Planned Home Births in Ireland

Triennial Report 2018–2020

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Office of the Nursing & Midwifery Services Director

HSE

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Definitions and terminology

The HSE National Home Birth Service is provided by SECMs to women who are considered at normal risk. An individualised approach is taken for each woman accessing the service to determine eligibility. To ensure comparison, the DMO's and the NPEC used the following definitions which are included in this report:

Exclusion Criteria: The HSE MOU/Agreement for home birth services (Annex 1) outline medical and other factors requiring planned birth in an obstetric unit and medical and other conditions requiring referral to a consultant obstetrician by the midwife for final assessment when planning place of birth.[1]

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

Intrapartum Transfer: The HSE MOU/Agreement for home birth services (Annex 1) outlines indications for intrapartum transfer.[1]

Postpartum Transfer: The HSE MOU/Agreement for home birth services (Annex 1) outlines indications for postpartum transfer.[1]

Booking: For the purposes of this report, booking relates to the woman's first antepartum visit with the Self-Employed Community Midwife.

Maternity unit: Refers to the 19 public hospitals in the Republic of Ireland providing Maternity Care services.

Parity: The number of completed pregnancies, whether live birth or stillbirth, of at least 24 weeks gestation or with a birthweight ≥500g; prior to the home birth between 2018 and 2020.

Gravida: The number of times the woman has been pregnant, irrespective of duration; prior to the home birth between 2018 and 2020.

Stillbirth: A baby born without signs of life from 24 weeks' gestation and/or with a birth weight of ≥ 500g.

Early Neonatal Death: Death of a live born baby occurring before 7 completed days after birth.

Acknowledgements

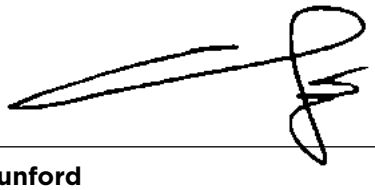
The HSE welcomes the publication of the 7th national clinical audit on planned home births in Ireland, which details clinical outcomes of care provided by Self Employed Community Midwives (SECMs) on behalf of the HSE and those homebirths, within the acute services of Waterford and Wexford.

The National Maternity Strategy (2016) 'Creating a Better Future Together'[2] acknowledged that demand for homebirths exists and this need is reflective in this triennial report, with 848 women registered for homebirth from January 2018 to December 2020. At all times, the HSE Homebirth Service aims to deliver safe, quality care to normal risk eligible women and their families. This 2018 -2020 report is an invaluable resource for all key stakeholders.

I wish to acknowledge the work of all Designated Midwifery Officers (DMOs), SECMs and Community Midwives, past and present, for their leadership, advocacy and support for homebirths in Ireland throughout the years. The DMOs monitor the provision of the homebirth service as per the HSE Homebirth Service agreement and their continued professional, hardworking and dedicated commitment to improving the service is very much appreciated. Sincere thank you to all the SECMs who daily dedicate themselves to providing choice and access for women to have the continuity of care and carer in their pregnancies and births.

As of 28th February 2022, the HSE Homebirth Service is under the governance of Acute Operations. It is clear that in aligning the HSE Homebirth Service as per the National Maternity Strategy it will be integrated with community midwifery and the wider maternity service, as part of the recommended maternity networks. The integration of the HSE Homebirth Service is also in line with the National Slaintecare Strategy.[3]

It is important that homebirth services be provided as a choice for women and supported in a safe and sustainable way, with appropriate multidisciplinary clinical oversight, to provide an excellent experience for individual users, as well as excellent health outcomes for both mother and baby.



TJ Dunford
Head of Operations; Primary Care.
Community Operations

Preface

In collaboration with the Designated Midwifery Officers, HSE.

Welcome to the Planned Home Births Triennial Report (2018-2020) from the Health Service Executive (HSE) in collaboration with the National Perinatal Epidemiology Centre (NPEC). The content of this report reflects the commitment and hard work of many people involved in the maternity services, specifically those involved with the home birth service and the NPEC team. The reason for undertaking a 3-year report is based on difficulties completing the data due to staffing at the NPEC and the COVID-19 pandemic. It was decided with the support of the Designated Midwifery Officers (DMOs) and the NPEC Governance Group to compile a 3-year report.

We acknowledge and thank the Designated Midwifery Officers who play a key role in the safe monitoring and supervision of the HSE Home Birth Service, to the 22 Self Employed Community Midwives who provided care to the women and their families over the 2018-2020 period and to the midwives providing an integrated hospital community midwifery service in Waterford and Wexford. We recognise the challenging years brought upon SECMs and maternity services during the COVID-19 pandemic and acknowledge that the SECMs continued to provide exemplary care to the expectant women, mothers and their babies during this time.

This report provides evidence that year on year, more women are choosing their own home as their preferred place to birth. The care provided to women within the HSE Home Birth Service meets the National Maternity Strategy; Creating a Better Future 2016-2026[2] strategic priority to facilitate a woman's choice of care and place of birth. Furthermore midwife-led and midwife delivered care provided by the HSE Home Birth Service contributes to the Strategy's tenet to increase midwifery care for normal risk women and to empower women in their decision making about their own care.

International evidence highlights that quality midwifery care improves over 50 health-related outcomes in areas such as breastfeeding, cancer and cardio-metabolic disease prevention, tobacco cessation, sexual and reproductive health as well as early childhood development.[4] This report together with the results of the first Health Information and Quality Authority (HIQA) National Maternity Experience Survey found that 100% of those surveyed reported having either a good or very good experience in the HSE Home Birth Service. This indicates a high level of satisfaction for this care model for women in Ireland with one woman commenting "I had such a great experience and I will never forget it".[5] Midwife led and midwife provided care offers continuity to mothers and continues to reflect international evidence that it has a high satisfaction rate for mothers.

We look forward to continued collaboration in assessing the outcomes of maternity care provided, learning from the data and working together, to improve the care of mothers and babies in Ireland.

Richard Greene
Director, National Perinatal Epidemiology Centre.

Executive Summary

This is the seventh national clinical audit report on planned HSE home births in Ireland under the care of SECMs and the integrated hospital community service in Waterford (UHW) and Wexford (WGH). This is a triennial report covering the years 2018, 2019 and 2020. This report provides details on the 848 women who were registered for a home birth from January 1st 2018, to December 31st 2020. Of these, 489 women gave birth at home. Over the course of these three years, 22 primary SECMs and midwives from UHW and WGH provided a home birth service on behalf of the HSE. Anonymised data were reported by the Home Birth Services on a total of 848 planned home births from 2018-2020 (n=231, n=272 and n=345, respectively). This reflects a gradual increase in the number of women who were registered for a home birth compared to figures from 2016 (n=192) and 2017 (n=183). For 2020, the rise in the number of home births may have been impacted by the COVID-19 pandemic reaching Ireland in this year.

The geographical distribution of home births is reflective of the number of SECMs available in each region. HSE South continued to show the highest numbers of home births in this triennial report, as it did in previous reports. Dublin Mid Leinster and Dublin North East showed a significant increase in planned home births compared to previous years. Of the women who were registered for a home birth, almost 95% women registered during pregnancy with their general practitioner (GP). All women planning a home birth were booked with a maternity unit/hospital.

Almost three-quarters of the women registered for a home birth were parous women (68.0%, 69.9% and 65.5% for 2018, 2019 and 2020). Women who were registered for home birth also had an older age profile than all women who gave birth in the country with 74.9% versus 65.7% aged between 30-39 years. Women over the age of 40 applying to the home birth service is shown in this report to be one of the main reasons requiring an individual assessment by a consultant obstetrician when planning place of birth.

Of the women who were registered for a home birth, all but one woman had an antepartum ultrasound scan. In 2020, an increase was seen in women who had their antepartum ultrasound scan at 20 weeks gestation or later (24%) compared to 2018 and 2019 (11% and 8% respectively), which could be reflective of how these services were affected by the pandemic.

Of the 848 women who were registered for a home birth, 33.4% were referred to a maternity hospital due to complications arising during the antepartum period. Similar to previous years, nulliparous women were more likely to transfer in the antepartum period compared to parous women (44% versus 28%). Of the women who transferred during the antepartum period, 14% were transferred because of post maturity, 11% because of prolonged pre-labour rupture of membranes and 9% because the fetus was measuring small for gestational age. Of the women referred to the maternity hospital during the antepartum period, 22% returned to the care of the SECMs following review. There were 221 women whose care remained within the maternity hospital system following transfer. Of these 221 women, 122 had a spontaneous vaginal birth in the maternity hospital (55%). Nulliparous women were more likely to have a caesarean section birth than parous women (41.5% versus 13.5%).

Of the 627 women who began labouring at home, 22% were transferred to a maternity hospital. Nulliparous women were more likely to transfer during labour than parous women (33% versus 8%). More than 90% of intrapartum transfers occurred during the first stage of labour, potentially reflecting caution by the SECMs around the decision to transfer. Failure to progress in labour (27%) and maternal request for analgesia (27%) were the primary reasons associated with transfers during the intrapartum period. Over the three years, three parous women required transfer during the 3rd stage of labour.

The prevalence of antepartum and intrapartum transfers is in line with what is reported in the literature. For example, a systematic review studying the proportions and indications for

transfer from home to hospital during or after labour in planned home births found that the total proportion of women transferred to hospital during labour or after birth, varied from 9.9% to 31.9% across the included studies.[6] Similarly, a Dutch study showed that 46.9% of women, who were in caseload midwifery care, were referred to obstetrician-led care (24.2% antepartum and 22.8% in the intrapartum period).[7]

This is the first time that the NPEC Planned Home Birth Report includes the number of women who had a liaison obstetrician available as part of the home birth service. Approximately 80% of women who were registered for a home birth had a liaison obstetrician available in 2018 (80%) and 2019 (82.6%). In 2020, when the number of home births increased, there was a decrease noted in the percentage of home birth liaison obstetricians available (60%), which could be indicative of the extra strain put on health services during the COVID-19 pandemic.

Of the 489 infants born at home, 6% needed some form of resuscitation ranging from requiring suction only, receiving oxygen, use of intermittent positive pressure ventilation or receiving cardiac massage. This is in line with previous literature, which shows that up to 10% of newborns will need some form of additional support at birth, and 1% will require significant resuscitation.[8] Eighteen infants who were born at home were transferred to a maternity hospital. Most of the babies were transferred because of respiratory concerns (i.e. tachypnoea, grunting, low oxygen saturation; 61.1%), followed by non-fatal fetal anomalies for review (22.2%). Eleven of these eighteen infants were admitted to the Special Care Baby Unit (SCBU) or Neonatal Intensive Care Unit (NICU) following transfer. All of which were later discharged alive and well.

Vitamin K is offered to all women in Ireland for administration to their newborn infants as standard practice. Following informed discussion, 13.2% (n=64) of women who gave birth at home declined this option for their infants. Following their home birth, 52% of women had to return to the maternity unit on day 3 in order to have their baby's routine newborn examination done by the hospital neonatologist/paediatrician as the service was not available in the community.

Women who birthed at home were on average discharged 14 days after the birth of their infants from the care of the SECMs.

On the day of the home birth, 97% of women were breastfeeding exclusively, with 95% breastfeeding exclusively on the day of discharge from the care of the SECMs. Women who birthed at home were twice as likely to be breastfeeding exclusively on day of discharge compared to all women who gave birth (95% versus 47%). Eight percent (n=38) of women were referred to a maternity hospital in the postpartum period.

