

# Planned Home Births in Ireland

ANNUAL REPORT 2013



NATIONAL PERINATAL  
EPIDEMIOLOGY CENTRE



Office of the  
Nursing & Midwifery  
Services Director



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Health Service Executive

Tús Áite do  
Shábháilteacht 1 Othar  
Patient Safety 1 First



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# Acknowledgements

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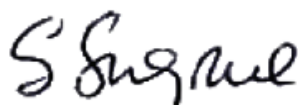
Measurement of the outcome of the care of women and their babies is essential for the development of the home birth service and it is to this end that it was decided that a national clinical audit on planned home births was established and figures published in an Annual Report. The Health Service Executive (HSE) is pleased therefore to publish the second Annual Report (2013). The Report is endorsed by the Clinical Programme for Obstetrics and Gynaecology in the HSE.

The Office of the Nursing and Midwifery Services Directorate, under the Chairmanship of Dr. Michael Shannon supported the development of the home birth service over the last number of years. I wish to acknowledge his support.

I would also like to acknowledge the role the Designated Midwifery Officers have performed over the past year and their dedication to ensuring each woman who has been approved for a home birth receives a quality home birth service on behalf of the HSE.

I again wish to thank 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.

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 work more closely with them in the future. They provide excellent quality care to low risk women across the country. The data presented in the Annual Report assists other health care professionals to have confidence in the service and we hope 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 2013 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.<sup>1</sup> This rate is slightly lower than the home birth rate in the United States of America (0.7%)<sup>2</sup>, much lower than England (2.2%) and Wales (3.1%)<sup>3</sup> and significantly lower than the Netherlands where almost one quarter of births are reported to be in the home.<sup>4</sup>

The Royal College of Midwives (RCM) and the Royal College of Obstetricians and Gynaecologists (RCOG) support home birth for women with uncomplicated pregnancies.<sup>5</sup> 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.<sup>6</sup> 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 having a baby at home 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.<sup>7,8</sup> 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 delivered in a hospital setting.<sup>4</sup> 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.<sup>4</sup>

## 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.<sup>9</sup>

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.<sup>10</sup> 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.<sup>11</sup>

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 the most important factor and that the need for continuity of care is essential.<sup>12</sup> 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

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.

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

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, SECMs (previously known as Independent Midwives) sign an annual Memorandum of Understanding (MOU) with the HSE, to provide planned home birth services to eligible women. 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.”

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.<sup>13</sup>

## 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 2013. As outlined in the MOU between HSE and the SECMs, each SECM is required to partake in clinical audit. Each SECM forwards case notes to the DMO in their respective HSE area. The DMO then collates the data using a standardised audit tool and that data are forwarded to the National Perinatal Epidemiology Centre (NPEC) for analysis. This clinical audit is a national record of planned home births in the Republic of Ireland for 2013. 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 antenatally, during labour or postnatally. 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.

<sup>13</sup>Health Services Executive (2008) Delivery on choice Home birth options for women in Ireland Dublin: HSE

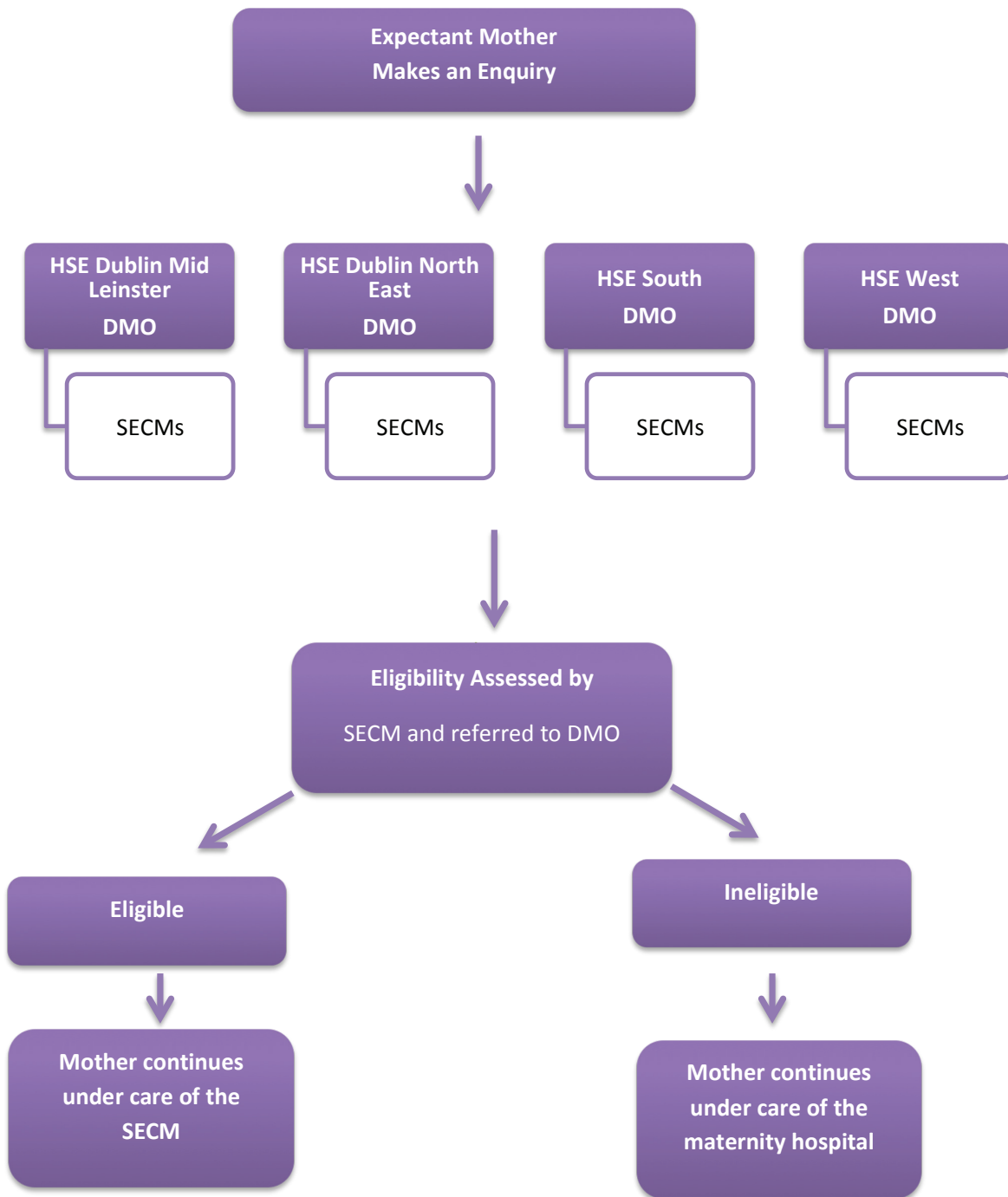
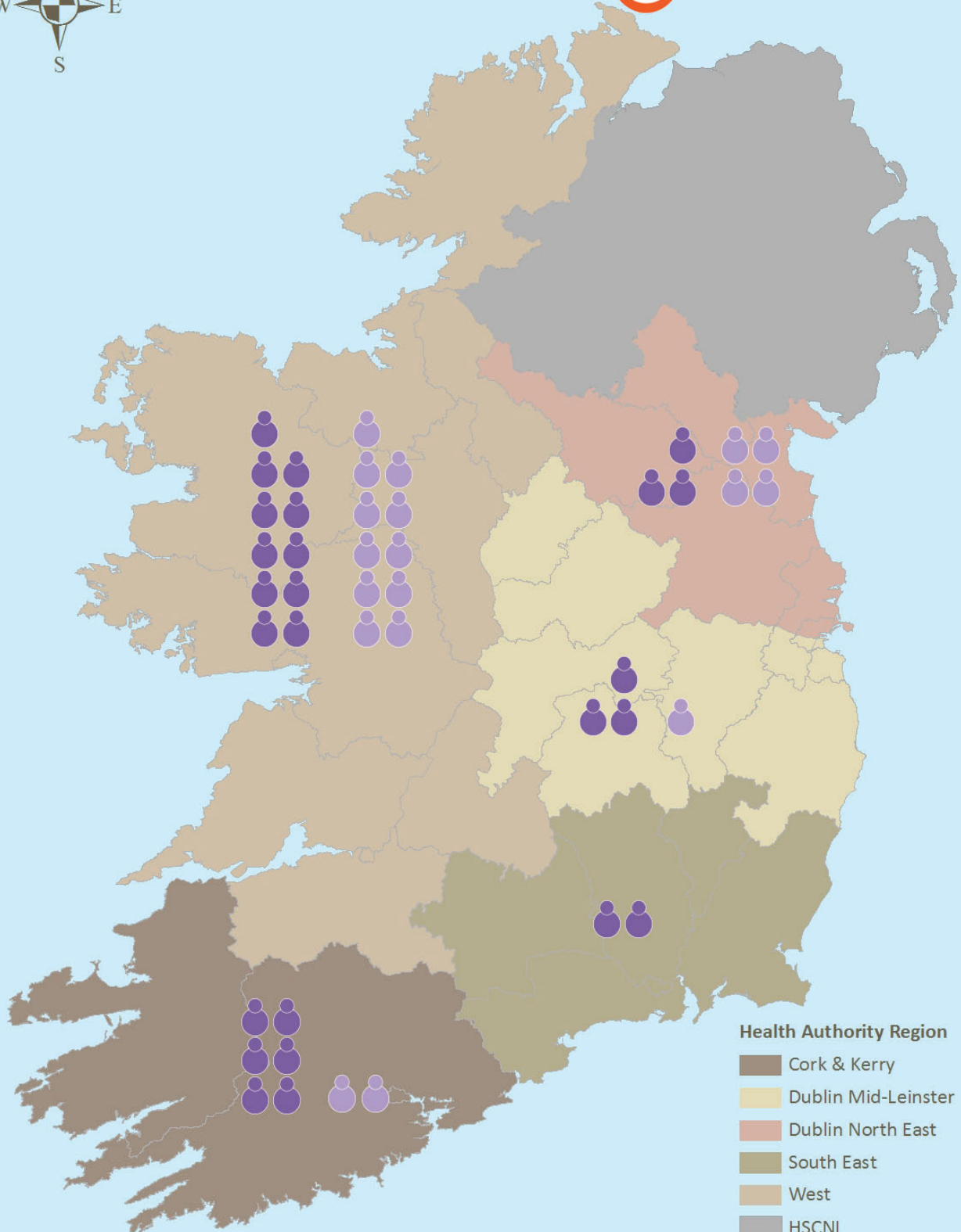


