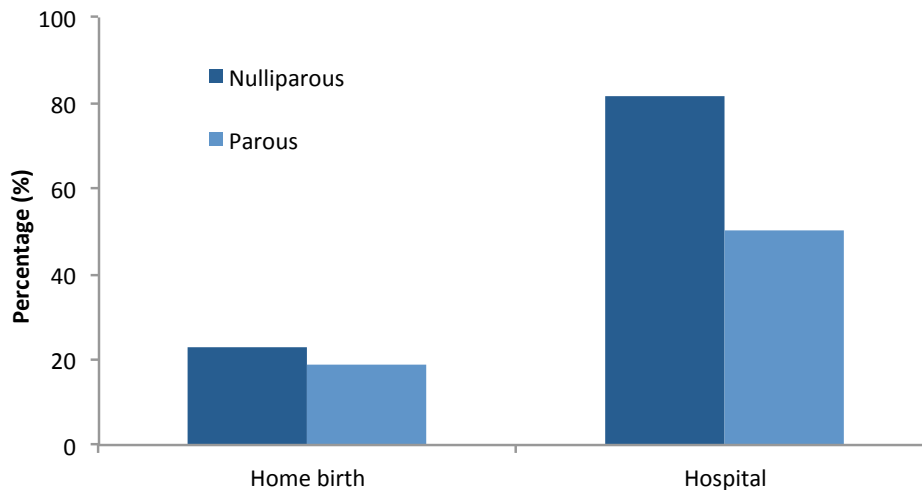


Figure 7: Active management of the third stage of labour, 2014

Pain relief

Type of pain relief was recorded for all 167 women who gave birth at home (Figure 8). Over half of the women used no pain relief (53.9%; n=90). Of the 167 recorded, 38 women who had a home birth had a water birth (22.8%).

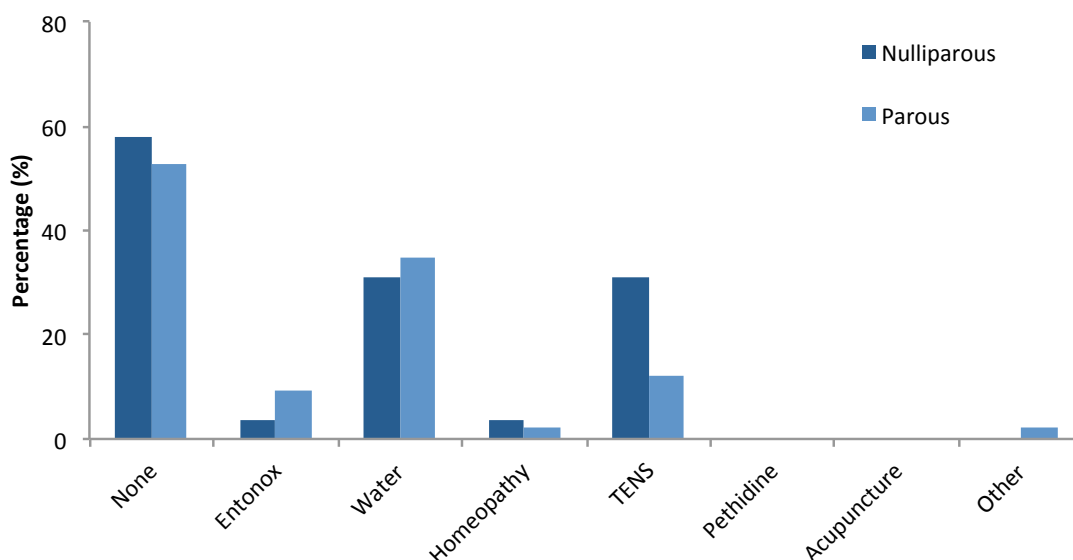


Figure 8: Pain relief used by women delivered in the home, 2014

Other incidences at birth

Two cases of shoulder dystocia occurred. For more than half of the women (55.4%) who gave birth at home the perineum remained intact (Table 24). Of those who birthed at home, parous women were more likely to have

their perineum intact than nulliparous women (59.3% versus 38.7%). A higher number of nulliparous women underwent perineal suturing than parous women (41.9% versus 23.7%).