Body mass index (BMI) was reported for a total of 95.2% of women registered for home birth, with an increasing availability of data for BMI over the three years of this report. Thirteen women indicated that they were smoking at the point of booking, seven of whom gave up during pregnancy. These figures suggest a 53.9% cessation rate although this estimated rate is based on small numbers. Thus, 0.71% women smoked throughout their pregnancy for this triennial report. In Ireland, it is estimated that 11% of pregnant women smoke throughout their pregnancy.[9] Regarding alcohol consumption, the vast majority (92%) of the women registered for home birth did not consume alcohol during their pregnancy. As smoking and alcohol consumption are a risk factor for a range of adverse perinatal outcomes, it is encouraging to continue to see lower rates of such behaviours in this population.

This report provides information on the national clinical audit on planned home births in Ireland from 2018 to 2020. This report offers an informative resource for clinicians to inform women and for women themselves to be self-informed in a clear and transparent manner in relation to planned home birth as an option in Ireland. Clinical audit by the Home Birth Service in collaboration with the NPEC will provide evidence that care provision adheres to the standards and guidelines as included in the selection criteria and as specified in the Memorandum of Understanding (MOU) and Agreement between the HSE and the SECMs. The NPEC in collaboration with the DMOs continue to develop the audit tool for home births in order for this to be achieved.

Recommendations

Maternity units should consider identifying a liaison obstetrician or a specific home birth clinic for women who are registered with the home birth services in Ireland.

The identification of a liaison obstetrician or specific home birth clinic would assist in establishing effective assessment, referral and/or transfer pathways, providing a point of contact for the women and their SECMs. Where this is in place in some hospitals,[10] it's recognised that communication is improved, and continuity of care is supported.

NPEC should continue collaboration with the DMOs to further develop the home birth audit form.

Further development of the audit form will allow for more accurate data to be captured. By improving the quality of the audit form and the data collected, it will ensure that evidence-based care continues to be reviewed.

RECOMMENDATIONS FROM THE PREVIOUS REPORT (2017) THAT HAVE BEEN PROGRESSED

Development of a national tool-kit for the SECM to assist in the estimation of blood loss.

Since the last report in 2017, several measures have been put in place to standardise the estimation of blood loss and improve documentation. One of these measures is the introduction of the "blood loss aid" toolkit. This is a pictorial reference guide to aid visual estimation of blood loss developed by the Queen Charlotte's Hospital, London, as recommended in the HSE Home Birth Service Midwifery Practice Guidelines (2018).[10, 11]

Acknowledgment of the increase in the numbers of second SECMs being present at the majority of home births in Ireland.

Overall, this report shows a continued improvement in having a second SECM present at the time of a home birth. The SECM is to be accompanied at the birth by a second SECM who is also required to have an Agreement with the HSE.[11] It is the responsibility of the SECM to source this second SECM.

There has been an improvement in data provision of weight, height and Body Mass Index (BMI) measures among women who were registered for home birth in Ireland during this triennial report.

All pregnant women should have an accurate weight, height and BMI measured and documented in the midwifery notes at their first antepartum visit in order to ascertain the impact of maternal BMI on perinatal outcomes in Ireland. BMI was reported for a total of 95.2% of women registered for home birth in this triennial report, with an increasing availability of data for BMI over the three years.

Introduction

Purpose of this audit

The primary aim of this report is to present national statistics and an overview of audit findings from the HSE home births service in the Republic of Ireland (ROI) for the years 2018, 2019 and 2020. This report draws on information collected from the planned home birth in Ireland audit. Clinical audit is defined as "a clinically-led quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and acting to improve care when standards are not met."[12] The audit examines both the maternal and fetal outcomes of planned HSE home births, including outcomes whereby the care of the woman is transferred for hospital care in the antepartum, intrapartum or postpartum 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.

Pathway of care in the Republic of Ireland

As illustrated in Figure 1 when a woman enquires about having a home birth, she can contact a DMO or the SECM directly, or book directly with the small number of hospitals providing an integrated community service. The criteria for home birth are discussed with the woman and eligibility for the service is agreed. An application form and consent form are signed between the SECM and the woman, and then forwarded to the DMO to confirm eligibility. 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 woman's GP, the Director of Midwifery at the maternity hospital where the woman is booked and the Administration Department of the HSE, Local Health Office (LHO) about the forthcoming home birth. Women intending to have a home birth are advised by the SECM to register with a GP and to register and avail of services with a maternity hospital of their choice. The SECM will be the primary carer for the mother and child up to 14 days after the birth. Full service to the woman denotes a minimum of 11 visits by the SECM, which is generally divided into 5 antepartum visits, labour and birth, and 5 postpartum visits, subject to individual needs.

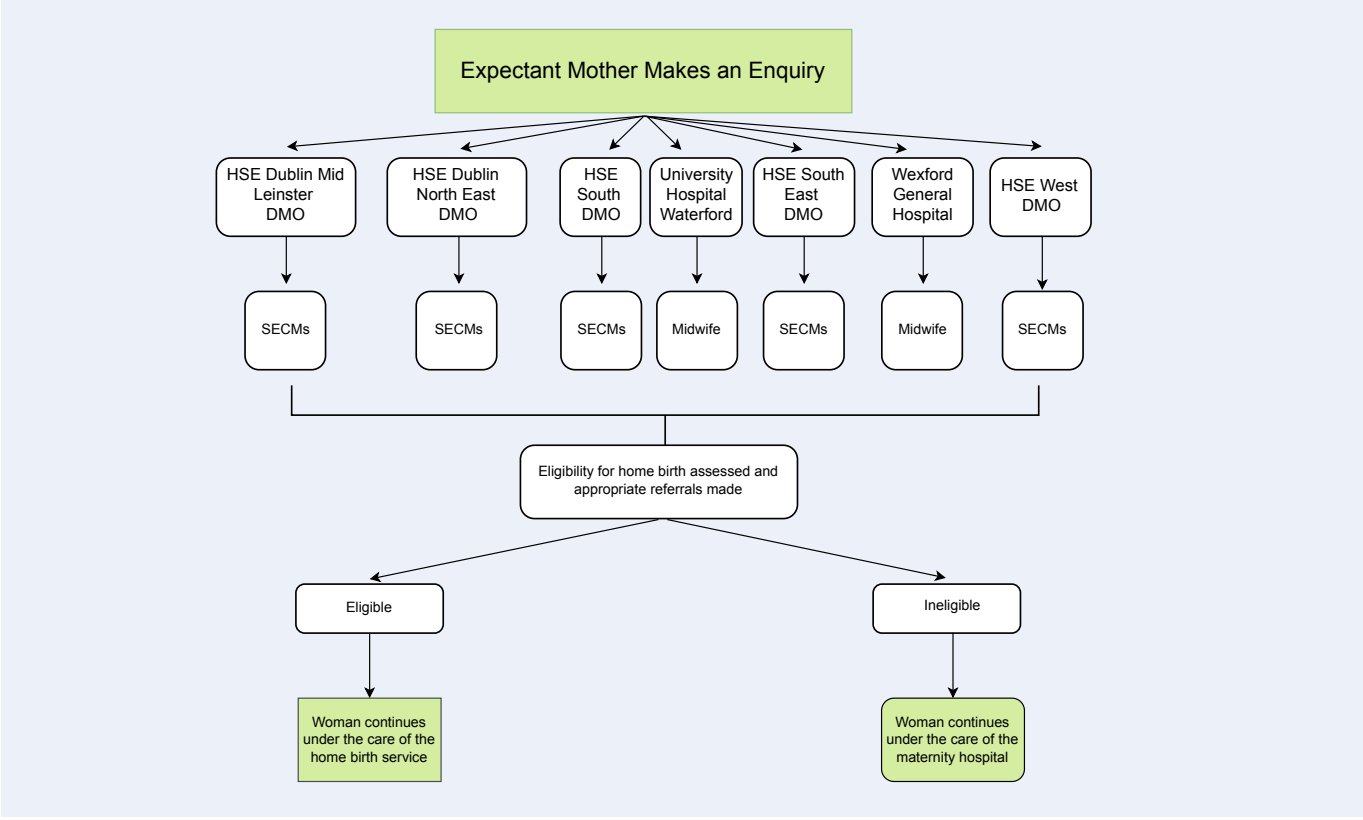


Figure 1: Pathway of care for planned home birth enquiries.

Methods

Data recording

From 2018-2020, 22 primary SECMs in Ireland provided a home birth service on behalf of the HSE. As outlined in the MOU between HSE and the SECMs, each SECM is required to partake in clinical audit. In UHW and WGH, the home birth service is available through the hospital from a team of midwives.

Domiciliary notes of midwifery care are sent by the SECM or midwife to the DMO. The DMO reviews the domiciliary midwifery notes, then collates the data using a standardised audit tool and that data is forwarded to the NPEC for analysis. Data on all the women who registered with the HSE home birth service and who gave birth between January 1, 2018, and December 31, 2020, were collected using the standardised NPEC data collection form. Figure 2 illustrates the flow of information in the data collection process.

Missing data

To ensure accuracy of information, missing or incomplete data were sought from respective SECM and maternity units by the DMO. However, for some cases, information may still be missing because the SECMs do not always receive a full dataset when the women are transferred into the maternity units. This has been impacted further during the COVID-19 pandemic where the SECMs could no longer accompany the women into the hospital. 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.