Figure 1: Pathway of care for planned home birth enquiries

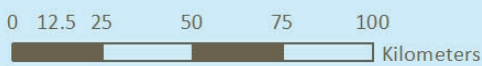


NATIONAL PERINATAL  
EPIDEMIOLOGY CENTRE



**Health Authority Region**

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



# Methods

## Data recording

In 2013, 20 primary Self Employed Community Midwives (SECMs) in Ireland provided a home birth service on behalf of the Health Service Executive (HSE). 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 and transfers the information to the National Perinatal Epidemiology Centre's (NPEC) home birth database. Data on all of the women who registered with the home birth service between January 1 and December 31 2013 were collected from all DMOs using a standardised NPEC data collection form. Figure 2 illustrates the flow of information involved.

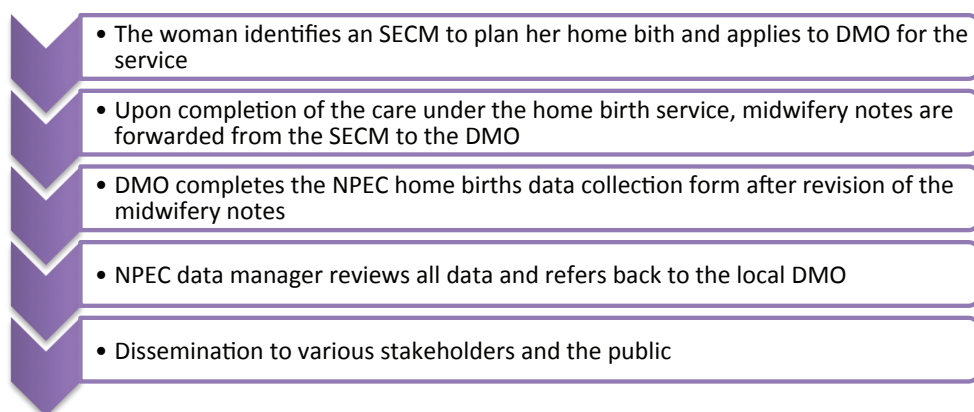


Figure 2: Flow of information in the NPEC data collection process.

## 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 for home birth services outline medical and other conditions indicating increased risk suggesting planned birth at an obstetric unit (Appendix B). Table 3 and Table 4 of the HSE MOU for home birth services outline medical

## 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.

and other conditions indicating individual assessment when planning place of birth (Appendix C)

**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 for home birth services outlines indications for intrapartum transfer (Appendix D)

**Postpartum Transfer:** Hospital transfer following birth. Table 6 of the HSE MOU 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 2013.

**Gravida:** The number of times the mother has been pregnant, irrespective of duration; prior to the home birth in 2013.