Table 24: Perineal Outcomes, 2014

| | Primiparous | | Multiparous | |
|------------------------|-------------|-----------|-------------|------------|
| | Home | Hospital† | Home* | Hospital†† |
| Intact | 12(38.7) | 10(38.5) | 80(59.3) | 13(76.5) |
| Episiotomy | 1(3.2) | 9(34.6) | 1(0.7) | 0(0.0) |
| 1st Degree Tear | 6(19.4) | 2(7.7) | 27(20.0) | 1(5.9) |
| 2nd Degree Tear | 12(38.7) | 5(19.2) | 26(19.3) | 3(17.6) |
| 3rd Degree Tear | 0(0) | 0(0) | 1(0.7) | 0(0) |
| 4th Degree Tear | 0(0) | 0(0) | 0(0) | 0(0) |

Note: Values are shown as n (%) unless otherwise stated. †Missing data on 12 women. *Missing data on one woman ††data missing on 17 women.

Estimated blood loss at delivery

The average estimated blood loss for those who delivered at home was 276 ml. The women who birthed at home generally lost either 100-249ml or 250-499ml of blood. The maximum recorded blood loss was estimated at 1,500ml (Figure 9).

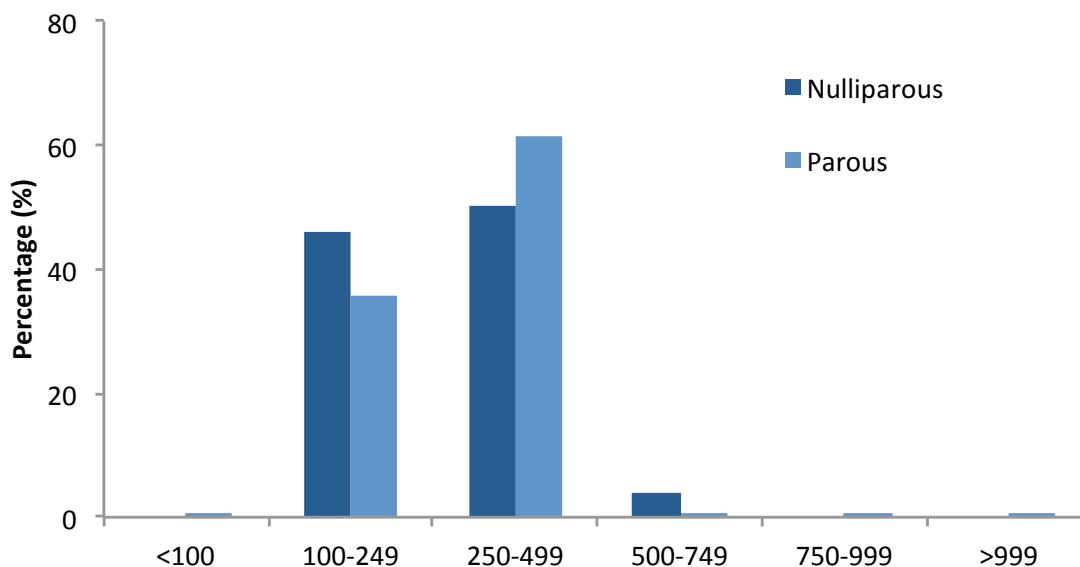


Figure 9: Estimated blood loss (mls) at delivery for women who delivered in the home, 2014

Characteristics of babies who were delivered at home

Sex

Of the babies born at home, 75 were male (45.7%) and 89 were female (54.3%). Sex was unrecorded in three cases.

Birth weight

The mean birth weight for infants born at home was 3,669 grams. This is 217 grams or 6.3% greater than the mean birth weight for all infants born in the country in 2013 (3,452 grams).² For two thirds of births delivered at home (68.1%), the birth weight was between 3,000 and 3,999 grams. One fifth of babies

(21.1%) who were delivered at home had a birth weight between 4,000 and 4,499 (Figure 10). There were three (1.8%) low birth weight babies (less than 2,500 grams) born at home which is a third of the rate of all infants born in the country at 5.5% in 2013.¹