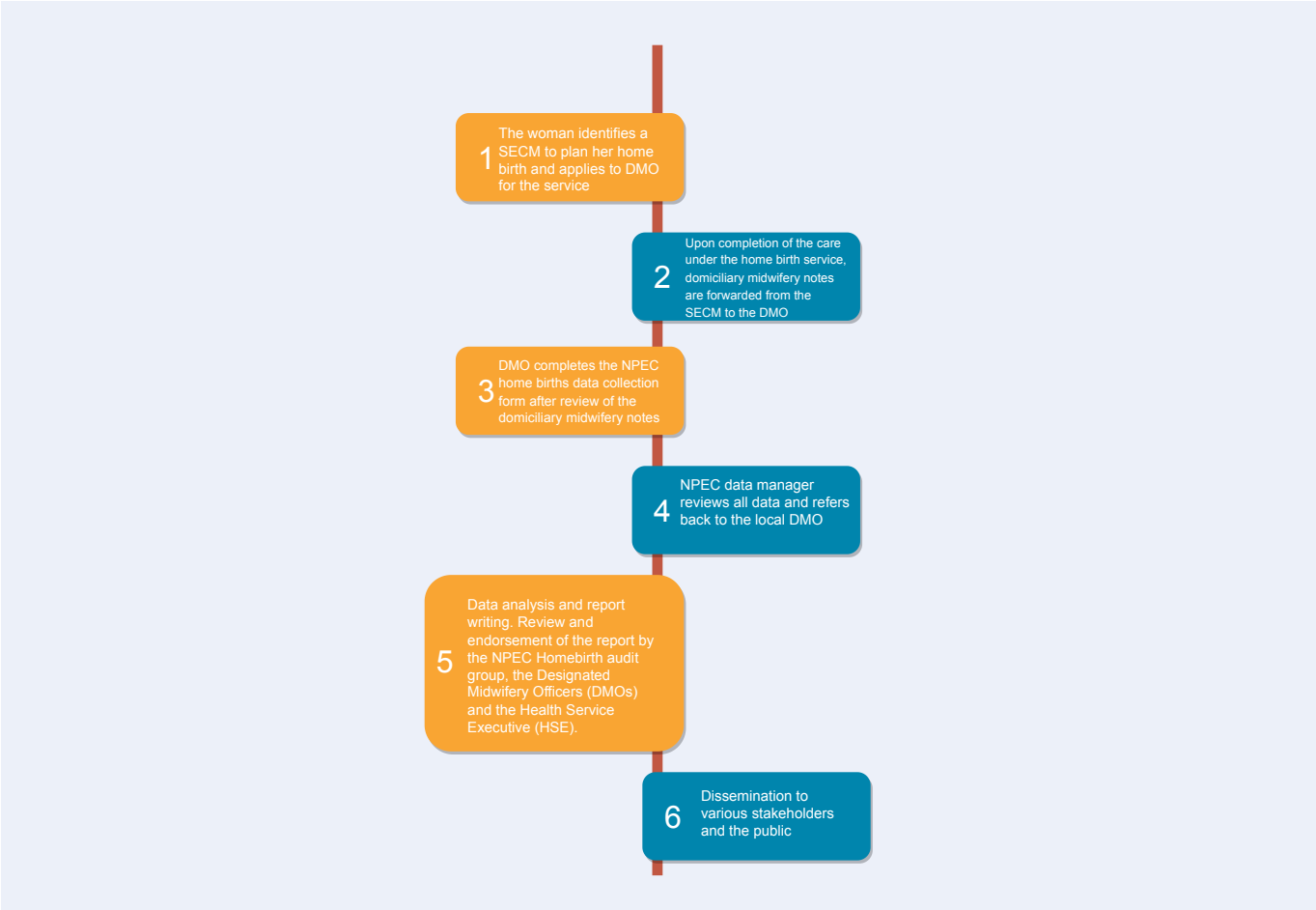


Figure 2: Flow of information in the NPEC data collection process.

Results

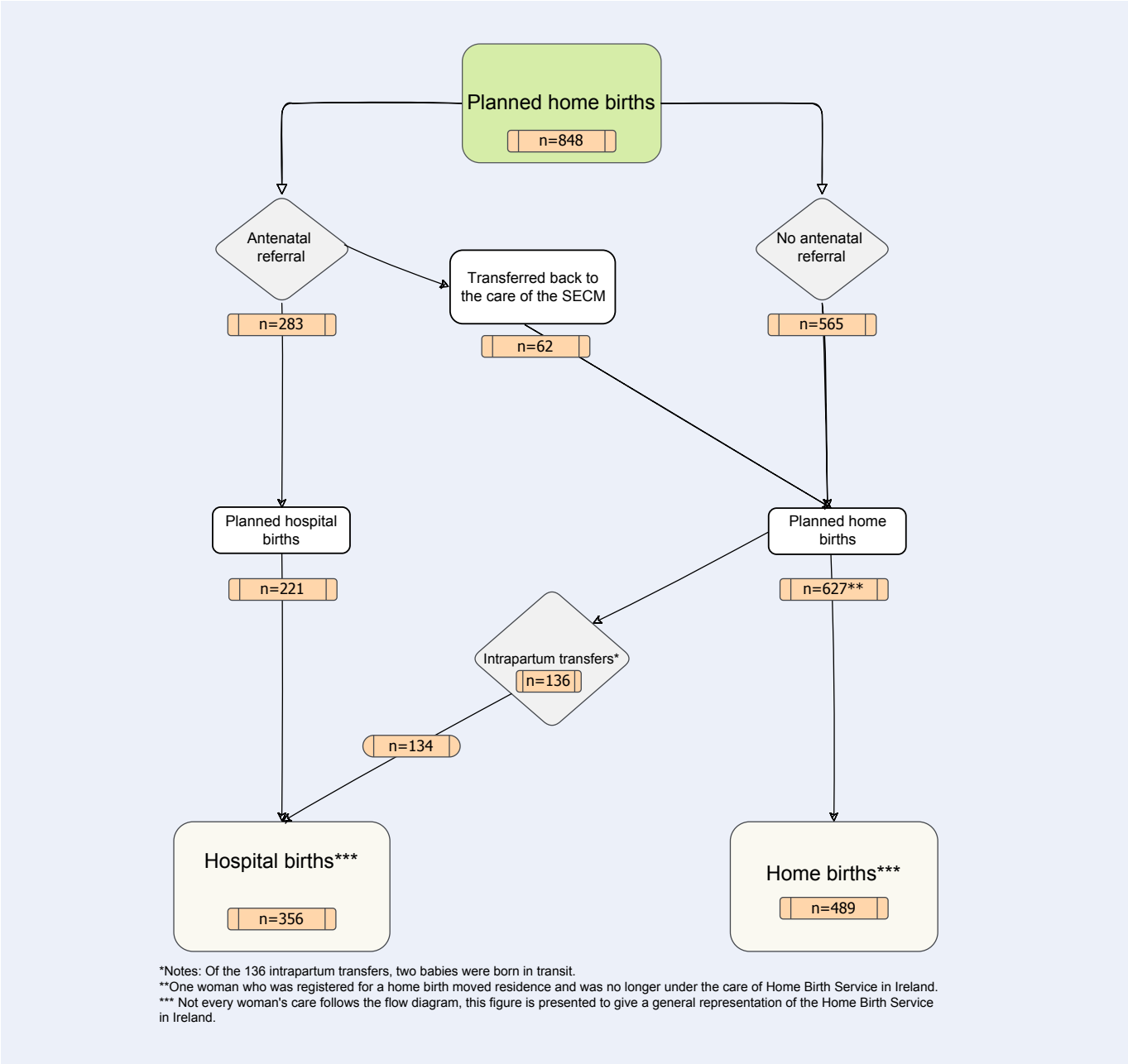


Figure 3: Flowchart of planned home births, 2018-2020.

For the period from January 1st 2018, to December 31st 2020, there were 848 women who were registered for a home birth. The number of women who were registered for a home birth steadily increased from 2018 to 2020 (n=231, 11.8%, n=272, 13.9% and n=345, 17.6%, respectively) compared to 2016 and 2017 (n=192, 9.8% and n=183, 9.3%, respectively). The number of planned home births were not evenly distributed over all the years of this audit, where the lowest number of planned home births occurred in 2017 (n=183 of 1961, 9.3%) and the highest occurred in 2020 (n=345 of 1961, 17.6%). (Table 1)

The distribution of home births by Health Service Executive (HSE) region is markedly different to the overall distribution of births nationally. The majority of home births in HSE South continues from previous years. However, in 2020, Dublin Mid Leinster showed a significant increase in planned home births compared to previous years, and Dublin North East also showed their highest number of planned home births compared to previous years. (Table 1)

Table 1: Distribution of women who were registered for a home birth by HSE area, 2013 -2020.

HSE area/ Year*	Dublin North East	Dublin Mid Leinster	HSE West	HSE South	HSE South East	All HSE areas 2013-2020
	N=307 N(%)	N=385 N(%)	N=277 N(%)	N=936 N(%)	N=56 N(%)	N=1961 N(%)
2013	40(15.5)	50(19.4)	51(19.8)	117(45.3)	-	258(100)
2014	38(15.1)	50(19.8)	44(17.5)	120(47.6)	-	252(100)
2015	24(10.5)	29(12.7)	49(21.5)	126(55.3)	-	228(100)
2016	25(13)	27(14.1)	27(14.1)	113(43.8)	-	192(100)
2017	31(16.9)	18(9.8)	17(9.3)	103(39.9)	14(7.7)	183(100)
2018	39(16.9)	41(17.7)	27(11.7)	108(46.8)	16(6.9)	231(100)
2019	46(16.9)	66(24.3)	27(9.9)	122(44.9)	11(4)	272(100)
2020	64(18.6)	104(30.1)	35(10.1)	127(36.8)	15(4.3)	345(100)

Note: Values are shown as n(%) unless otherwise stated. *Seven women registered with the domino scheme in the maternity hospital, but all their antepartum and postpartum care was with the SECMs for the time period 2013-2020. HSE South includes Waterford University Hospital planned home birth cases, and South East includes Wexford General Hospital planned home birth cases. HSE South East home births were reported as HSE South home birth numbers until year end 2016.

Maternal characteristics

Age

The age range of women who booked from 2018 to 2020 for a home birth was 18-44 years. In this triennial report, the average age of women who were registered for a home birth was 38 years old. Consistent with data from 2017, home birth women tended to be older when compared to all women who gave birth in Ireland (Table 2). A higher majority (n=633 of 845, 74.9%) of women who were registered to give birth at home were aged 30-39 years compared to 65.7% of all women who gave birth from 2018 to 2020.

Table 2: Age distribution of women who were registered for a home birth, 2018-2020.

Age group*	Home births 2018 N=229 N(%)	Home births 2019 N=271 N(%)	Home births 2020 N=345 N(%)	All births[13] 2018-2020 N=176,275 (%)
<20yrs	2(0.9)	0(0)	1(0.3)	1.5%
20-24yrs	9(3.9)	8(3)	4(1.2)	7.9%
25-29yrs	34(14.8)	43(15.9)	48(13.9)	17.0%
30-34yrs	77(33.6)	84(31)	128(37.1)	34.3%
35-39yrs	89(38.9)	113(41.7)	142(41.2)	31.4%
>40yrs	18(7.9)	23(8.5)	22(6.4)	7.9%

Note: Values are shown as n(%) unless otherwise stated. *Age unknown for two women in 2018, and one woman in 2019.

Marital status

As outlined in Table 3, consistent with previous years, almost all of the women who were registered for a home birth were either married (60.8%, 64.3% and 67.4% for 2018, 2019 and 2020) or with a partner (15.0%, 25.3% and 18.9% for 2018, 2019 and 2020).

Table 3: Marital status of women who were registered for a home birth, 2018-2020.

Marital Status*	Home births 2018 N=227 N(%)	Home births 2019 N=269 N(%)	Home births 2020 N=344 N(%)
Married	138(60.8)	173(64.3)	232(67.4)
Partner	34(15)	68(25.3)	65(18.9)
Never Married	53(23.3)	28(10.4)	45(13.1)
Separated/Divorced	2(0.9)	0(0)	2(0.6)

Note: Values are shown as n(%) unless otherwise stated. *Marital status unknown for four women in 2018, three women in 2019 and one woman in 2020.

Ethnicity

The majority of women who booked for a home birth were of white Irish ethnicity, which is consistent with the percentage of white Irish in the female population aged 15-49 years surveyed in 2016 (77.2%, 73.7% and 79.0% for 2018, 2019 and 2020 versus 77.3% for 2016, Table 4). The numbers of Asian/Asian Irish (n=9), Black/Black Irish (n=2) and mixed ethnicities (n=15) are small and are under representative of the population for this triennial report. There were no Irish Traveller women who had a planned home birth for this triennial report.

Table 4: Ethnicity of women who were registered for a home birth, 2018-2020.

Ethnicity*	Home births 2018 N=228 N(%)	Home births 2019 N=270 N(%)	Home births 2020 N=343 N(%)	15–49-year-old female Population[14] 2016 N=781,392 (%)
White Irish	176(77.2)	199(73.7)	271(79)	77.3%
Other white background	48(21.1)	61(22.6)	60(17.5)	15.1%
Other ethnic backgrounds	4(1.8)	10(3.7)	12(3.5)	6.8%

Note: Values are shown as n(%) unless otherwise stated. Other ethnic backgrounds include Asian/Asian Irish, Black/Black Irish, Other/mixed. *Ethnicity unknown for three women in 2018, two women in 2019 and two women in 2020.