# Results

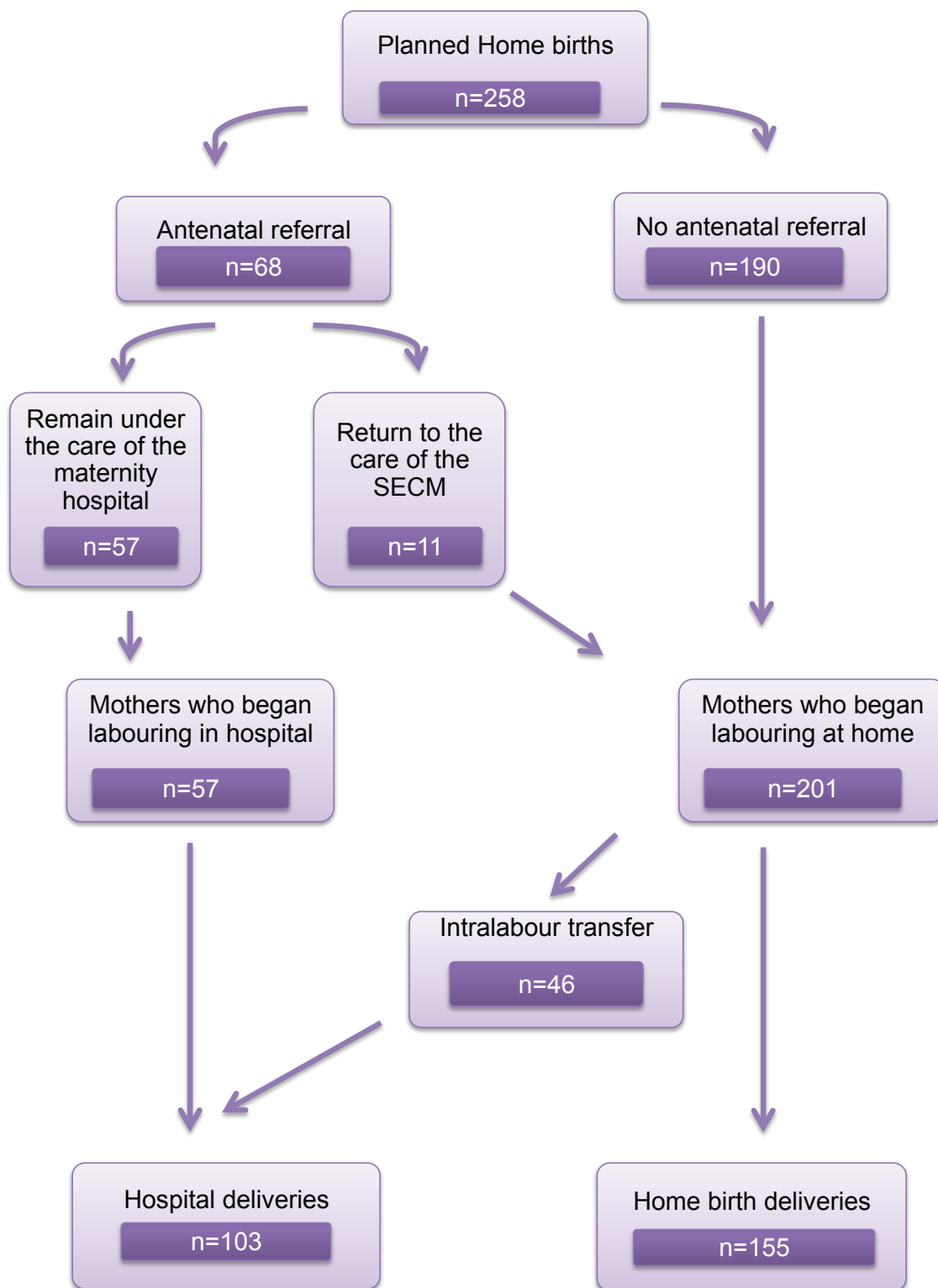


Figure 3: Flowchart of planned home births, 2013



For the period from January 1st to December 31st 2013, there were 258 mothers who intended on having a home birth. During this same period 69,267 births were recorded in the 20 maternity units throughout the Republic of Ireland. 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 15.5% in HSE Dublin North East, 19.4% in HSE Dublin Mid Leinster, 19.8% in HSE West and 45.3% in HSE South (Table 1). These figures show a notable increase of home births in HSE Dublin North East from 2012 to 2013 (8.9% versus 15.5%). The overrepresentation of home births in HSE South persists from 2012 in 2013 (45.3%).

Table 1: Distribution of mothers intending on having a home birth by HSE area, 2012 and 2013

HSE area	Home births (2012)	Home births (2013)
Dublin North East	20(8.9)	40(15.5)
Dublin Mid Leinster	41(18.3)	50(19.4)
West	56(25.0)	51(19.8)
South	107(47.8)	117(45.3)

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

The monthly average distribution of home births and hospital births was 22 and 5,772 births respectively. As outlined in Figure 4, home births were relatively evenly spread throughout the

year, with the lowest number of births occurring in December (5.5%) and the highest occurring in March (11.0%).

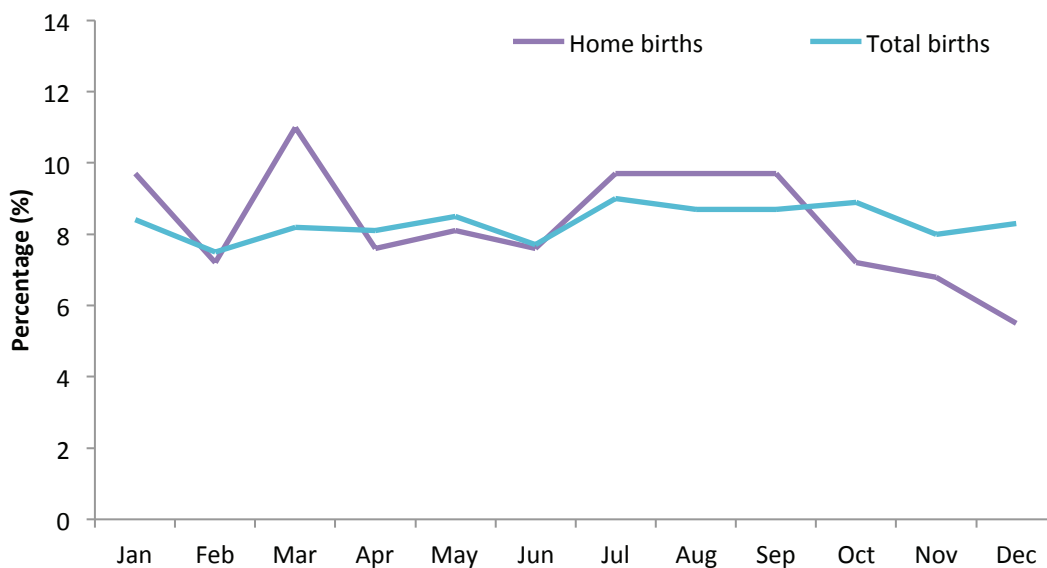


Figure 4: Percentage of births by month, 2013

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 22-44years. Consistent with data from 2012, these women tended to be older than all mothers who gave birth in

Ireland (Table 2). Over three quarters of women (79.1%) 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, 2012 and 2013

Age group	Home births (2012*)	Home births (2013*)	All births, CSO 2013 (%) <sup>1</sup>
<20yrs	0(0)	0(0)	1.9
20-24yrs	6(2.7)	7(2.7)	9.3
25-29yrs	27(12.1)	33(12.8)	20.0
30-34yrs	96(43.0)	115(44.6)	37.1
35-39yrs	78(35.0)	89(34.5)	26.0
>40yrs	16(7.2)	14(5.4)	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 (67.4%; n=174) or with a partner (22.5%; n=58).

Table 3: Marital status of mothers intending on having a home birth, 2012 and 2013

Marital status	Home births (2012)	Home births (2013)
Married	138(61.6)	174(67.4)
Partner	65(29.0)	58(22.5)
Never Married	12(5.4)	16(6.2)
Separated	0(0)	2(0.8)
Divorced	0(0)	2(0.8)
Widowed	0(0)	0(0)
Unknown	9(4.0)	6(2.3)

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

## Ethnicity

Three-quarters of the mothers who booked for a home birth were of white Irish ethnicity which is slightly lower than the percentage of white Irish who booked for a home birth in 2012 (74.1% versus 82.3%). The proportion

of women with another white background is over representative of those in the female population aged 15-49 years in 2013 (Table 4). The numbers of Black/Black Irish are small but representative of the population.

Table 4: Ethnicity of mothers intending on having a home birth, 2012 and 2013

Ethnicity	Home births (2012*)	Home births (2013**)	15-49 year old female population 2011
<b>White Irish</b>	181(82.3)	189(74.1)	80.4%
<b>Irish Traveller</b>	0(0)	0(0)	0.7%
<b>Other white background</b>	33(15.0)	60(23.5)	12.5%
<b>Asian/Asian Irish</b>	1(0.5)	2(0.8)	2.4%
<b>Black/Black Irish</b>	3(1.4)	4(1.6)	1.6%
<b>Other/mixed</b>	2(0.9)	0(0)	1.0%

Note: Values are shown as n (%) unless otherwise stated. Population data from the National Census 2011.

\*Ethnicity unknown for four mothers. \*\*Ethnicity unknown for three mothers

## Gestation at booking

Gestation at the time of the women's antenatal scan was unrecorded in a sixth of the cases (n=46). Of those recorded half of the women booked with the SECM between 12 and 19 weeks gestation and over one-quarter booked

at 20 weeks gestation or later (Table 5). It can be seen that the proportion of women who booked with the SECM before 12 weeks almost doubled from 11.8% in 2012 to 20.8% in 2013.

Table 5: Weeks gestation at date of booking, 2012 and 2013

Gestation at booking	Home births (2012*)	Home births (2013**)
<b>Less than 12 Weeks</b>	21(11.9)	44(20.8)
<b>12-19 Weeks</b>	107(60.5)	109(51.4)
<b>20 Weeks or Later</b>	49(27.7)	59(27.8)

Note: Values are shown as n (%) unless otherwise stated. \*Gestation at booking unknown for 47 mothers.

\*\*Gestation at booking unknown for 46 mothers.

## Body mass index

Body mass index (BMI) was available for 40.7% (n=103) of women (Table 6). The BMI in almost three quarter of those women (61.0%; n=64)

was in the healthy range (18.5-24.9kgm<sup>-2</sup>). Almost one third (30.5%; n=32) were classified as overweight (25.0-29.9kgm<sup>-2</sup>).

Table 6: Body mass index of mothers intending on having a home birth, 2012 and 2013

BMI of mothers intending on having a home birth, 2012 (kgm <sup>-2</sup> )	Home births (2012*)	Home births (2013**)	2007 SLÁN <sup>‡</sup> %
<b>Underweight (&lt;18.5)</b>	3(3.1)	1(1.0)	2
<b>Healthy (18.5-24.9)</b>	57(58.8)	64(61.0)	44
<b>Overweight (25.0-29.9)</b>	28(28.9)	32(30.5)	31
<b>Obese (&gt;30.0)</b>	9(9.3)	8(7.6)	23

Note: Values are shown as n (%) unless otherwise stated. \*BMI unknown for 127 mothers. \*\*BMI unknown for 153 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 255 (98.8%) of the 258 women. Nine women (3.5%) were smokers at the time, three of whom gave up during pregnancy. These figures suggest a 33% (3 of 9) cessation rate although this estimated rate is based on small numbers. Thus, six of the 255 (2.4%) 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 239 of the 258 women (92.6%). Of these the vast majority of mothers (225 of 239, 94.1%) did not consume alcohol during pregnancy. Of the 14 who drank alcohol during pregnancy 1 drank alcohol 2-4 times a month and 13 drank alcohol monthly.