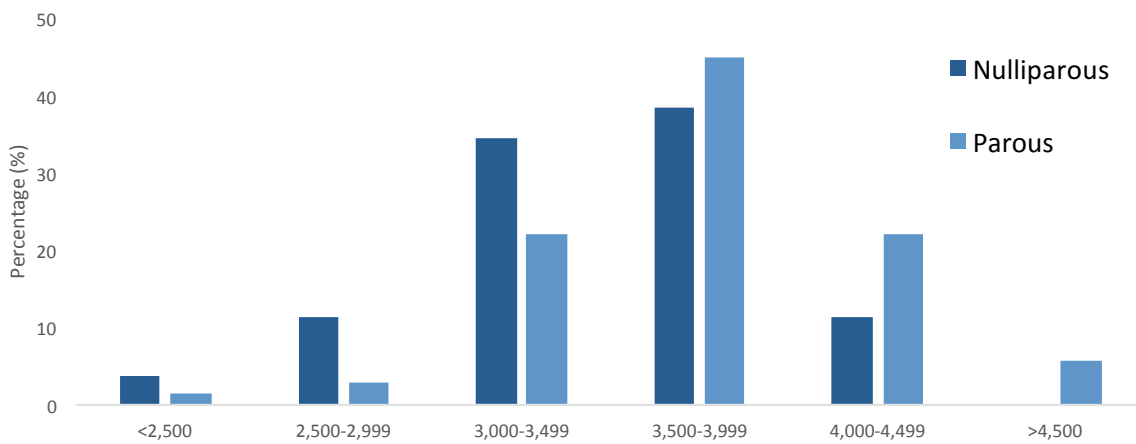


Figure 10: Distribution of birth weight (grams) in babies delivered in the home, 2014

Apgar scores

At one minute after birth over three quarters of babies (81.7%) had an Apgar score of nine (Figure 11). At five minutes the majority of babies had an Apgar score of either nine (30.3%) or ten (69.1%).

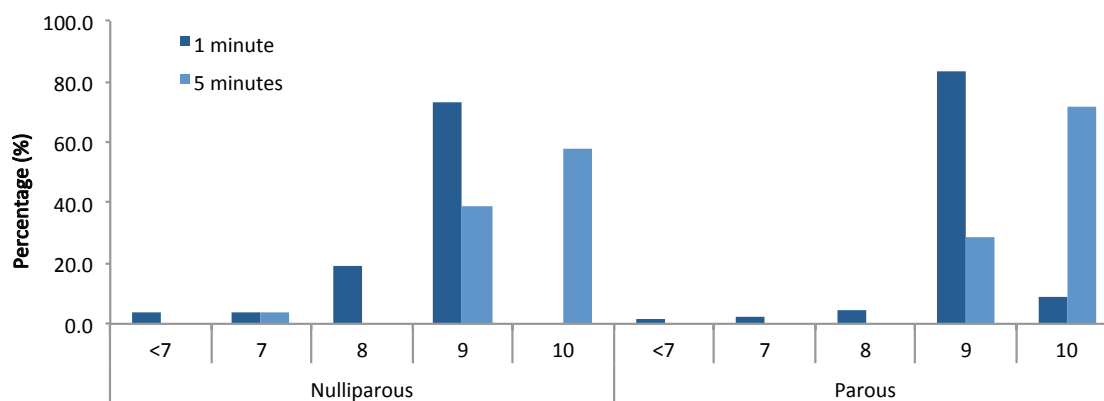


Figure 11: Apgar scores at 1 and 5 minutes for babies delivered in the home, 2014

1. Central Statistics Office. (2013) Vital Statistics Fourth Quarter and Yearly Summary 2012. Cork: CSO.

Resuscitation

Fourteen of the 167 babies born at home (8.4%) needed some form of resuscitation. Seven of the 14 babies were resuscitated with suction

only, four received oxygen, two received tactile simulation and one baby was resuscitated by intermittent positive pressure ventilation.