Distance of the woman's residence to services

Data related to the distance of the woman's residence to the SECM and to the nearest maternity hospital is shown in Figure 4. Half of the women were within 30 kilometres of the SECM (n=479, 57.8%; mean=29.15kms). Over half of women were within 30 kilometres of the maternity hospital (n=515, 62.3%; mean=26.9kms). Information relating to transfer time will be discussed later in the report.

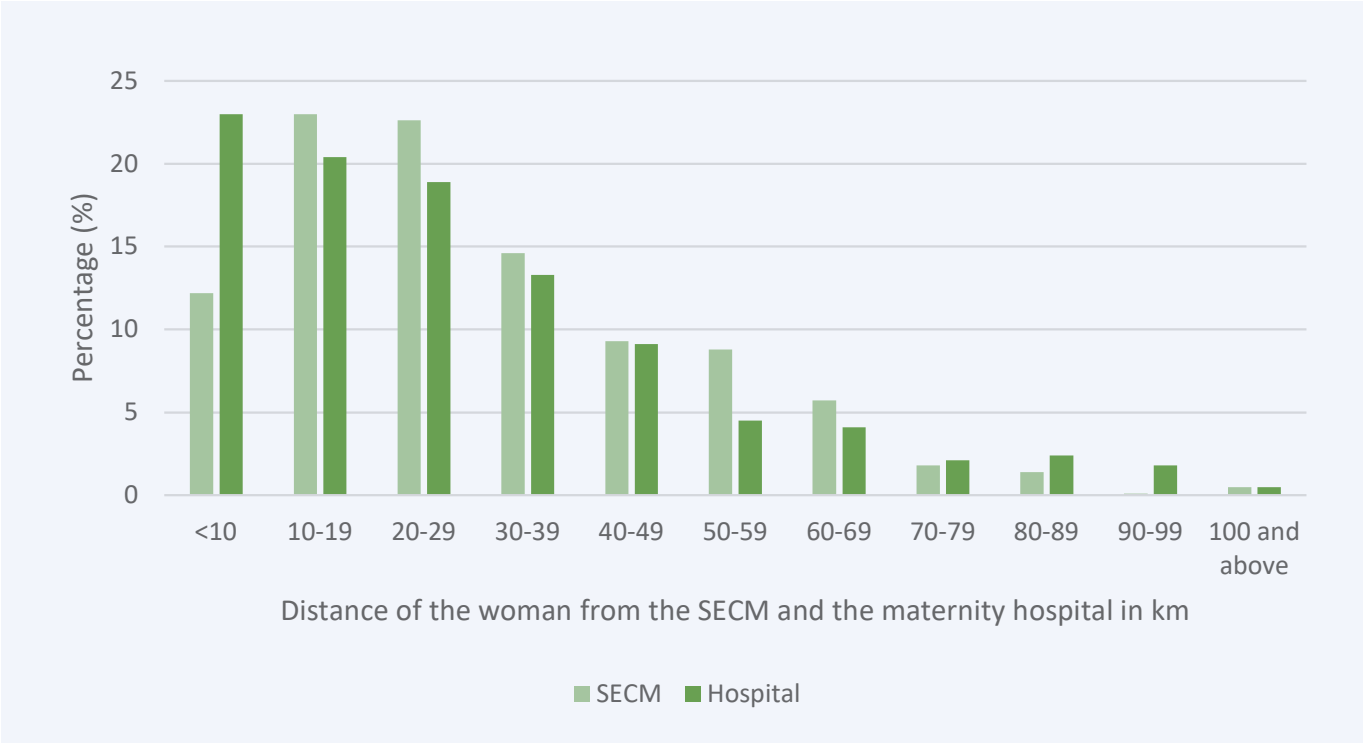


Figure 4: Distance (km) of the woman from the SECM and the maternity hospital, 2018-2020.

Body mass index

Body mass index (BMI) was available for 95.2% (n=807) of women (Table 5). For the years 2018 to 2020, the BMI for approximately 60% of women was in the healthy range (18.5-24.9kgm-2), almost one third were classified as overweight (25.0-29.9kgm-2) and approximately one in ten were classified as obese (>30.0kgm-2). The BMI profile of women who were registered for a home birth was healthier than the general population of women giving birth in Ireland in 2020, based on a comparison with data collated from seven maternity units in Ireland.

Table 5: Body Mass Index (BMI) of women who were registered for a home birth, 2018-2020.

BMI Category (kgm-2)*	Home births 2018 N=215 N(%)	Home births 2019 N=260 N(%)	Home births 2020 N=332 N(%)	Maternities** 2020 N=35,122 (%)
Underweight (<18.5)	4(1.9)	7(2.7)	4(1.2)	1.30%
Healthy (18.5-24.9)	138(64.2)	154(59.2)	193(58.1)	46.20%
Overweight (25.0-29.9)	59(27.4)	70(26.9)	104(31.3)	31.30%
Obese (>30.0)	14(6.5)	29(11.2)	31(9.3)	21.10%

Note: Values are shown as n(%) unless otherwise stated. *BMI unknown for 16 women in 2018, 12 women in 2019 and 13 women in 2020. **Data on BMI were collated for 35,122 maternities in 2020 from seven of the country's 19 maternity hospitals/units and used to estimate the national number of maternities by BMI category.

Smoking and alcohol consumption

Smoking status and alcohol consumption at the time of booking was recorded for the majority of women (n=840 of 848, 99.1% and n=841 of 848, 99.2%, respectively). Thirteen women (1.5%) indicated that they were smoking at point of booking, seven of whom gave up during pregnancy. These figures suggest a 53.9% (n=7 of 13) cessation rate although this estimated rate is based on small numbers. Thus, 6 of the 842 (0.71%) women smoked throughout their pregnancy for this triennial report. The vast majority of women (n=776 of 841, 92.3%) reported they did not consume alcohol during pregnancy. Of the 63 women who drank alcohol during pregnancy, 61 drank alcohol monthly or less.

Previous pregnancy

As indicated in Table 6, almost two-thirds of the women who were registered for a home birth had a previous birth (68.0%, 69.9% and 65.5% for 2018, 2019 and 2020).

Table 6: Parity of women who were registered for a home birth, 2018-2020.

Parity	Home births 2018 N=231 N(%)	Home births 2019 N=272 N(%)	Home births 2020 N=345 N(%)	All births[15,16] 2018-2019 N=118,569 (%)
Nulliparous	74(32)	82(30.1)	119(34.5)	38.8%
Parous	157(68)	190(69.9)	226(65.5)	61.2%

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

Table 7 specifies gravida and parity for all 848 women who were registered for a home birth from 2018 to 2020. Prior to this current pregnancy, a quarter of women (n=221, 26.06%) were never pregnant before. Almost half of the women who were registered for a planned home birth had completed pregnancies i.e. live births from 24 weeks of gestation and/or stillbirths (n=403 of 848, 47.5%). One fifth of the women had experienced previous completed pregnancies plus at least one pregnancy <24 weeks gestation and birthweight <500g (n=170 of 848, 20.1%). Approximately 6% (n=54 of 848, 6.4%) of women experienced pregnancies which only resulted in miscarriages, i.e. <24 weeks gestation and birthweight <500g (Table 7).

Table 7: Gravida/parity of women prior to the pregnancy in 2018-2020.

				Parity			
	0	**1**	**2**	**3**	**4**	**5**	**Total**
0	221	0	0	0	0	0	**221**
1	45	215	0	0	0	0	**260**
2	5	49	136	0	0	0	**190**
3	4	17	39	37	0	0	**97**
4	0	6	11	22	12	0	**51**
5	0	1	1	7	8	3	**20**
6	0	0	0	1	1	7	**9**
Total	**275**	**288**	**187**	**67**	**21**	**10**	**848**

Note: We refer to gravida and parity prior to the current pregnancy between 2018-2020. 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 women who were registered for a home birth registered with a maternity unit (100%). Almost 95% of women registered during pregnancy with their GP (n=798 out of 842, missing information for six women). Demand for home births exceeds the number of GP's available to provide shared care.

Of the 627 women who had a previous pregnancy and were registered for a home birth, 27 (3.3%) were reported to have had a previous obstetric condition which included Group B streptococcus, gestational diabetes mellitus and retained placenta (Table 8). Of the 27 pregnancy problems reported in this cohort, five were reported in 2018, ten in 2019 and twelve in 2020 respectively.

Table 8: Previous obstetric conditions and other factors indicating individual assessment when planning place of birth, 2018-2020.

	N=27 of 627
Group B streptococcus	6(22.2)
Gestational diabetes	3(11.1)
Retained placenta	3(11.1)
Small for gestational age	3(11.1)
Post-partum haemorrhage	2(7.4)
Neonatal death	2(7.4)
Shoulder dystocia	2(7.4)
Preterm labour	1(3.7)
Pre-eclampsia	1(3.7)
Polyhydramnios	1(3.7)
Other	3(11.1)

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

Of the 848 women who were registered for a home birth, 183 women (21.6 %) were reported to have a current medical or obstetric condition (Table 9). Of the 183 women 96.7% were reviewed by an obstetrician in the maternity unit (n=177 out of 183). The most common conditions were being over 40 years old at booking, having had a cone biopsy or large loop excision of the transformation zone and having unstable hypothyroidism.

Table 9: Current medical or obstetric factors requiring referral to a consultant obstetrician by the midwife for final assessment when planning place of birth, 2018-2020.

	N=183 of 848
Age over 40 at booking	35(19.1)
Cone biopsy or large loop excision of the transformation zone	35(19.1)
Unstable hypothyroidism such that a change in treatment is required	26(14.2)
Under current outpatient psychiatric care	15(8.2)
Previous extensive vaginal, cervical, or third- or fourth-degree perineal trauma	15(8.2)
Para 5 or more	8(4.4)
Gynaecological history or major gynaecological surgery	5(2.7)
Spinal abnormalities	4(2.2)
History of previous baby more than 4.5 kg	4(2.2)
Cardiac disease without intrapartum implications	3(1.6)
Hyperthyroidism	3(1.6)
Antepartum bleeding of unknown origin (single episode after 24 weeks of gestation)	3(1.6)
Fetal abnormality	3(1.6)
Ulcerative colitis	2(1.1)
Atypical antibodies not putting the baby at risk of haemolytic disease	2(1.1)
Previous fractured pelvis	1(0.5)
Neurological deficits	1(0.5)
Sickle-cell trait	1(0.5)
Pre-eclampsia developing at term	1(0.5)
Clinical or ultrasound suspicion of macrosomia	1(0.5)
Blood pressure of 140 mmHg systolic or 90 mmHg diastolic on two occasions	1(0.5)
Fibroids	1(0.5)
Distance from the midwife or nearest hospital/maternity unit	1(0.5)
Other	33(18)

Note: Values are shown as n(%) unless otherwise stated. Categories are not mutually exclusive.

There was also a small cohort of women (n=5) who required extra monitoring during their pregnancy but that did not require transfer of care to the maternity unit, demonstrating effective SECM escalation, referral and follow up processes. Reasons included: fetal growth monitoring requiring extra growth scans, low lying placenta that required re-scanning then deemed safe and unstable or transverse lie.

A home birth liaison obstetrician was identified for approximately 70% of the women who were planning a home birth (n=589 of 802, 73.4%, 46 missing data). This proportion varied during the triennial reporting period, with 2019 showing the highest number of liaison obstetricians available (n=218 of 264, 82.6%), followed by 2018 (n=176 of 220, 80.0%). In 2020, 60% of women had a liaison obstetrician identified (n=195 of 318, 61.3%).