## Previous pregnancy

As indicated in Table 7 almost three quarters of the women who intended on having a home birth had a previous birth (184 of 255, 72.2%). Table 8 specifies gravida/parity for 255 of the 258 women who intended on having a home birth in 2013. One quarter of women (n=64, 25.1%) were never pregnant before (gravida=0). Of the women who had been pregnant (gravida > 0), almost three quarters (n=141 of 191, 73.8%) had

completed pregnancies (gravida = parity, indicated by green shading); one quarter (n=43, 22.5%) experienced completed pregnancies but also at least one pregnancy less than 24 weeks gestation and under 500g birthweight (gravida > parity > 0, indicated by orange shading) and 4% (n=7, 3.7%) had miscarriages, 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, 2013

Parity	Home births (2013*)	All Births HPO
<b>Nulliparous</b>	<b>71(27.8)</b>	<b>26,665(38.5)</b>
<b>Parous</b>	<b>184(72.2)</b>	<b>42602(61.5)</b>

Note: Values are shown as n (%) unless otherwise stated. \*Parity unknown for 3 mothers.

Table 8: Gravida/parity of women prior to pregnancy in 2013

Gravida	Parity								Total
	0	1	2	3	4	5	6	7	
0	64								64
1	4	71							75
2	2	14	49						65
3	1	4	10	13					28
4	0	0	3	7	6				16
5	0	0	1	1	2	2			6
6	0	0	0	0	0	0	0		1
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	0
<b>Total</b>	<b>71</b>	<b>89</b>	<b>63</b>	<b>21</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>255</b>

Note: Data unknown for 3 cases. We refer to gravida and parity prior to the pregnancy in 2013. 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 three women registered during pregnancy with their general practitioner and all women registered with their local maternity unit.

Of the 206 women who had a previous pregnancy, 5 (2.4%) were reported to have had medical or obstetric problems as outlined in Appendix B which included postnatal depression, previous caesarean section, previous postpartum haemorrhage and risk factors associated with Group B streptococcus.

Of the 258 women who intended on having a home birth, 29 mothers (11.2%) were reported to have a medical or an obstetric problem as outlined in Appendix B which included; term pregnancy (37+0 to 42+0) pre-labour

rupture of the membranes for more than 24hrs and post-term pregnancy and Appendix C which included age over 40 at booking, antepartum bleeding of unknown origin, body mass index at booking of greater than or equal to 35, under current outpatient psychiatric care, clinical or ultrasound suspicion of macrosomia, spinal abnormalities, history of previous baby more than 4.5kgs, extensive vaginal, cervical, third fourth degree perineal trauma, hyperthyroidism, parity greater than 6, fibroids, cone biopsy or large loop excision of the transformation zone, and retained placenta requiring manual removal in theatre. Women giving a history of anal fissure, Inflammation of gallbladder, Hodgkin's lymphoma, were also reviewed. All of the above women were reviewed by a consultant obstetrician in a maternity unit.

## Planning for the delivery

It was reported that 3% of the women (n=8) did not have an ultrasound scan. The estimated date of delivery were calculated by last menstrual period in 140 of 258 (54.3%) of cases and/or by scan in 164 of 258 (63.6%) of cases.

The number of antepartum visits by the midwives to women intended on having a

home birth ranged from none to 16 visits. The average number of visits to the women was seven. Almost three quarters of attendances by the midwife for both nulliparous and parous women were between four and nine (69.1% and 76.1%). One in five women were visited between 10 and 12 times antenatally (Table 9).

Table 9: Number of antenatal visits to the SECM, 2013

	Nulliparous (n=71)	Parous (n=180)
<b>Up to 3 visits</b>	4(5.6)	3(1.7)
<b>4-6 visits</b>	30(42.3)	67(37.2)
<b>7-9 visits</b>	19(26.8)	70(38.9)
<b>10-12 visits</b>	16(22.5)	35(19.4)
<b>13-15 visits</b>	1(1.4)	5(2.8)
<b>More than 15 visits</b>	1(1.4)	0(0)

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

## Antenatal referrals

Of the 258 women intending to have a home birth, 68 (26.4%) 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 antenatally than parous women (32.4% versus 24.4%; Table 10). Almost one quarter of these referrals were associated with post maturity (23.5%; n=16) therefore the women attended hospital to have labour induced.

Table 10: Antenatal referral by parity, 2013

	Nulliparous (n=71)	Parous (n=184)
<b>No antenatal referral</b>	48(67.6)	140(77.6)
<b>Antenatal referral</b>	23(32.4)	44(24.4)

Note: Values are shown as n (%) unless otherwise stated. Unknown for one woman.

Almost half of all women who were referred to the maternity hospital during the antenatal period had a spontaneous vertex delivery.

Nulliparous women were more likely to have a caesarean section delivery than parous women (Table 11).

Table 11: Mode of delivery for women with an antenatal transfer, 2013

	Nulliparous (n=23)	Parous (n=37)*
<b>Spontaneous Vertex</b>	11(47.8)	21(56.8)
<b>Vaginal Breech</b>	0(0.0)	1(2.7)
<b>Ventouse</b>	0(0.0)	0(0.0)
<b>Forceps</b>	0(0.0)	0(0.0)
<b>Caesarean Section</b>	2(8.7)	1(2.7)
<b>Unknown</b>	10(43.5)	14(37.8)

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

Of the 68 women referred to the maternity hospital for antenatal care 11 (16.2%) women were returned to the care of the SECM. There was one adverse outcome identified for a woman who initially was booked with the home birth service and subsequently was referred to the maternity hospital antenatally for care. This

adverse outcome was reported to the HSE and the States Claim Agency whereby the mother was under the care of the maternity hospital however the mother did not attend the hospital for her labour and birth which resulted in her giving birth unassisted at home.

### Intrapartum transfers

Of the 201 women who began labouring at home 46 (22.9%) were transferred to a maternity hospital to deliver the baby. Of these women 40% were transferred by

ambulance (n=15). As demonstrated in Table 12, nulliparous women more than four times more likely to transfer during labour than parous women (54.9% versus 11.5%).

Table 12: Intrapartum transfer rates by parity, 2013

	Nulliparous (n=51)	Parous (n=148)
<b>Home birth not transferred</b>	23(45.1)	131(88.5)
<b>Intrapartum transfer</b>	28(54.9)	17(11.5)

Note: Values are shown as n (%) unless otherwise stated. Unknown for two women.

Over three quarters of intrapartum transfers occurred during the first stage of labour (80.5%; n=29). Parous women were more

likely to transfer during the 2nd stage compared to nulliparous women (25.0% versus 16.7%) as outlined in Table 13.

Table 13: Stage of labour when transferred, 2013

	Nulliparous (n=25)	Parous (n=13)
<b>1st Stage</b>	20(80.0)	10(76.9)
<b>2nd Stage</b>	4(16.0)	3(23.1)
<b>3rd Stage</b>	1(4.0)	0(0.0)

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

## Medical interventions

Almost half of intrapartum transfers to the maternity unit were associated with failure to progress in labour (45.7% n=21). As indicated in Table 14, the mode of delivery was unknown in almost half of women who transferred during labour to the maternity unit (43.5%; n=20). Of the 25 recorded the majority of women had a spontaneous vaginal delivery (80.0%; n=20).

Of the 37 women who transferred during labour, sixteen (43.2%) had an epidural and one women (2.7%) had a blood transfusion. No other adverse outcomes were recorded for any of the other women transferred during labour.