Delivery examination and screening

Eight of the 167 babies (4.8%) were suspected of having a congenital abnormality specifically: Down Syndrome, talipes of right foot, genetic mitochondrial, hypospadias, suspected tongue tie, nodule on left ear, birth mark on baby's spine and hip dysplasia in the newborn. The National Newborn Bloodspot Screening Programme was performed on 98.7% of the babies (161 of 163,

unknown for four babies). As outlined in Table 23, medical examination of the newborn was carried out by a general practitioner in 86.2% (n=144) of cases where the baby was birthed at home. For those babies born in the maternity unit this examination was mainly undertaken by a hospital paediatrician (71.4%; n=50).

Table 25: Medical examination of the newborn, 2014

| | Home | Hospital |
|-------------------------------|-----------|----------|
| General Practitioner | 144(86.2) | 1(1.7) |
| Hospital Paediatrician | 18(10.8) | 50(71.4) |
| Not carried out | 2(1.2) | 0(0) |
| Unknown | 3(1.8) | 19(27.1) |

Note: Values are shown as n (%) unless otherwise stated.

Of the babies who were birthed at home, two thirds had vitamin K administered either orally (42.7%, n=70) or by intramuscular injection (25.0%; n=41). Vitamin K was not administered

to 32.3% (n=53) of babies born at home versus 12.0% (n=6) of those babies born in the hospital following transfer (Table 26).

Table 26: Vitamin K administration, 2014

| | Home* | Hospital† |
|----------------------------|----------|-----------|
| Administered orally | 70(42.7) | 7(14.0) |
| Administered IM | 41(25.0) | 37(74.0) |
| Not administered | 53(32.3) | 6(12.0) |

Note: Values are shown as n (%) unless otherwise stated. *Data missing on 3 cases + Data missing for 20 mothers.

Method of feeding

Method of feeding was recorded on both day one and on day of discharge from the care of the SECM. As outlined in Table 27, the vast majority of mothers were exclusively breastfeeding on both day one (n=164,

98.2%) and on day of discharge (n=159, 95.2%). Mothers who birthed at home were twice as likely to breastfeed exclusively as the total population¹ on day of discharge (95.2% v 46.6%).

Table 27: Method of feeding, 2014

| | Day one | | Day of Discharge | |
|--------------------------------|-----------|-----------|------------------|-----------|
| | Home* | Hospital† | Home** | Hospital† |
| Exclusive breastfeeding | 164(99.4) | 46(92.0) | 159(97.0) | 48(96.0) |
| Partial breastfeeding | 1(0.6) | 3(6.0) | 3(1.8) | 2(4.0) |
| Artificial | 0(0.0) | 1(2.0) | 2(1.2) | 0(0) |

Note: Values are shown as n (%) unless otherwise stated. * Data missing on 2 mothers. **Data missing on 3 mothers + Data missing for 20 mothers

1. Central Statistics Office. (2013) Vital Statistics Fourth Quarter and Yearly Summary 2012. Cork: CSO.

Infant Transfers

Eight of the 167 babies delivered at home (4.8%) were transferred to hospital for reasons specified in Table 28. Five of the eight babies were transferred by ambulance with the two of the babies transferred by private car and one baby transferred by foot.

Table 28: Reasons for infant transfer, 2014

| | n |
|---|----------|
| Down Syndrome | 1 |
| Baby grunting with chest recession, dusky and cold. Suspected infection. | 1 |
| Observation due to an Apgar of 7 | 1 |
| Overnight observation due to head cold/concerns by mother about blue colour whilst feeding | 1 |
| Viral respiratory tract infection aged 10 days | 1 |
| Respiratory distress | 2 |
| Weight loss of 14% on day 7 | 1 |

Postnatal transfers

Eight women were transferred in the postnatal period for care in a maternity unit. Of the eight women seven were transferred by ambulance. Indications for transfer included; postpartum haemorrhage, mastitis, hypovolaemia, third degree tear and perineal suturing (Table 29).

Table 29: Reasons for maternal transfer postpartum, 2014

| | n |
|---------------------------------------|----------|
| Primary Postpartum haemorrhage | 4 |
| Perineal haematoma | 1 |
| Mastitis | 1 |
| Suturing of perineum | 1 |
| Third degree tear | 1 |
| Hypovolaemia | 1 |

Note: Reasons for transfer are not mutually exclusive with one woman having two reasons for transfer recorded

Medical interventions undertaken in the maternity hospital included; administration of intravenous antibiotics (12.5%; n=1) and local anaesthetic and of blood products (37.5%; n=3), the perineal suturing (37.5%; n=3).