Antepartum care

Estimated date of delivery (EDD) was calculated using both ultrasound scan and last menstrual period (LMP) in the majority of cases (n=359, 42.6%). For the remainder of the women, EDD was calculated using ultrasound scan only (n=356, 42.2%) or LMP only (n=128, 15.2%), missing information for five cases.

Of the 848 women registered for a home birth, 843 (99.9%) had an antepartum ultrasound scan (missing information for four cases). Gestation at the time of the scan was recorded for 834 of the 843 women who had an antepartum ultrasound scan. The frequency of antepartum ultrasound scan at 12 weeks gestation or earlier decreases over the triennial report (27.3%, 18.1% and 11.0% for 2018, 2019 and 2020 respectively). The vast majority of the women had a scan between 12- and 19-weeks' gestation (62.1%, 73.7% and 65.3% for 2018, 2019 and 2020 respectively). The number of antepartum ultrasound scans performed at 20 weeks gestation increased in 2020 to 23.7% of women (Table 10).

Table 10: Weeks gestation at antepartum ultrasound scan, 2017-2020.

Gestation*	Home births 2017 N=179 N(%)	Home births 2018 N=227 N(%)	Home births 2019 N=270 N(%)	Home births 2020 N=337 N(%)
Less than 12 weeks	33(18.4)	62(27.3)	49(18.1)	37(11.0)
12-19 weeks	127(70.9)	141(62.1)	199(73.7)	220(65.3)
20 weeks or later	19(10.7)	24(10.6)	22(8.1)	80(23.7)

Note: Values are shown as n(%) unless otherwise stated. *Gestation at scan unknown for two women in 2017, for four women in 2018, and for two women in 2019, and for eight women in 2020.

The number of antepartum visits by the midwives to women who were registered for a home birth ranged from one to 16 visits. The mean number of antepartum visits to the women was six. As indicated in Table 11, the majority of visits for both nulliparous and parous women were between four and nine (79.4 % and 84.0%).

Table 11: Number of antepartum visits by the SECM, 2018-2020.

Antepartum visits*	Nulliparous N=272 N(%)	Parous N=568 N(%)
Up to 3 visits	27(9.9)	38(6.7)
4-6 visits	146(53.7)	317(55.8)
7-9 visits	70(25.7)	160(28.2)
10-12 visits	24(8.8)	48(8.5)
13-15 visits	5(1.8)	5(0.9)

Note: Values are shown as n(%) unless otherwise stated. *Number of antepartum visits unknown for three nulliparous and unknown for five parous women.

Antepartum referrals

Of the 848 women who were registered for a home birth, 283 (33.4%) were referred to a maternity hospital due to complications arising during the antepartum period. A small number (n=8) of women had an individual care plan put in place whereby the woman received combined care with the obstetric team and the SECM and gave birth in hospital. For the purpose of this audit, these women were captured under antepartum referrals. Nulliparous women were more likely to be referred to the maternity hospital in the antepartum period than parous women (43.6% versus 28.4%; Table 12).

Table 12: Antepartum referral by parity, 2018-2020.

	Nulliparous N=275 N(%)	Parous N=573 N(%)
No antepartum referral	155(56.4)	410(71.6)
Antepartum referral	120(43.6)	163(28.4)

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

The most common reasons for antepartum transfers were post maturity (n=39, 14.1%), prolonged pre-labour rupture of membranes (n=30, 10.9%) and measuring small for gestational age (n=24, 8.7%, Table 13).

Table 13: Reasons for antepartum transfer, 2018-2020.

Reasons for antepartum transfer*	N=276		
	Nulliparous N=116 N(%)	Parous N=160 N(%)	Total N(%)
Post maturity	20(17.2)	19(11.9)	39(14.1)
Prolonged rupture of membranes	17(14.7)	13(8.1)	30(10.9)
Small for gestational age	7(6)	17(10.6)	24(8.7)
Malpresentation	12(10.3)	5(3.1)	17(6.2)
Induction of labour	9(7.8)	8(5)	17(6.2)
Premature rupture of membranes	6(5.2)	9(5.6)	15(5.4)
Reduced fetal movements	2(1.7)	11(6.9)	13(4.7)
Suspected fetal distress incl. meconium stained liquor	6(5.2)	7(4.4)	13(4.7)
Group B streptococcus	1(0.9)	11(6.9)	12(4.3)
Ultrasound diagnosis of oligo/polyhydramnios	5(4.3)	7(4.4)	12(4.3)
Hypertension	3(2.6)	6(3.8)	9(3.3)
Antepartum haemorrhage	2(1.7)	7(4.4)	9(3.3)
Large for gestational age	5(4.3)	3(1.9)	8(2.9)
Onset of gestational diabetes mellitus	4(3.4)	4(2.5)	8(2.9)
Visual disturbances and/or proteinuria	2(1.7)	3(1.9)	5(1.8)
Anaemia	2(1.7)	3(1.9)	5(1.8)
Viral infection	0(0)	5(3.1)	5(1.8)
Suspected fetal anomaly	1(0.9)	3(1.9)	4(1.4)
Changed mind about home birth	3(2.6)	1(0.6)	4(1.4)
Unstable lie	0(0)	3(1.9)	3(1.1)
Placenta praevia	0(0)	3(1.9)	3(1.1)
Developed antibodies	0(0)	2(1.3)	2(0.7)
Low lying placenta	2(1.7)	0(0)	2(0.7)
Pre-eclampsia	1(0.9)	1(0.6)	2(0.7)
Threatened preterm labour	0(0)	2(1.3)	2(0.7)
SECM not available	0(0)	2(1.3)	2(0.7)
Placental abruption	1(0.9)	1(0.6)	2(0.7)
Pulmonary embolism	0(0)	1(0.6)	1(0.4)
Pyrexia	1(0.9)	0(0)	1(0.4)
Other	12(10.3)	12(7.5)	24(8.7)

Note: Values are shown as n(%) unless otherwise stated. Categories are not mutually exclusive. *Reasons for antepartum transfer missing for four nulliparous women and for three parous women. Some women had more than one reason for transfer and in such cases, each reason was counted in the table above.

Of the 283 women referred to the maternity hospital for antepartum care, one in five women (n=62, 21.9%) returned to the care of the SECM. Of these 62 women, 10 (16.1%) also had an intrapartum transfer. Of the 221 women who were referred to the maternity hospital in the antepartum period and did not return to the care of the SECM, 217 women gave birth in the hospital, three women gave birth at home before they could be transported to hospital, and one woman who was transferred in the antepartum period by the SECM gave birth at home under a different private service.

Of these 221 women, a quarter had a caesarean section birth (n=53, 26.8%). Nulliparous women were more likely to have a caesarean section than parous women (41.5% versus 13.5%; Table 14). The mode of birth was unknown for one tenth of women (n=23, 10.4%) which, as highlighted previously in this report, could be an example of the SECMs not having full access to the birth details when a woman is transferred into the maternity unit.

Table 14: Mode of birth for women who were transferred in the antepartum period and gave birth in the maternity unit, 2018-2020.

Mode of birth*	N=221	
	Nulliparous N=94 N(%)	Parous N=104 N(%)
Spontaneous vertex	37(39.4)	85(81.7)
Ventouse	14(14.9)	3(2.9)
Forceps	4(4.3)	2(1.9)
Caesarean section	39(41.5)	14(13.5)

Note: Values are shown as n(%) unless otherwise stated. *Mode of birth unknown for 10 nulliparous women, and 13 parous women.

Intrapartum transfers

Of the 627 women who began labouring at home, 136 (21.7%) were transferred to a maternity hospital during labour. Of these women, 57.9% were transferred by ambulance (n=78, information missing for two cases) and the remainder by private car. It took between 5 and 120 minutes to transfer women from their homes to the maternity hospital. The mean time it took to transfer was 32.1 minutes. Almost 50% of women who had an intrapartum transfer, were transferred to a maternity unit within less than 30 minutes. Another 50% took between 30 and 60 minutes to transfer, as is recognised in other studies.[17] Only 5% of transfers took longer than 60 minutes (Table 15). Data for length of transfer was missing for 12 women.

Of the 136 women who were transferred in the intrapartum period 131 women gave birth in the hospital, three women gave birth at home but were transferred in before the 3rd stage of labour was completed, and two women gave birth in transit on their way to the hospital.

Table 15: Length of intrapartum transfer, 2018-2020.

Length of time	N= 124 N(%)
<30min	58(46.8)
30-40 min	41(33.1)
41-60 min	19(15.3)
More than 60 min	6(4.8)

Note: Values are shown as n(%) unless otherwise stated. Data for length of transfer was missing for 12 women.

As demonstrated in Table 16, nulliparous women were four times more likely to transfer during labour than parous women (33.2% versus 7.9%).

Table 16: Intrapartum transfer rates by parity, 2018-2020.

Intrapartum transfer*	N=848	
	Nulliparous N=274 N(%)*	Parous N=573 N(%)
Home birth not transferred	183(66.8)	528(92.1)
Intrapartum transfer	91(33.2)	45(7.9)

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

More than ninety percent of intrapartum transfers occurred during the first stage of labour (n=121, 91.7%, missing information for three cases). As outlined in Table 17, three parous women required transfer during the 3rd stage of labour.

Table 17: Stage of labour when transferred, 2018-2020.

Stage of labour*	N=133	
	Nulliparous N=91 N(%)	Parous N=42 N(%)
1st Stage	84(92.3)	37(88.1)
2nd Stage	7(7.7)	2(4.8)
3rd Stage	0(0)	3(7.1)

Note: Values are shown as n(%) unless otherwise stated. *Information missing for three parous women.

As indicated in Table 18, almost one fifth of intrapartum transfers to the maternity unit were associated with failure to progress in labour (n=37, 27.4%) or a maternal request for medical analgesia (n=37, 27.4%).

Table 18: Reasons for intrapartum transfer, 2018-2020.

	N=135		
	Nulliparous N=91 N(%)	Parous N=44 N(%)	Total N(%)
Maternal request for analgesia	29(31.9)	8(18.2)	37(27.4)
Failure to progress in labour	25(27.5)	12(27.3)	37(27.4)
Meconium-stained liquor	15(16.5)	3(6.8)	18(13.3)
Prolonged rupture of membranes	11(12.1)	5(11.4)	16(11.9)
Concern with fetal heart rate	7(7.7)	1(2.3)	8(5.9)
Maternal request	1(1.1)	5(11.4)	6(4.4)
Preterm labour	2(2.2)	3(6.8)	5(3.7)
Intrapartum haemorrhage	3(3.3)	2(4.5)	5(3.7)
Maternal tachycardia	2(2.2)	0(0)	2(1.5)
Hypertension	2(2.2)	0(0)	2(1.5)
SECM unavailable for care	1(1.1)	2(4.5)	3(2.2)
Retained placenta	0(0)	2(4.5)	2(1.5)
Undiagnosed breech	0(0)	2(4.5)	2(1.5)
Suspected sepsis	1(1.1)	0(0)	1(0.7)
Other	2(2.2)	4(9.1)	6(4.4)

Note: Values are shown as n(%) unless otherwise stated. *Information missing for one parous woman who gave birth in transit. Some women had more than one reason for transfer and in such cases, each reason was counted in the table above.