Table 14: Mode of delivery for women with an intrapartum transfer, 2013

	Nulliparous (n=28)	Parous (n=17)
<b>Spontaneous Vertex</b>	10(35.7)	10(58.8)
<b>Vaginal Breech</b>	2(7.1)	0(0.0)
<b>Ventouse</b>	0(0.0)	0(0.0)
<b>Forceps</b>	2(7.1)	0(0.0)
<b>Caesarean Section</b>	1(3.6)	0(0.0)
<b>Unknown</b>	13(46.4)	7(41.2)

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



## Home birth deliveries

### Delivery

Of the 201 women who began labouring at home 155 gave birth at home (77.1%). The distribution of home births by HSE region was similar to the distribution of planned home births (Table 15).

Table 15: Distribution of mothers intending on having a home birth by HSE area, 2013

	Home births (N=155)	Planned home births (N=258)
<b>Dublin NE</b>	24(15.5)	40(15.5)
<b>Dublin Mid Leinster</b>	30(19.4)	50(19.4)
<b>West</b>	30(19.4)	51(19.8)
<b>South</b>	71(45.8)	117(45.3)

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 18). Liquor was clear in almost all cases (Table 19) however, parous women were more likely to have meconium stained liquor than nulliparous women (7.2% versus 0%).

Table 16: Rupture of membranes, 2013

	Nulliparous		Parous	
	Home	Hospital	Home	Hospital
<b>Spontaneous</b>	22(95.7)	16(57.1)	125(95.4)	8(47.1)
<b>Artificial</b>	0(0.0)	4(14.3)	0(0.0)	3(17.6)
<b>Unknown</b>	1(4.3)	8(28.6)	6(4.5)	6(35.3)

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

Table 17: Liquor colour, 2013

	Nulliparous		Parous	
	Home*	Hospital†	Home**	Hospital††
<b>Clear</b>	22(100)	15(78.9)	115(92.0)	10(90.9)
<b>Meconium</b>	0(0.0)	4(21.1)	9(7.2)	1(9.1)
<b>Other</b>	0(0.0)	0(0.0)	1(0.8)	0(0.0)

Note: Values are shown as n (%) unless otherwise stated. \* Data missing for one woman .  
+Data missing for 9 women. ++Data missing for 6 women.

A Self Employed Community Midwife (SECM) was present at the vast majority of births (95.5%). A second midwife was present at two thirds of births (65.8%). 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 18). Auxiliary health care professionals were present at some births in an observational capacity. Family members were also present at births. In a number of cases the SECM or second midwife was contacted and in transit however due to the mothers short labour the baby was born before arrival.

Table 18: Who was present at the birth by HSE area, 2013

	Overall	Dublin North East (n=24)	Dublin Mid-Leinster (n=30)	West (n=30)	South (n=75)
<b>SECM</b>	148(95.5)	23(95.8)	29(96.7)	28(93.3)	68(95.8)
<b>Second Midwife</b>	102(65.8)	5(20.8)	7(23.3)	26(86.7)	64(90.1)
<b>Doula</b>	1(0.6)	0(0.0)	0(0.0)	0(0.0)	1(1.4)
<b>Partner</b>	146(94.2)	21(87.5)	29(96.7)	29(96.7)	67(94.4)
<b>Other</b>	24(15.5)	6(25.0)	13(43.3)	2(6.7)	3(4.2)

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

### Duration of labour

The majority of women laboured between three and six hours (mean duration 4.2 hours). The longest labour for women who birthed at home was 17 hours. As expected

(Figure 5), parous women laboured faster with over one third of those women having laboured for less than three hours (38.6%).

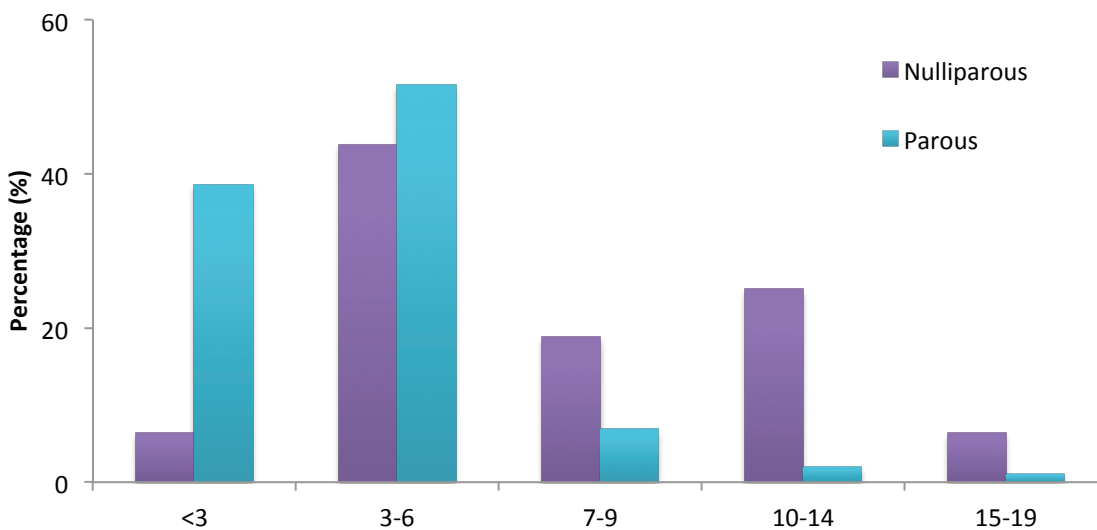


Figure 5: Duration of labour (hours completed) by parity, 2013

As documented in Table 19 there was some variation in maternal position for birth. Almost half of the women who birthed at home favoured kneeling (50.6%; n=78). One in four

parous women birthed on all fours (24.6%; n=32). The birthing position of over half the women who had an intrapartum transfer was unknown (53.3%; n=24).

Table 19: Maternal position for birth by parity, 2013

	Nulliparous		Parous	
	Home	Hospital	Home	Hospital
<b>Kneeling</b>	11(47.8)	1(3.6)	67(51.6)	4(28.6)
<b>All fours</b>	0(0.0)	0(0.0)	32(24.6)	0(0.0)
<b>Standing</b>	2(8.7)	0(0.0)	7(5.4)	1(7.1)
<b>Squatting</b>	3(13.0)	0(0.0)	8(6.1)	0(0.0)
<b>Sitting</b>	1(4.3)	3(10.7)	8(6.1)	0(0.0)
<b>Lateral position</b>	2(8.7)	0(0.0)	4(3.1)	0(0.0)
<b>Other</b>	4(17.4)	4(14.3)	4(3.1)	2(14.3)
<b>Unknown</b>	0(0.0)	17(60.7)	0(0.0)	7(50.0)

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

## Management of the third stage of labour

The vast majority of women who gave birth at home had a physiological third stage of labour (87.0%; n=134). Nulliparous were twice more likely to have active management than parous women at home (21.7% versus 10.8%; Figure 6). Of the women who were transferred during labour to a maternity unit management

of the third stage of labour was recorded in 24 of the 46 cases (52.5%). Of these women over three quarters (79.2%; n=19) had active management. Of the 39 women who had active management, either in the hospital or in the home, syntocinon and/or syntometrine was used in 29 cases.

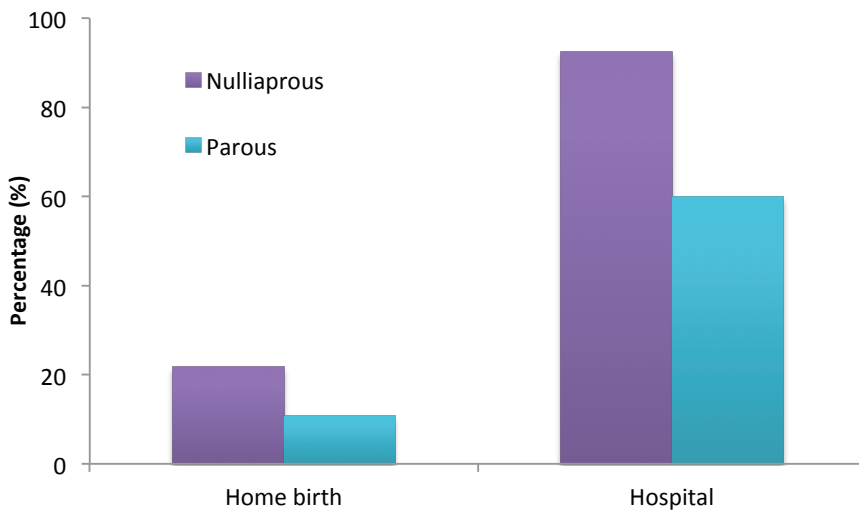


Figure 6: Active management of the third stage of labour by parity, 2013

## Pain relief

Use of pain relief was recorded for all 155 women who gave birth at home. Over half of the women used no pain relief (57.4%; n=89). Nulliparous

women were more likely to use water for pain relief (Figure 7). Of the 155 recorded, 36 women who had a home birth had a water birth (23.2%).