Summary

This is the third national clinical audit on planned home births in Ireland under the care of Self Employed Community Midwives (SECMs). Anonymised data were reported by the five Designated Midwifery Officers on a total of 252 planned home births in 2014. Almost half of all planned home births were arranged through the Health Service Executive (HSE) South home birth service (48%).

Women intent on a home birth had an older age profile to all mothers who gave birth in the country with 77% aged 30-39 years versus 63% for all women giving birth. Body mass index (BMI) was reported for over half of mothers who planned to have a home birth (55%). Of the 55% with data, most were in the healthy range (64%), 29% were overweight, and 5% were obese.

Smoking prevalence is unknown for the pregnant population in Ireland. In UK countries, 12-19% of pregnant women smoke throughout their pregnancy. Data reported for this clinical audit also indicated that seven of the ten mothers who smoked (70%) stopped smoking during pregnancy. Therefore just three women (1%) with a planned home birth in Ireland smoked throughout their pregnancy in 2014. As smoking is a risk factor for perinatal outcomes it is encouraging to continue to see a lower rate of smokers in this population. Regarding alcohol, the vast majority (92%) of the home birth pregnant women did not consume alcohol during pregnancy.

Of the women who intended on having a home birth 21% were referred to the maternity hospital during the antenatal period. Of these women 29% returned to the care of the SECM. Nulliparous women were more likely to be referred than parous women (23% versus 20%). Over one quarter of mothers who transferred during the antenatal period were transferred as they had passed their

estimated date of delivery. Over two thirds (65%) who were referred before birth had a spontaneous vertex delivery in the maternity hospital. However it is important to note that the mode of delivery was unknown for almost one fifth of the women who transferred into the care of the maternity hospital during antenatal care (18%).

Of the 203 mothers who began labouring at home, 18% were transferred to a maternity hospital. Almost all (83%) of these transfers occurred in the first stage of labour. Of these transfers, 39% were associated with failure to progress in labour.

Of the 167 infants born at home 8% needed some form of resuscitation. Eight of all infants who were born at home were transferred to a maternity hospital; three of these babies were admitted to the neonatal intensive care unit. Almost all infants (97%) born at home in 2014 were examined by either a General Practitioner or hospital paediatrician.

On average, mothers stayed under the care of the SECM for 15 days after the birth and received an average of six postnatal visits. Eight mothers were transferred to a maternity hospital for postnatal care.

On the day of the home birth, 99% of mothers were breastfeeding exclusively. The figure was 96% on the day of discharge from the care of the SECM. Mothers who birthed at home were twice as likely to be breastfeeding exclusively on day of discharge compared to all women who gave birth (96% versus 47%). It is important to note that mothers who birth at home are discharged on average 15 days after the birth of their babies from the care of the SECM while mothers who deliver in the maternity hospital are generally discharged 3 days after the birth.

In summary, this national clinical audit of planned home births in Ireland provides baseline information for maternity care professionals and prospective mothers. Clinical audit by the Home Birth Service in collaboration with the National Perinatal Epidemiology Centre will be on-going to ensure that care provision adheres to the standards and guidelines as included in the selection criteria and as specified in the Memorandum of Understanding and Agreement between the HSE and the SECMs. The National Perinatal

Epidemiology Centre in collaboration with the Designated Midwifery Officers continues to develop the audit tool for home births in order for this to be achieved. This report offers an informative resource for clinicians to inform mothers in a clear and transparent manner in relation to planned home birth as a delivery option in Ireland. It is hoped that hospital based home birth services will also partake in the audit and therefore allow added information about options of care for women during pregnancy and delivery.