As indicated in Table 19, half of women who transferred to the maternity unit during labour had a spontaneous vaginal birth (n=69, 51.5%). The mode of birth was unknown for two nulliparous women. Almost all of the women who were transferred into the maternity unit continued to receive care postpartum from the SECM, regardless of place of birth.

Table 19: Mode of birth for women who had an intrapartum transfer, 2018-2020.

Mode of birth*	N=136	
	Nulliparous N=89 N(%)	Parous N=45 N(%)
Spontaneous vertex	38(42.7)	31(68.9)
Ventouse	23(25.8)	6(13.3)
Forceps	9(10.1)	2(4.4)
Caesarean section	19(21.3)	6(13.3)

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

Of the 136 women who transferred during labour, 58 (43.6%, missing information for three women) had an epidural, and two women (n=2, 1.5%, missing information for 11 women) were reported to have had a blood transfusion.

Home births

Labour details

The distribution of births at home by HSE region was similar to the distribution of planned home births (Table 20).

Table 20: Distribution of women who were registered for a home birth and gave birth at home by HSE area, 2018-2020.

	Planned home births N=848 N(%)	Home births N=489 N(%)
Dublin North East	149(17.6)	78(16)
Dublin Mid Leinster	211(24.9)	120(24.7)
West	89(10.5)	56(11.5)
South*	357(42.1)	213(43.8)
South East**	42(5)	22(4.5)

Note: Values are shown as n(%) unless otherwise stated. *HSE South includes Waterford University Hospital.
**South East includes Wexford General Hospital.

Of the women who started labouring at home (n=627), rupture of membranes occurred spontaneously in the vast majority of cases (n=544, 88.9%; Table 21).

Table 21: Rupture of membranes, 2018-2020.

Rupture of membranes*	Nulliparous N=154		Parous N=441	
	Home N=76 N(%)	Hospital N=78 N(%)	Home N=404 N(%)	Hospital N=37 N(%)
Spontaneous	73(96.1)	59(75.6)	387(95.8)	24(64.9)
Artificial	3(3.9)	19(24.4)	17(4.2)	13(35.1)

Note: Values are shown as n(%) unless otherwise stated. *The data was missing for a total of 24 women who gave birth at the hospital and a total of six women who gave birth at home. One woman who gave birth in transit had a spontaneous rupture of membranes, the information is missing for the second woman who gave birth in transit.

Liquor was clear in almost all cases (n=540, 90.8%, information missing for 31 women). Women who gave birth in the maternity hospital following intrapartum transfer, irrespective of parity, were more likely to have meconium-stained liquor. This is in line with previous findings in this report where meconium-stained liquor was found to be the third most common reason for intrapartum transfer (Table 18).

Table 22: Liquor colour, 2018-2020.

Liquor colour*	Nulliparous = 153		Parous = 441	
	Home N=76 N(%)	Hospital N=77 N(%)	Home N=405 N(%)	Hospital N=36 N(%)
Clear	70(92.1)	57(74)	383(94.6)	29(80.6)
Meconium	2(2.6)	17(22.1)	18(4.4)	6(16.7)
Bloodstained	4(5.3)	3(3.9)	4(1)	1(2.8)

Note: Values are shown as n(%) unless otherwise stated. *The data was missing for a total of 26 women who gave birth at the hospital and a total of four women who gave birth at home. One infant who was born in transit had clear liquor; the information is missing for the second infant who was born in transit.

As indicated in Table 23, the woman's primary Self-Employed Community Midwife (SECM) was present at the vast majority of home births (n=447, 91.4%). A second midwife was also present at the majority of home births (n=388, 79.3%). The presence of a second midwife increased over the course of this triennial report from 76.9% in 2018 (n=103 of 134) to 83.9% in 2020 (n=167 of 199). Other people noted to have been present at the birth include the woman's relatives such as her mother or sister and other birth partners or friends. For women who were not attended by their primary SECM during the birth (n=39), 14 women were attended by a midwife in their home (i.e. other SECM, domino midwife or integrated hospital community midwifery service). One woman was attended by paramedics and subsequently transferred into hospital for routine care. For the remaining 24 women, the midwife arrived shortly after the birth to continue to provide care to the woman and her baby, 92% of these women were parous (n=22 of 24, 91.6%). None of these 24 women or babies required transfer to hospital following the birth.

As discussed previously in this report, there were 3 women whose care was transferred to their maternity unit in the antepartum period but gave birth at home before they could be transported into the hospital. These women and their babies were well and continued to receive routine care.

Table 23: Who was present at the home birth by HSE area, 2018-2020.

	Overall (N=489)	Dublin NE (N=78)	Dublin Mid Leinster (N=120)	HSE West (N=56)	HSE South* (N=213)	HSE South East** (N=22)
SECM	447(91.4)	72(92.3)	111(92.5)	50(89.3)	199(93.4)	15(68.2)
Second midwife	388(79.3)	54(69.2)	96(80)	39(69.6)	183(85.9)	16(72.7)
Doula	17(3.5)	1(1.3)	5(4.2)	5(8.9)	5(2.3)	1(4.5)
Partner	461(94.3)	76(97.4)	109(90.8)	55(98.2)	201(94.4)	20(90.9)
Other	81(16.6)	3(3.8)	28(23.3)	13(23.2)	27(12.7)	10(45.5)

Note: Values are shown as n(%) unless otherwise stated. Categories are not mutually exclusive. *HSE South includes Waterford home births which may be provided by SECMs and/or by midwives from University Hospital Waterford. **HSE South East includes Wexford home births which are facilitated by acute maternity services midwives only. Therefore, no SECM attended the seven home births in this area. The SECM attendance at HSE Home Birth Services within the South East (Carlow/Kilkenny and South Tipperary) was 100% (n=15).

Over half of all women laboured within six hours (mean duration 3.4 hours). The longest labour for women who gave birth at home was 24 hours. As expected, parous women laboured faster (Figure 5) with more than half of those women having laboured for less than three hours (67.2%).

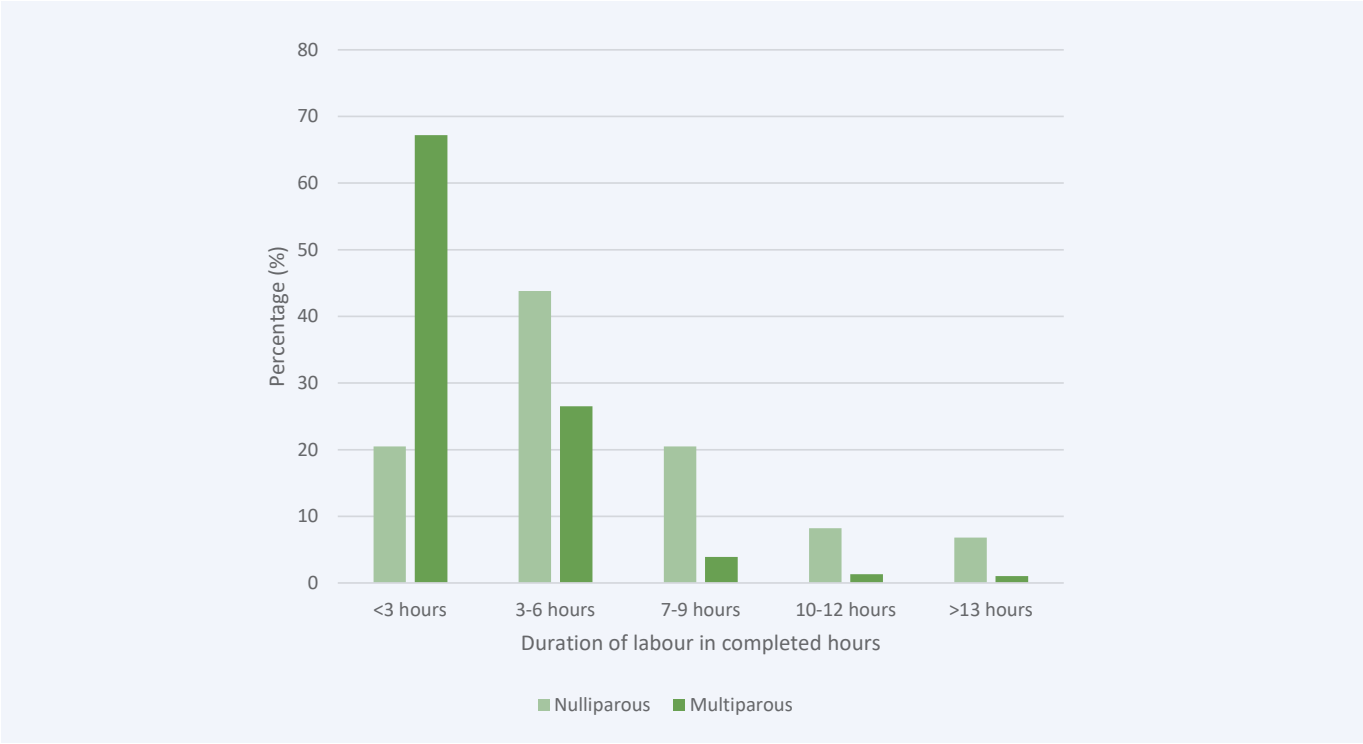


Figure 5: Duration of labour (hours completed) by parity, 2018-2020.

As documented in Table 24 there was some variation in maternal position for birth among nulliparous and parous women. Over one third of women gave birth at home in a kneeling position (n=172, 35.4%). Approximately one third of parous women birthed on all fours in the home (n=139, 33.9%).

Table 24: Maternal position for birth by parity, 2018-2020.

Maternal position*	Nulliparous N=76 N(%)	Parous N=413 N(%)
Kneeling	20(26.3)	152(37.1)
All fours	19(25)	139(33.9)
Sitting	15(19.7)	34(8.3)
Standing	2(2.6)	36(8.8)
Squatting	8(10.5)	16(3.9)
Other	12(15.8)	33(8.0)

Note: Values are shown as N(%) unless otherwise stated. *Missing information for three parous 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 (n=361 of 487, 74.1%, information missing for two cases). The physiological management of the third stage comprises of the following components: no routine use of uterotonic drugs, no clamping of the cord until pulsation has stopped, delivery of the placenta by maternal effort.[1]

Of the 126 women who had active management in the home, intramuscular syntocinon was administered in 93 cases, syntometrine in 36 cases and seven women required a syntocinon infusion (figures are not mutually exclusive). One third of nulliparous women had active management at home (n=25 of 76, 32.9%; Figure 6). Of the women who birthed in a maternity unit, management of the third stage of labour was recorded by the DMO in 311 of the 356 cases (87.4%). Of these women almost ninety percent (n=271, 87.1%) had active management.

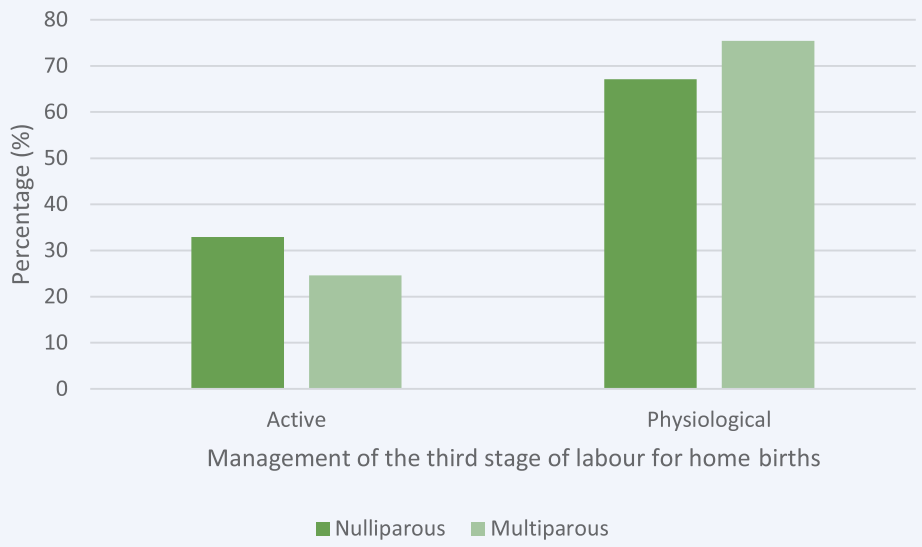


Figure 6: Management of the third stage of labour for home births, 2018-2020.