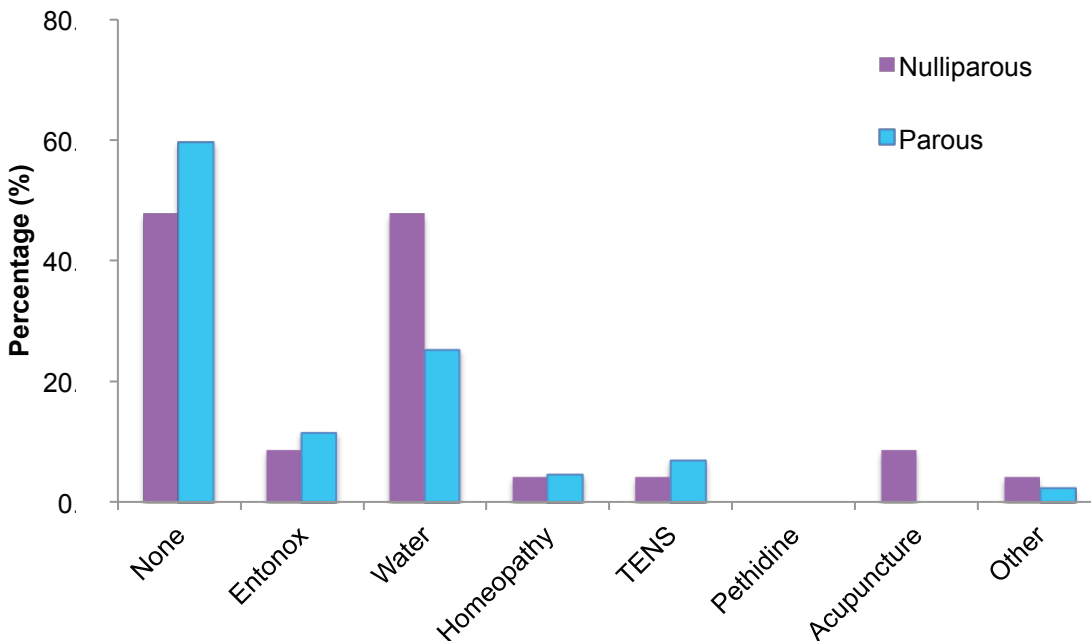


Figure 7: Pain relief used by women delivered in the home by parity, 2013

### Other incidences at birth

One case of shoulder dystocia occurred and there were two women who were transferred to a maternity hospital during labour with undiagnosed breech presentation. For almost two thirds of the women (60.8%) who gave birth at home the perineum remained intact (Table 20). Of those who birthed at

home, parous women were more likely to have their perineum intact than nulliparous women (64.3% versus 45.5%). As expected, as nulliparous women were more likely to experience a tear they were also more likely to undergo perineal suturing than parous women (39.1% versus 15.3%).

Table 20: Perineal outcomes, 2013

	Primiparous		Multiparous	
	Home*	Hospital††	Home*	Hospital††
<b>Intact</b>	10(45.5)	3(18.8)	83(64.3)	8(72.7)
<b>Episiotomy</b>	1(4.5)	8(50.0)	1(0.8)	2(18.2)
<b>1st Degree Tear</b>	3(13.0)	1(6.3)	26(20.2)	1(9.1)
<b>2nd Degree Tear</b>	6(26.1)	4(25.0)	19(14.7)	0(0.0)
<b>3rd Degree Tear</b>	2(8.7)	0(0.0)	0(0.0)	0(0.0)
<b>4th Degree Tear</b>	0(0.0)	0(0.0)	0(0.0)	0(0.0)

Note: Values are shown as n (%) unless otherwise stated. \*Data missing for one woman. †Missing data on 12 women. ††data missing on 6 women.

### Estimated blood loss at delivery

The average estimated blood loss was 241 ml. The women who birthed at home generally lost either 100-249ml or 250-499ml of blood.

The maximum blood loss was estimated at 600ml (Figure 8).

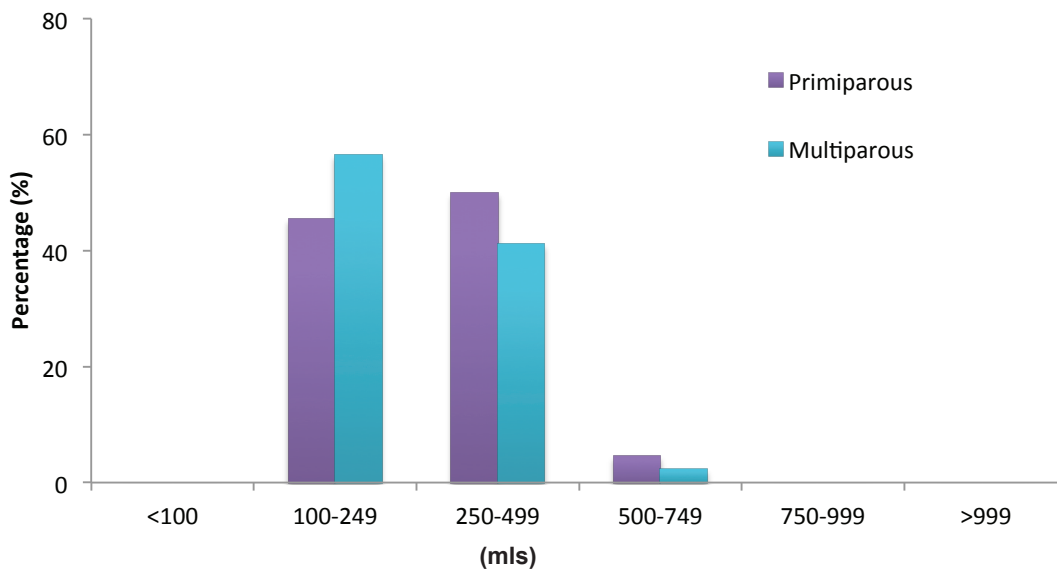


Figure 8: Estimated blood loss at delivery for women who delivered in the home, 2013

## Characteristics of babies who were delivered at home

### Sex

Of the babies born at home, 88 were male (56.8%) and 67 were female (43.2%). These are relatively comparable to all babies in the

country whereby 51.3% were male and 48.7% were female in 2013.<sup>1</sup>

### Birth weight

The mean birth weight for infants born at home was 3,609 grams. This is 157 grams or 4.5% greater than the mean birth weight for all infants born in the country in 2013 (3,452 grams).<sup>1</sup> For two thirds of births delivered at home (62.5%), the birth weight was between 3,000 and 3,999 grams. Almost a quarter of

babies (28.1%) who were delivered at home had a birth weight between 4,000 and 4,499 (Figure 9). There were four (2.6%) low birth weight babies (less than 2,500 grams) born at home which is half the rate of all infants born in the country at 5.5% in 2013.<sup>1</sup>

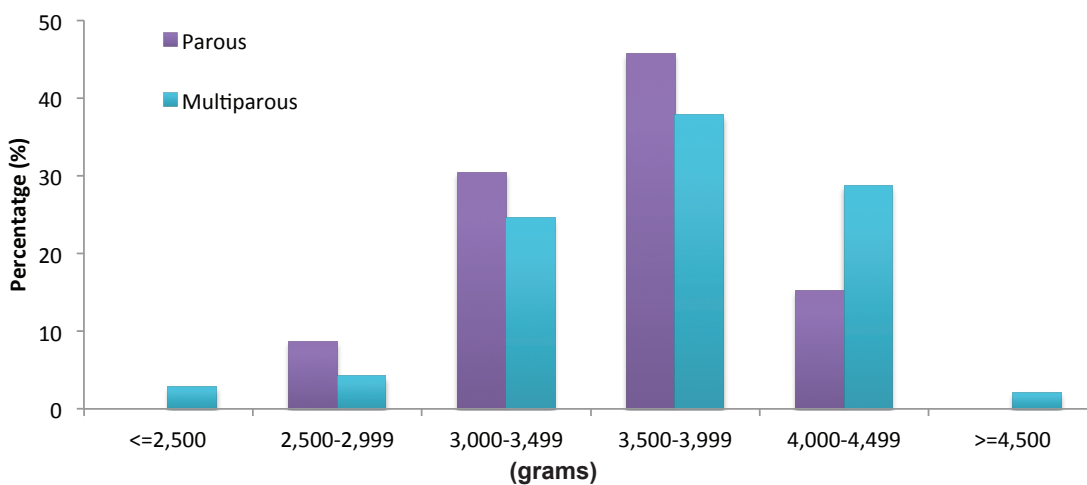


Figure 9: Distribution of birth weight in babies delivered in the home, 2013

### Apgar scores

At one minute after birth more than three quarters of babies (80.4%) had an Apgar score of nine (Figure 10). At five minutes the majority of babies had an Apgar score of either nine (29.7%) or ten (63.9%). One baby was

transferred to the maternity hospital by ambulance for oxygen therapy and to be reviewed by a paediatrician due to a low Apgar score.