Appendix A: Designated Midwifery Officers

| HSE Area | Contact |
|---------------------|---|
| Dublin Mid-Leinster | Anne Clarke Designated Midwifery Officer HSE Dublin Mid Leinster Mill Lane Palmerstown Dublin 20 Tel: (01) 6201698 Mobile: 086 4107217 Email: homebirth.dublinml@hse.ie |
| Dublin North East | Ann O'Byrne Designated Midwifery Officer HSE DNE Health Service Executive Dublin North City 2nd Floor, Ballymun Health Care Facility Ballymun Dublin 9 Tel: (01) 8467159 Mobile: 087 9457094 Email: homebirth.dne@hse.ie |
| South | Jo Delaney & Siobhán Sweeney Designated Midwifery Officers Home Birth Service Cork & Kerry Old Dr's Residence St. Finbarrs Hospital Cork Tel: (021) 4923483 Mobile: 087 2889499 Email: Homebirth.South@hse.ie |
| West | Mary T Gibbons Designated Midwifery Officer HSE West Office of Nursing/Midwifery Service Directorate. Mobile: 087 0525060 E-mail: mary.gibbons@hse.ie |

HSE Area

Contact

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Note: The above details are of Designated Midwifery Officers in their current post at time of publication. In 2014, Michelle Waldron was the DMO for Dublin North East until she left her post in October 2015 and took up the post as DMO in the South East. Eithne Coen exited her post in the South East in November 2015. Ann O'Byrne took up post in Dublin North East in October 2015.

A list of the Self Employed Community Midwives is available from the following link to the HSE website; http://www.hse.ie/eng/services/list/3/maternity/homebirth_services.html

Appendix B: Medical conditions and other factors suggesting/requiring planned birth in an obstetric unit

Table 1: Medical conditions indicating increased risk suggesting planned birth at an obstetric unit

| Disease area | Medical condition |
|------------------|---|
| Cardiovascular | Confirmed cardiac disease Hypertensive disorders |
| Respiratory | Asthma requiring an increase in treatment or hospital treatment or requiring steroid treatment in last year Cystic fibrosis |
| Haematological | Haemoglobinopathies – sickle-cell disease, beta-thalassaemia major History of thromboembolic disorders Immune thrombocytopenia purpura or other platelet disorder or platelet count below 100 000 Von Willebrand’s disease Bleeding disorder in the woman or unborn baby Atypical antibodies which carry a risk of haemolytic disease of the newborn |
| Infective | Risk factors associated with group B streptococcus whereby antibiotics in labour would be recommended Infective Hepatitis B or Hepatitis C Carrier of/infected with HIV Toxoplasmosis – women receiving treatment Current active infection of chicken pox/rubella/genital herpes in the woman or baby Tuberculosis under treatment |
| Immune | Scleroderma Systemic lupus erythematosus |
| Endocrine | Diabetes Maternal thyrotoxicosis |
| Renal | Abnormal renal function Renal disease requiring supervision by a renal specialist |
| Neurological | Epilepsy Myasthenia gravis Previous cerebrovascular accident |
| Gastrointestinal | Liver disease associated with current abnormal liver function tests |
| Psychiatric | Psychiatric disorder requiring current in-hospital care and / or requiring specialist care. |

Table 2: Other factors indicating increased risk suggesting planned birth at an obstetric unit

| Factor | Additional information |
|----------------------------------|---|
| Previous pregnancy complications | <p>Unexplained stillbirth/neonatal death or previous death related to intrapartum difficulty [to be discussed with neonatologists]</p> <p>Previous baby with neonatal encephalopathy</p> <p>Pre-eclampsia requiring preterm birth</p> <p>Placental abruption with adverse outcome</p> <p>Eclampsia</p> <p>Uterine rupture</p> <p>Primary postpartum haemorrhage requiring additional pharmacological treatment or blood transfusion</p> <p>Caesarean section</p> <p>Shoulder dystocia</p> |
| Current pregnancy | <p>Multiple birth</p> <p>Placenta praevia</p> <p>Pre-eclampsia or pregnancy-induced hypertension</p> <p>Post-term pregnancy [For medical review by 42 weeks]</p> <p>Preterm labour < 37 +0</p> <p>Preterm pre-labour rupture of membranes</p> <p>Term pregnancy (37+0 to 42+0) pre-labour rupture of membranes for more than 24hrs</p> <p>Placental abruption</p> <p>Anaemia – haemoglobin less than 10g/dl at onset of labour</p> <p>Confirmed intrauterine death</p> <p>Induction of labour</p> <p>Substance misuse</p> <p>Alcohol dependency requiring assessment or treatment</p> <p>Onset of gestational diabetes</p> <p>Malpresentation – breech or transverse lie</p> <p>Recurrent antepartum haemorrhage</p> |
| Fetal indications | <p>Small for gestational age in this pregnancy (less than 5th centile or reduced growth velocity on ultrasound)</p> <p>Abnormal fetal heart rate (FHR)/Doppler studies</p> <p>Ultrasound diagnosis of oligo/polyhydramnios</p> |
| Previous gynaecological history | <p>Myomectomy</p> <p>Hysterotomy</p> |