Pain relief

Type of pain relief used was recorded for all 489 women who gave birth at home (Figure 7). Over one third of women used no pain relief (n=175, 35.8%) with parous women more likely to not use any pain relief (39.5% versus 15.98%). Nulliparous women were more likely to use water for pain relief than parous women (76.3% versus 43.8%). Of the 489 recorded, almost 50% of women who had a home birth used water immersion for pain relief (n= 239, 48.9%) and 33% birthed in water.

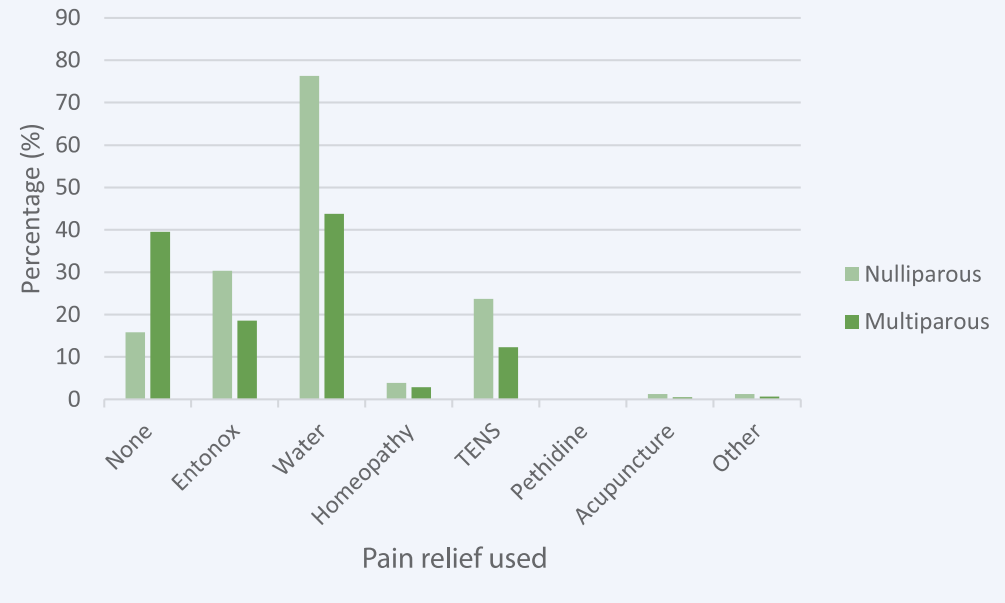


Figure 7: Pain relief used by women who gave birth at home, 2018-2020.

Perineal outcomes

For almost half of the women (n=221 of 485, 45.6%, missing information for four women) who gave birth at home the perineum remained intact (Table 25). Of those who birthed at home, parous women were more likely to have an intact perineum than nulliparous women (49.6% versus 23.7%).

There were five reported cases (n=5 of 485, 1.03%) where women who gave birth at home had an episiotomy in this triennial report 2018-2020, compared to 30.6% of women who gave birth in the hospital following transfer (n=37 of 121, missing information for 12 women).

Six women who gave birth at home experienced a third-degree tear (n=6 of 485, 1.2%), which is similar to the rate of third degree tears for all pregnant women (0.9%) in Ireland in 2018- 2019.[15, 16] Twice as many nulliparous women underwent perineal suturing than parous women who gave birth at home (52.6%; n=40 of 76 versus 21.7%; n=89 of 409, missing information for three cases).

Table 25: Perineal outcomes for women who had a home birth in comparison to the general pregnant population, 2018-2020.

	Home Birth data N=485		HIPE data	
	Nulliparous N=76	Parous* N=409	Nulliparous N=29,479	Parous N=47,824
Episiotomy	2(2.6)	3(0.7)	15519(52.6)	4935(10.3)
Intact	18(23.7)	203(49.6)	3424(11.6)	20359(42.6)
1st degree tear	17(22.4)	119(29.1)	3232(11)	7368(15.4)
2nd degree tear	35(46.1)	81(19.8)	8583(29.1)	15341(32.1)
3rd degree tear	4(5.3)	2(0.5)	915(3.1)	449(0.9)
4th degree tear	0(0)	1(0.2)	62(0.2)	23(0.05)

Note: Values are shown as n(%) unless otherwise stated. *Data missing for four parous women who gave birth at home. Perineal outcomes for all women who gave birth in hospital in 2018-2019 is based on Hospital In-Patient Enquiry (HIPE) data. HIPE data excludes women who had a caesarean section.

Estimated blood loss at birth

The average estimated blood loss for those who had a home birth was 279ml. The HSE's Home Birth Service guideline on the management of postpartum haemorrhage (PPH)(2018) defines a PPH as "the loss of 500 ml or more of blood from the genital tract within 24 hours of the birth of the baby."[11] Women who birthed at home had a recorded estimated blood loss of between 50 and 1500 ml (n=484, 99.0%, missing information for five women, Figure 8) with approximately 98% of women who birthed at home losing less than 500ml (n=472 of 484, 97.5%).

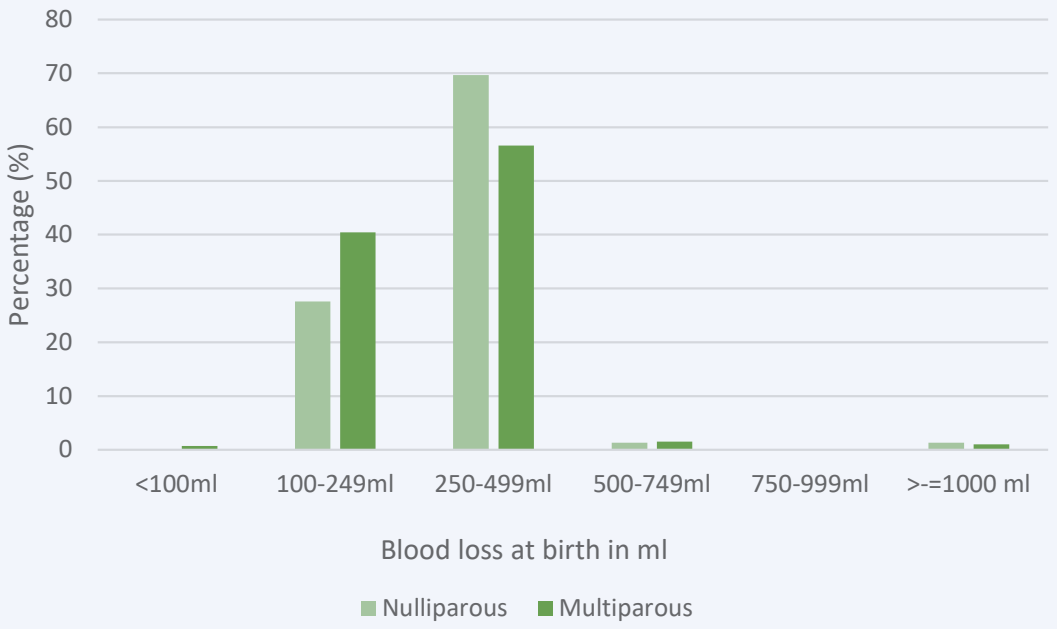


Figure 8: Estimated blood loss (mls) at delivery for women who gave birth at home, 2018-2020.

Other incidences at birth

There were two cases of shoulder dystocia reported from the 486 women who gave birth at home (0.8%, missing information for three women). This rate is lower than the rate reported for all births (1.4%) in high-income countries.[14] Both babies had normal Apgar scores and did not require any resuscitation.

Infant outcomes

Infant characteristics

Of the 489 infants born at home, 232 were female (47.8%) and 252 were male (52.0%, missing information for five infants). The mean birth weight for infants born at home was 3,704 grams. Almost three quarters of infants who were born at home had a birth weight between 3,000 and 3,999 grams (n=340, 70.2%, missing information for four infants). A quarter of infants (n=123, 25.4%) who were born at home had a birth weight greater than 4,000 grams (Figure 9). There were no low-birth-weight infants (less than 2,500 grams) born at home.

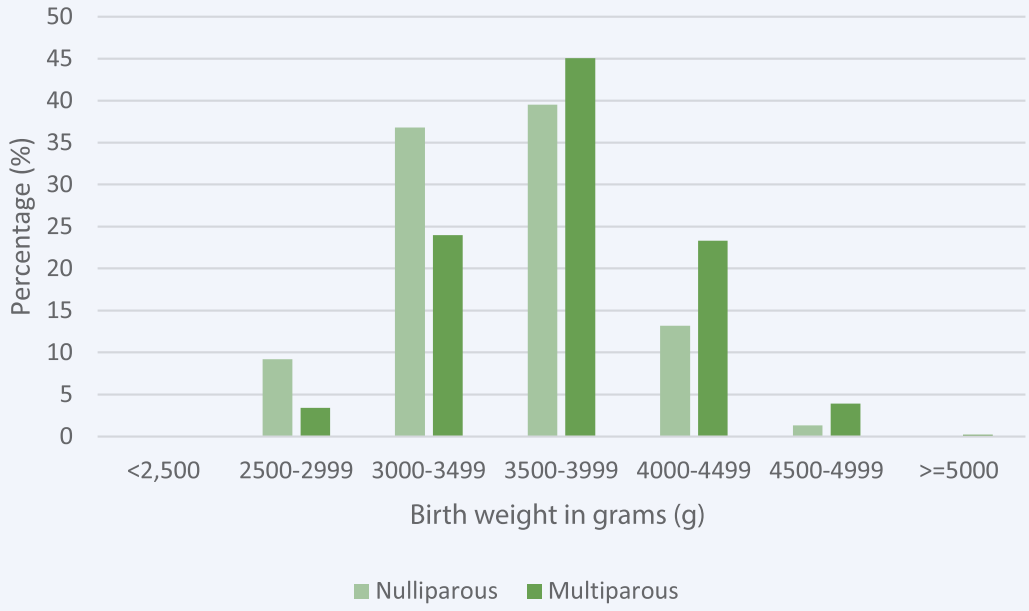


Figure 9: Distribution of birth weight in infants born at home, 2018-2020.

Apgar scores

Data on Apgar scores at 1 minute and 5 minutes were available for 468 and 475 infants born at home (n=489) respectively. Only two infants (n=2, 0.4%) had an Apgar score of six at one minute after birth (Figure 10). However, these two infants reached an Apgar score of 9 and 10 at 5 minutes after birth. At five minutes, the majority of infants had an Apgar score of either nine (n=87, 18.3%) or ten (n=379, 79.8%).