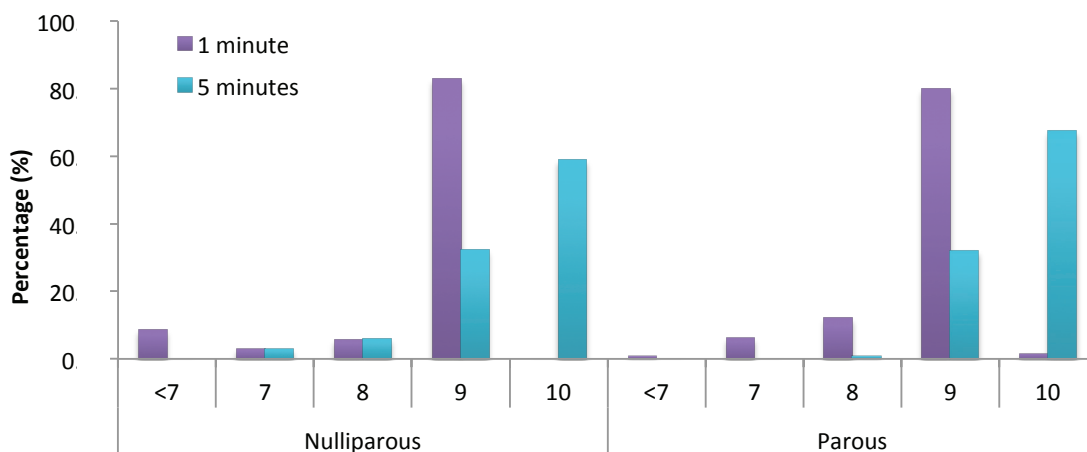


Figure 10: Apgar scores at 1 and 5 minutes for babies delivered in the home, 2013

## Resuscitation

Seven of the 155 babies born at home (4.5%) needed some form of resuscitation. Five of these seven babies were resuscitated

with suction only, two received oxygen and one baby was resuscitated by intermittent positive pressure ventilation

## Delivery examination and screening

Four of the 155 babies (2.6%) were suspected of having a congenital abnormality specifically: congenital cataracts, positional talipes, umbilical hernia and two cord vessel. A newborn bloodspot screening test was performed on 98.7% of the babies (150 of 152, unknown for three babies). Medical examination of the newborn was carried out by a general practitioner in 88% of cases

where the baby was birthed at home. For those who began labouring at home but the baby was born in the maternity unit this examination was mainly undertaken by a hospital paediatrician (89.7%; n=35). All babies were examined by either a General Practitioner or a hospital paediatrician (Table 21).

Table 21: Medical examination of the newborn, 2013

	Home*	Hospital†
<b>Yes, by General Practitioner</b>	137(88.4)	4(10.3)
<b>Yes, by Hospital Paediatrician</b>	12(7.7)	35(89.7)
<b>No</b>	0(0.0)	0(0.0)

Note: Values are shown as n (%) unless otherwise stated. \*Data missing for 6 newborns. + Data missing for 7 newborns.

Of the babies who were birthed at home, almost two thirds had vitamin K administered either orally (33.3%, n=50) or intramuscular injection (25.3%; n=38). Vitamin K was not

administered to 41.3% (n=62) of babies born at home versus 10.3% of those babies born in the hospital following an intrapartum transfer (Table 22).

Table 22: Vitamin K administration, 2013

	Home*	Hospital†
<b>Yes, administered orally</b>	50(33.3)	5(12.8)
<b>Yes, administered IM</b>	38(25.3)	30(76.9)
<b>No</b>	62(41.3)	4(10.3)

Note: Values are shown as n (%) unless otherwise stated. \* missing data on 5 infants + missing data on 7 infants

## 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 23, the vast majority of mothers were exclusively breastfeeding on both day one (n=136,

91.9%) and on day of discharge (n=143, 93.5%). Mothers who birthed at home were twice as likely to breastfeed exclusively as the total population<sup>1</sup> on day of discharge (93.5% v 46.6%).

Table 23: Method of feeding, 2013

	Day one		Day of Discharge	
	Home*	Hospital†	Home*	Hospital†
<b>Exclusive breastfeeding</b>	136(91.9)	34(87.2)	143(93.5)	34(87.2)
<b>Partial breastfeeding</b>	10(6.8)	4(10.3)	8(5.2)	4(10.3)
<b>Artificial</b>	2(1.4)	1(2.6)	2(1.3)	1(2.6)

Note: Values are shown as n (%) unless otherwise stated. \* Data missing on 7 mothers. \*\*Data missing on two mothers. + Data missing for 7 mothers.

## Infant Transfers

Six of the 155 babies delivered at home (3.9%) were transferred to hospital for reasons specified in Table 24. Four of the six babies were transferred by ambulance with the other two babies transferred by private car.

Table 24: Reasons for infant transfer, 2013

	N
<b>Baby grunting (respiratory)</b>	<b>3</b>
<b>Low Apgar Score</b>	<b>1</b>
<b>Hypoglycaemia</b>	<b>1</b>
<b>Unknown</b>	<b>1</b>

## Postnatal transfers

Six women were transferred postnatally for care in a maternity unit. Of the six women four were transferred by ambulance. Indications for transfer included; postpartum haemorrhage, retained placenta, perineal suturing and postnatal dizziness. Medical interventions undertaken in the maternity hospital included; administration of intravenous syntocinon, the manual removal of placenta, administration of additional pharmacological treatment of cyotec and haemobate, spinal anaesthetic, local anaesthetic and perineal suturing.

# Summary

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This is the second national clinical audit on planned home births in Ireland under the care of Self Employed Community Midwives (SECMs). Anonymised data were reported by the four Designated Midwifery Officers on a total of 258 planned home births in 2013. Almost half of all planned home births were arranged through the Health Service Executive (HSE) South home birth service (45%).

Women intent on a home birth had an older age profile to all mothers who gave birth in the country with 79% aged 30-39 years versus 63% for all giving birth. Body mass index (BMI) was not reported for most mothers who planned to have a home birth (59%). Of the 41% with data, most were in the healthy range (61%), 31% were overweight, and 8% were obese. Efforts will be made to improve the completeness of data on BMI.

Smoking prevalence is unknown for the pregnant population in Ireland. In UK countries, 12-19% of pregnant women smoke throughout their pregnancy. This was the case for just 4% of the women with a planned home birth in Ireland in 2013. Data reported for this clinical audit also indicated that three of the nine mothers who smoked (33%) stopped smoking during pregnancy. 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 (93%) of the home birth pregnant women did not consume alcohol during pregnancy.

Of the women who intended on having a home birth 26% were referred to the maternity hospital antenatally. Of these women 16% returned to the care of the SECM. Nulliparous women were more likely to be referred than parous women (32.4% versus 23.9%). Almost one quarter of mothers who transferred antenatally were transferred as they had passed their estimated date of delivery. Half of mothers who were referred antenatally

had a spontaneous vertex delivery (48%). However it is important to note that the mode of delivery was unknown for almost half (46%) of the women who transferred into the care of the maternity hospital antenatally.