Appendix C: Medical conditions and other factors requiring referral to consultant obstetrician by the midwife for final assessment when planning place of birth

Table 3: Medical conditions indicating individual assessment when planning place of birth

| Disease area | Medical condition |
|-----------------------|--|
| Cardiovascular | Cardiac disease without intrapartum implications |
| Haematological | Atypical antibodies not putting the baby at risk of haemolytic disease Sickle-cell trait Thalassaemia trait |
| Immune | Nonspecific connective tissue disorders |
| Endocrine | <ul style="list-style-type: none"> • Hyperthyroidism • Unstable hypothyroidism such that a change in treatment is required |
| Skeletal/neurological | Spinal abnormalities Previous fractured pelvis Neurological deficits |
| Gastrointestinal | Liver disease without current abnormal liver function Crohn's disease Ulcerative colitis |

Table 4: Other factors indicating individual assessment when planning place of birth

| Disease area | Medical condition |
|---------------------------------|--|
| Previous complications | Stillbirth/neonatal death with a known non-recurrent cause Pre-eclampsia developing at term Placental abruption with good outcome History of previous baby more than 4.5 kg Extensive vaginal, cervical, or third- or fourth-degree perineal trauma Previous term baby with jaundice requiring exchange transfusion Retained placenta requiring manual removal in theatre |
| Current pregnancy | Antepartum bleeding of unknown origin (single episode after 24 weeks of gestation) Body mass index at booking of ≥ 35 or < 18 kg/m ² Blood pressure of 140 mmHg systolic or 90 mmHg diastolic on two occasions Clinical or ultrasound suspicion of macrosomia Para 6 or more Recreational drug use Under current outpatient psychiatric care Age over 40 at booking |
| Fetal indications | Fetal abnormality |
| Previous gynaecological history | Major gynaecological surgery Cone biopsy or large loop excision of the transformation zone Fibroids Female circumcision |