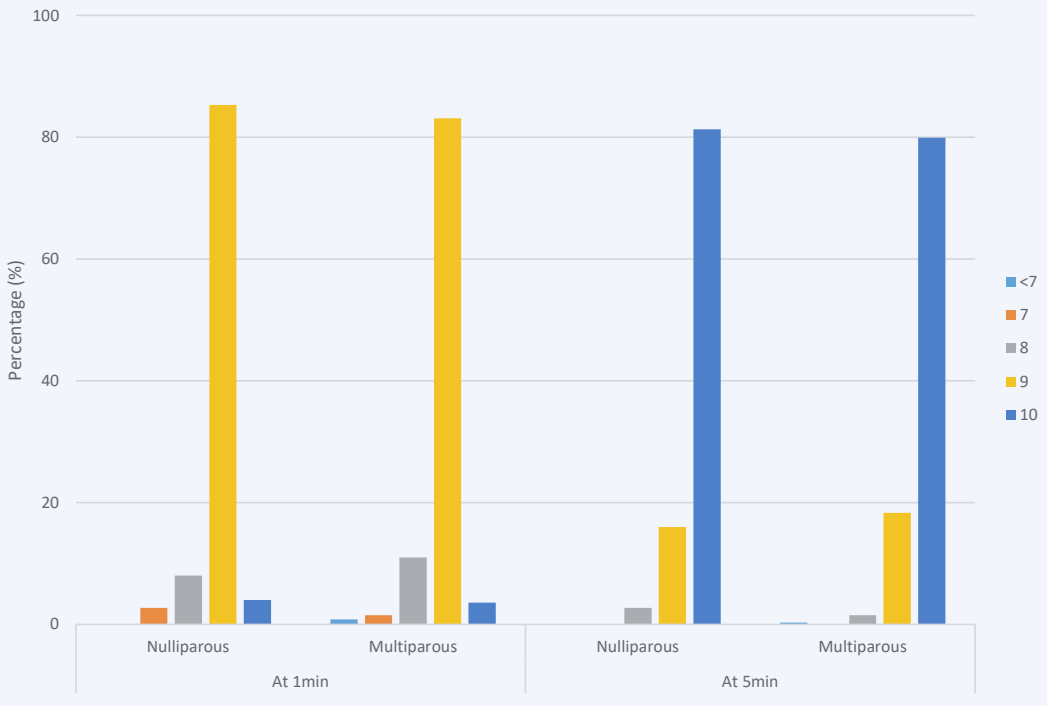


Figure 10: Apgar scores at 1 and 5 minutes for infants born at home, 2018-2020.

Resuscitation

Twenty-eight of the 487 infants born at home (5.7%, missing information for two infants) needed some form of resuscitation. Two babies required tactile stimulation only, six infants were resuscitated with suction only, six infants were resuscitated by intermittent positive pressure ventilation, one baby received cardiac massage and 13 infants received oxygen. Data are not mutually exclusive for forms of resuscitation needed. One fifth of the babies who required some form of resuscitation were transferred to the maternity unit for review (n=6 of 28, 21.4%).

Sixteen infants of the 136 women who transferred into hospital during labour required some form of resuscitation, four of which required suction only (2.9%), seven infants received oxygen (5.1%) and five were resuscitated by intermittent positive pressure ventilation (3.7%), and two infants received cardiac massage (1.5%). Six infants who were born in hospital following an intrapartum transfer were admitted to the neonatal unit (n=6, 4.4%).

Newborn examination and screening

Thirty-two of the 480 infants born at home (6.7%, missing information for 9 women) were suspected of having a congenital anomaly. A number of non-fatal congenital anomalies were identified following examination, the most common of which was tongue tie and birth marks or skin tags. As per Table 26, a number of other anomalies were identified including one baby with a ventricular septal defect and two babies with a cleft lip and/or palate.

Table 26: Congenital anomalies among babies who were born at home, 2018-2020.

	N=32 of 480
Tongue tie and/or lip tie	17(53.1)
Birth marks or skin tags	5(15.6)
Clicky hip	3(9.4)
Cleft lip and/or palate	2(6.3)
Hypospadius	1(3.1)
Sacral dimple	1(3.1)
Positional talipes	1(3.1)
Suspected trisomy 21	1(3.1)
Undescended testes	1(3.1)
Ventricular septal defect (VSD)	1(3.1)
Webbing of toes	1(3.1)
Congenital pneumonia	1(3.1)

Note: Values are shown as n(%) unless otherwise stated. Categories are not mutually exclusive.

The National Newborn Bloodspot Screening Programme was performed on 98.1% of the infants born at home (n=474 of 483, missing information for six women).

Medical examination of the newborn was carried out by a general practitioner in 45.8% of cases where the infant was birthed at home (n=223 of 487, missing information for two infants; one of the women was transferred by SECMs in the antepartum stage but gave birth at home with a private service). A hospital paediatrician examined 52.4% (n=255 of 487) of the infants born at home. There were nine infants who were examined by a midwife trained in Newborn Clinical Examination. Data on medical examination was recorded for all infants born in the maternity unit following transfer (n=136). Examination was undertaken by a hospital paediatrician for almost all these infants (n=133 of 136, 97.8%).

Of the infants who were birthed at home, half had vitamin K administered by intramuscular (IM) injection in this triennial report (n=250 of 485, 51.5%) compared to the 2017 report which was mainly administered orally (n=63 of 131, 48.0%). One third of infants who were born at home had vitamin K administered orally in this triennial report (n=171 of 485, 35.3%). Vitamin K was offered but declined for 13.2% (n=64) of infants born at home versus 3.9% (n=5) of infants born in the hospital following transfer (Table 27).

Table 27: Vitamin K administration, 2018-2020.

Vitamin K administration*	Home N=485 N(%)	Hospital N=131 N(%)
Administered orally	171(35.3)	20(15.3)
Administered IM	250(51.5)	106(80.9)
Offered but declined	64(13.2)	5(3.9)

Note: Values are shown as n(%) unless otherwise stated. *Data missing for four infants who were born at home, and for five infants who were transferred at the intrapartum stage to the hospital.

Method of feeding

Method of feeding was recorded on both day one and on day of discharge from the care of the SECM. Women who gave birth at home were discharged, on average, 14 days after the birth of their babies from the care of the SECM. In some exceptional circumstances the SECM may provide care beyond this agreed timeframe, this is provided on an individual basis. As outlined in Table 28, the vast majority of women who gave birth at home were exclusively breastfeeding on both day one (n=472 of 486, 97.1%) and on day of discharge (n=458 of 483, 95.2%). Women who birthed at home were twice as likely to breastfeed exclusively on day of discharge than the total population of women who gave birth in Ireland between 2018- 2019 (95.2% versus 46.6%).[15, 16]

Table 28: Method of feeding, 2018-2020.

Method of feeding*	Day one		Day of Discharge		Total population of women who gave birth[15, 16]
	Home N=486 N(%)	Hospital N=128 N(%)	Home N=483 N(%)	Hospital N=128 N(%)	2018-2019 N=58,450 N(%)
Breastfeeding Exclusively	472(97.1)	108(84.4)	458(95.2)	114(89.1)	46.60%
Partially breastfeeding	9(1.9)	19(14.8)	16(3.3)	11(8.6)	14.10%
Artificially feeding	5(1)	1(0.8)	9(1.9)	3(2.3)	60.70%

Note: Values are shown as n(%) unless otherwise stated. *Among women who gave birth at home the information was missing for three women at day one and for six women at day of discharge. Among women who were transferred and gave birth in hospital (n=136), the information was missing for eight women.

Infant transfers

Eighteen of the infants born at home were transferred to hospital for reasons specified in Table 29. Five infants were transferred by private car and 13 infants transferred by ambulance. Eleven of these infants were admitted into the Special Care Baby Unit (SCBU) or Neonatal Intensive Care Unit (NICU). The majority of the babies were transferred to the unit because of respiratory concerns (i.e. tachypnoea, grunting, low oxygen saturation). Other reasons included non-fatal fetal anomalies requiring review, jaundice treatment and potential contact with CMV infection requiring anti-viral medication.

Table 29: Reasons for infant transfer, 2018-2020.

	N=18 of 489
Respiratory concerns: tachypnoea, grunting, low oxygen saturation	11(61.1)
Fetal anomaly	4(22.2)
Stillbirth	1(5.5)
Jaundice	1(5.5)
Potential exposure to CMV infection	1(5.5)
Other	2(11.1)

Note: Values are shown as n(%) unless otherwise stated. Categories are not mutually exclusive.

Perinatal mortality

Of the 848 planned home births over the triennial period, there were five cases of perinatal mortality from 2018 to 2020. The cumulative perinatal mortality rate for all women who registered for a home birth was 5.8 perinatal deaths per 1000 births, which is similar to the cumulative national perinatal mortality rate reported by the NPEC Perinatal Mortality report 2018-2019 (5.6 per 1000 births).

Four of the five babies were born in hospital following transfer from the care of the HSE Home Birth service and one baby was born at home. There were three stillbirths and two early neonatal deaths, with causes including placental abruption, infection and stroke. Each of these cases were reported by the relevant hospitals to the perinatal mortality national clinical audit from the NPEC.[18]

Postpartum transfers

Thirty-eight women who gave birth at home were transferred in the postpartum period (which is considered from birth to 6 weeks) for care in a maternity unit. Of the 38 women, seven were transferred by private car, and 30 by ambulance (missing information for one case). Seven of the 30 women transferred by ambulance were accompanying their infant who required transfer to the hospital following the birth at home. Indications for transfer are outlined in Table 30.

Table 30: Reasons for maternal transfer postpartum, 2018-2020.

	N=38 of 489
Postpartum haemorrhage	12(31.6)
Extensive perineal tear, incl. 3rd and 4th degree tear, or complicated suturing	10(26.3)
Accompany infant being transferred following birth	7(18.4)
Retained placenta	2(5.3)
Pyrexia	2(5.3)
Blocked duct	2(5.3)
Pain	1(2.6)
Hypertension	1(2.6)
Offensive lochia	1(2.6)
Medical review required for large feto-maternal haemorrhage	1(2.6)
Other	1(2.6)

Note: Values are shown as n(%) unless otherwise stated. Categories are not mutually exclusive.

Medical interventions undertaken in the maternity hospital included suturing of the perineum (n=13, 25.5%) including one under spinal anaesthetic, and administration of IV medication (n=12, 23.5%).

Appendix A: Designated Midwifery Officers

HSE Area	Contact
Dublin Mid Leinster	**Margaret Hanahoe/Anne Clarke** Designated Midwifery Officer HSE Dublin Mid Leinster
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 & Denise Malone** 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	**Carmel Cronolly** Designated Midwifery Officer Portiuncula Hospital Ballinasloe Co. Galway Tel: 087 9707382 Email: carmel.cronolly2@hse.ie
Carlow **Kilkenny** **South Tipperary**	**Michelle Waldron** Designated Midwifery Officer Nursing and Midwifery Planning and Development Unit (NMPDU) Officer NMPDU HSE South, Office Complex Kilcreene Hospital Campus Co. Kilkenny Tel: (056) 7785620 Mobile: 087 7585024 Email: michelle.waldron@hse.ie
Waterford	**Janet Murphy** Designated Midwifery Officer, Waterford Tel: (051) 842207 Mobile: 087 9243538 Email: Janet.Murphy1@hse.ie
Wexford	**Nuria Tasies** CMM2 IHCMS/Domino/Homebirth Service Herbert Amon Unit Wexford General Hospital Wexford Direct phone number :053 91 53036 Email: nuria.tasies@hse.ie

The DMO's listed above were involved in the data collection at different stages for the period of the report 2018 – 2020

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