Of the mothers who began labouring at home, 23% were transferred to a maternity hospital. Almost all (83%) of these transfers occurred in the first stage of labour and parous women were more likely to transfer in the second stage (25% versus 17%). Half of these transfers (46%) were associated with failure to progress in labour with 40% of women being transferred by ambulance.

There was no maternal or perinatal death associated with the 258 planned home births in 2013. Of the infants born at home 5% needed some form of resuscitation. Six of all infants who were born at home were transferred to a maternity hospital; half of whom were admitted to the neonatal intensive care unit (50%). All infants born at home in 2013 were examined by either a General Practitioner or hospital paediatrician.

On average, mothers stayed under the care of the SECM for 16 days after the birth and received an average of six postnatal visits. Six mothers were transferred to a maternity hospital for postnatal care.

On the day of the home birth, 92% of mothers were breastfeeding exclusively. The figure was 94% 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 (94% versus 47%). It is important to note that mothers who birth at home are discharged on average 16 days after the birth of their babies from the care of the SECM while mothers who deliver in the maternity hospital are 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 between the HSE and the SECMs. Specific issues warranting in depth investigation, for example the presence of meconium stained liquor, will be reviewed and addressed in future reports. The SECMs work across the four HSE areas and as such must contend with differing geographical

constraints; therefore information relating to mothers distance from the SECM as well as the closest maternity hospital will be examined by this audit in the future. 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 is the most 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

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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
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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/home\\_birth.html](http://www.hse.ie/eng/services/list/3/maternity/home_birth.html)

## Appendix B: Medical conditions and other factors indicating increased risk suggesting planned birth at 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	<ul style="list-style-type: none"> <li>Unexplained stillbirth/neonatal death or previous death related to intrapartum difficulty [to be discussed with neonatologists]</li> <li>Previous baby with neonatal encephalopathy</li> <li>Pre-eclampsia requiring preterm birth</li> <li>Placental abruption with adverse outcome</li> <li>Eclampsia</li> <li>Uterine rupture</li> <li>Primary postpartum haemorrhage requiring additional pharmacological treatment or blood transfusion</li> <li>Caesarean section</li> <li>Shoulder dystocia</li> </ul>
Current pregnancy	<ul style="list-style-type: none"> <li>Multiple birth</li> <li>Placenta praevia</li> <li>Pre-eclampsia or pregnancy-induced hypertension</li> <li>Post-term pregnancy [ For medical review by 42 weeks]</li> <li>Preterm labour &lt; 37 +0</li> <li>Preterm pre-labour rupture of membranes</li> <li>Term pregnancy (37+0 to 42+0) pre-labour rupture of membranes for more than 24hrs</li> <li>Placental abruption</li> <li>Anaemia – haemoglobin less than 10g/dl at onset of labour</li> <li>Confirmed intrauterine death</li> <li>Induction of labour</li> <li>Substance misuse</li> <li>Alcohol dependency requiring assessment or treatment</li> <li>Onset of gestational diabetes</li> <li>Malpresentation – breech or transverse lie</li> <li>Recurrent antepartum haemorrhage</li> </ul>
Fetal indications	<ul style="list-style-type: none"> <li>Small for gestational age in this pregnancy (less than 5th centile or reduced growth velocity on ultrasound)</li> <li>Abnormal fetal heart rate (FHR)/Doppler studies</li> <li>Ultrasound diagnosis of oligo/polyhydramnios</li> </ul>
Previous gynaecological history	<ul style="list-style-type: none"> <li>Myomectomy</li> <li>Hysterotomy</li> </ul>

## Appendix C: Medical conditions and other factors indicating individual 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"> <li>• Hyperthyroidism</li> <li>• Unstable hypothyroidism such that a change in treatment is required</li> </ul>
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 $\geq 35$ or $< 18$ kg/m <sup>2</sup> 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

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Table 5 Indications for intrapartum transfer

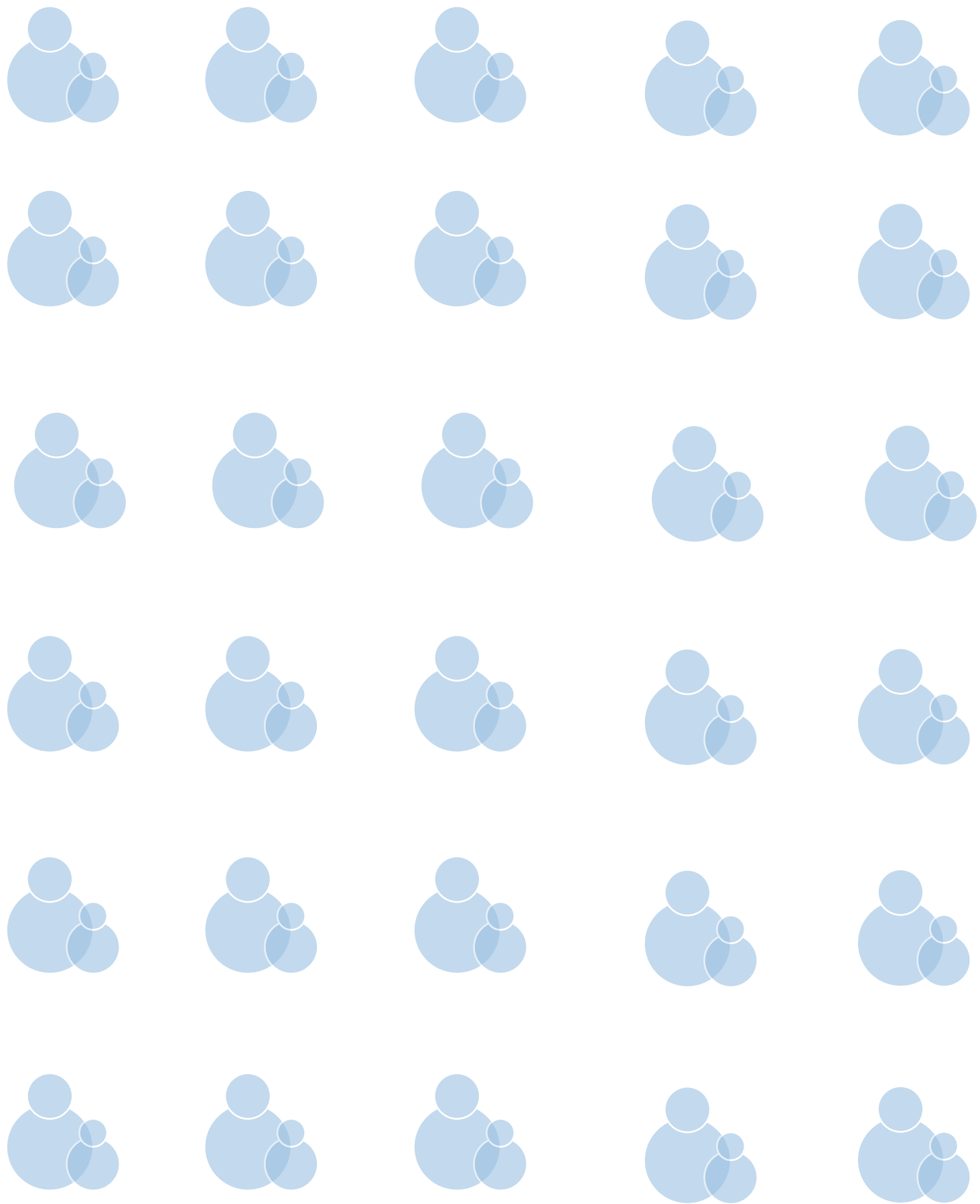
Spontaneous rupture of membranes > 24 hours
Indications for electronic fetal monitoring (EFM) including abnormalities of the fetal heart rate (FHR) on intermittent auscultation
Delay in the first or second stages of labour
Meconium stained liquor
Maternal request for epidural pain relief
Obstetric emergency – 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 (&gt;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>Concerns for psychological wellbeing</p> <p>Signs of thromboembolic disease</p>
Infant	<p>Congenital or genetic abnormality</p> <p>Respiratory symptoms – tachypnoea (RR&gt;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 &gt;24 hours</p> <p>Fits, jitteriness, abnormal lethargy, floppiness, high pitched cry</p> <p>Jaundice &lt;24 hours</p>
Other	Please write in a condition/diagnosis



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