Appendix D: Indications for intrapartum transfer

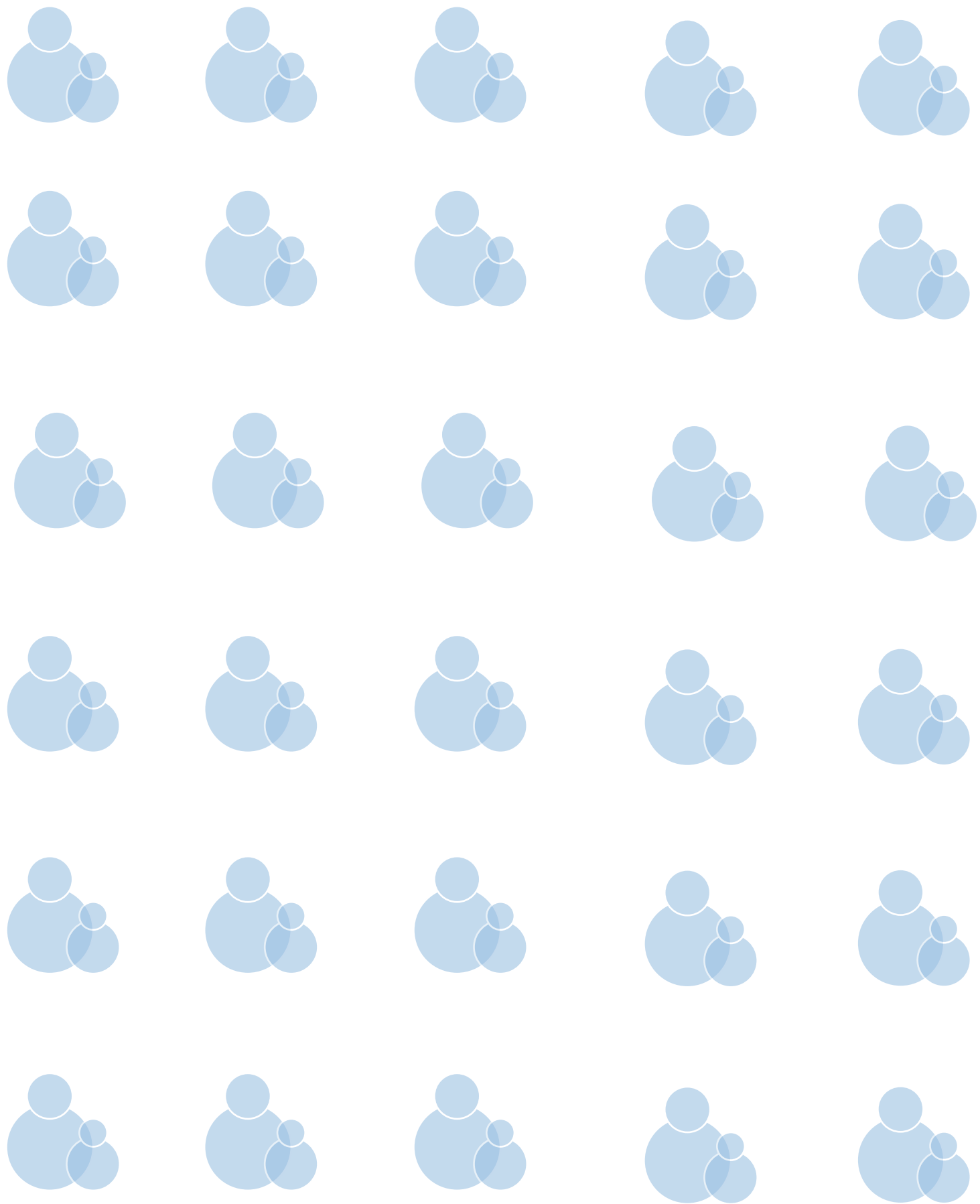
Table 5 Indications for intrapartum transfer

| |
|---|
| Spontaneous rupture of membranes > 24 hours |
| Indications for electronic fetal monitoring (EFM) including abnormalities of the fetal heart rate (FHR) on intermittent auscultation |
| Delay in the first or second stages of labour |
| Meconium stained liquor |
| Maternal request for epidural pain relief |
| Obstetric emergency – antepartum haemorrhage, cord presentation/prolapse, postpartum haemorrhage, maternal collapse or a need for advanced neonatal resuscitation |
| Retained placenta |
| Maternal pyrexia in labour (38.0 °C on one occasions or 37.5 °C on two occasions 2 hours apart) |
| Malpresentation or breech presentation diagnosed for the first time at the onset of labour, taking into account imminence of birth |
| Either raised diastolic blood pressure (over 90 mmHg) or raised systolic blood pressure (over 140 mmHg) on two consecutive readings taken 30 minutes apart |
| Uncertainty about the presence of a fetal heartbeat |
| Third or fourth degree tear or other complicated perineal trauma requiring suturing |

Appendix E: Indications for postpartum transfer

Table 6 Indications for Postpartum transfer

| Disease area | Medical condition |
|--------------|--|
| Mother | <p>Postpartum haemorrhage (>500mls) or any amount that causes the mothers condition to deteriorate</p> <p>Pyrexia (38.0 °C on one occasions or 37.5 °C on two occasions 2 hours apart)</p> <p>Signs of thromboembolic disease</p> <p>Retained placenta-required suturing</p> |
| Infant | <p>Congenital or genetic abnormality</p> <p>Respiratory symptoms – tachypnoea (RR>60/minute), grunting, recession</p> <p>Cyanosis, plethora, pallor</p> <p>Bile-stained vomiting, persistent vomiting or abdominal distension</p> <p>Delay in passing urine or meconium >24 hours</p> <p>Fits, jitteriness, abnormal lethargy, floppiness, high pitched cry</p> <p>Jaundice <24 hours</p> |
| Other | Please write in a condition/diagnosis |



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