

Category: Clinical Guidance Statement

Home Births (C-Obs 2)

This statement has been developed by the C-Obs 2 Home Births Statement Development Panel and was approved by the RANZCOG Women's Health Committee and Council in July 2023.

A list of the Women's Health Committee membership can be found in Appendix A: Women's Health Committee Membership. A list of the Statement Development Panel can be found in Appendix B: Statement Development Panel Membership.

Conflict of Interest disclosures have been received from all members of this committee (Appendix C: Overview of the development and review process for this statement).

Disclaimer: This information is intended to provide general advice to practitioners. This information should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any patient. This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. The document has been prepared having regard to general circumstances (Appendix D: Full Disclaimer).

Purpose:	To provide evidence-based guidance for RANZCOG members, to be used when counselling women ¹ who are considering or planning a home birth.
Target audience:	This statement was developed primarily for use by RANZCOG members. Other registered health professionals providing maternity care, and consumers are acknowledged as additional audiences.
Background:	This statement was first developed by the RANZCOG Women's Health Committee in March 1987 and updated in 2017. The statement was most recently updated by the C-Obs 2 Home Births Statement Development Panel, a working group of the Women's Health Committee in July 2023.
Funding:	The development and review of this statement was funded by RANZCOG.

 $^{^1}$ RANZCOG currently uses the term 'woman' in its documents to include all individuals needing obstetric and gynaecological healthcare, regardless of their gender identity. The College is firmly committed to inclusion of all individuals needing O&G care, as well as all its members providing care, regardless of their gender identity.



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1. Purpose and scope

In 2022, RANZCOG established a Statement Development Panel (SDP) to update the existing statement on Home Births. The SDP determined that the purpose of this update is to provide an evidence-based statement on home birth, including guidance for registered health professionals (obstetriciansⁱⁱ, GPs, and midwives) who assist women to plan for their preferred place of birth.

Out of scope: unplanned home births (born before arrival (BBA)); home births without attendance of a registered health professional (also known as freebirths); funding arrangements of home birth programs; private home births; home births for women with identified risk factors for adverse pregnancy outcomes (i.e., prior caesarean birth).

The methodology used to develop this Clinical Guidance Statement is detailed in <u>Manual for Developing and</u> Updating Clinical Guidance Statements for RANZCOG.

2. Introduction

While the majority of women (wāhine) in Australia and Aotearoa New Zealand plan to give birth in hospital, a number may consider birthing at home. Regardless of where women intend to birth, it is important that women and their families (whānau) are well-informed and understand the potential benefits and harms for both mother and baby. This outcome is best achieved through open conversations between the woman and the registered health professionals caring for her during pregnancy and birth. These professionals may include obstetricians, general practitioners (GPs) and/or midwives. With respectful consideration of a woman's birth preferences, the safety of the woman and her baby should be the foremost concern when making decisions about place of birth.

RANZCOG acknowledges that every woman has the right to choose the place of birth and that some women may consider birthing at home. This Clinical Guidance Statement aims to support clinicians in counselling women about the possible benefits and risks that may be associated with home birth. The statement provides evidence-based, comprehensive information, supported by peer-reviewed publications, local data, and protocols in order to support well-informed, shared decision-making between the woman and her care providers.

This aim of this statement is to provide Fellows, GP Diplomates, and trainees with evidence-based guidance for counselling women who are considering or planning a home birth, ensuring that information about the benefits and harms of home births is routinely included in discussions around place of birth. It will also be useful for registered health professionals working within home birth programs, by encouraging the use of protocols which cover eligibility criteria, referral processes, planning for transfer (including nomination of appropriately resourced transfer location/setting), escalation of care pathways, appropriate training of staff, required equipment, and personnel requirements.

3. Terminology

For the purposes of this statement, the following terms are used. Definitions are provided below:

Low-risk or women without identified risk factors refers to women who have had antenatal care and have a singleton, cephalic pregnancy at 37⁺¹ to 41⁺⁰ weeks gestation, with a normally grown fetus, without previous caesarean births or other uterine scars and do not have other pre-existing or current conditions, affecting the woman or her baby, which may increase the risk of adverse outcomes during pregnancy, birth or in the postnatal period. The National Midwifery Guidelines for Consultation and Referral (Australia) and Guidelines

ii Includes trainees and GP obstetricians.



<u>for Consultation (Referral Guidelines)</u> (Aotearoa New Zealand) provide a comprehensive list of conditions that warrant further consultation or referral to a medical practitioner, and therefore may change the level of risk.^{1,2}

Statistical measures

Odds Ratio (OR) measures association between two events (i.e., intervention and outcome). An OR of 1 is indicative of no difference in the odds or likelihood of an outcome with the intervention. An OR < 1 demonstrates reduced odds or likelihood of an outcome. An OR > 1 shows increased odds or likelihood of an outcome.

Relative Risk (RR) is the ratio between the risk or probability of an outcome with the intervention, divided by the risk for the same outcome with the comparator. Like the OR, a RR of 1 suggests no difference. An RR > 1 suggests increased risk. An RR < 1 suggests decreased risk. The term Hazard Ratio (HR) may also be used and is similarly equivalent.

Number needed to harm (NNH) is the number of patients that must receive a particular treatment for 1 additional patient to experience a particular adverse outcome.

4. List of recommendations

Recommendation 1

Evidence based recommendation

Conditional: Women considering a home birth should discuss the planned place of birth with clinicians. It is suggested that this discussion includes the evidence relating to maternal and neonatal outcomes associated with planned home birth compared to hospital birth, for women without identified risk factors for adverse pregnancy outcomes.

GRADE of evidence: Low

Good Practice Point 1

GPP: It is recommended that publicly funded home birth programs should include protocols which cover eligibility criteria and include referral processes, planning for transfer, escalation of care pathways, appropriate training of staff, required equipment, suitability of home environment, and personnel requirements.

5. Background

Rationale

In Australia, there are models of care where home is the planned setting for birth, provided by at least 15 publicly funded home birth programmes where there is collaboration between midwives and hospital services.³ The availability and accessibility of these programs is further described later in this statement. Services may also be offered privately but these services are out of scope for this statement. In Aotearoa New Zealand, most women are cared for by Lead Maternity Carers (LMCs, usually midwives); and home births are offered through collaborative care arrangements with other LMC midwives and as needed, through local hospitals.

Ensuring that women are supported to make informed decisions and choices about aspects of their care was identified as a key strategic direction for Australian maternity services by the Council of Australian Governments (COAG) Health Council in 2019. For women, reasons for choosing to have a home birth



vary. Studies report preferences such as wanting to avoid birth intervention, the comfort and familiarity of home environments, freedom to make own choices, and desire to experience greater continuity of care. These findings are consistent with national survey data in Australia which additionally reported that one-third of women surveyed, who indicated interest in a home birth for their next pregnancy, considered their previous hospital birth experience as traumatic, and cited this as one reason for exploring the option of home birth. A study of women in Aotearoa New Zealand also reported women who choose to give birth at home were more likely to be older and multiparous, however, this study did not report reasons underpinning their decision.

It must be acknowledged that risk may change over the course of a pregnancy and discussing changes in the risk profile with women and their health care providers throughout pregnancy, and at the time of decision-making around the planned place of birth, is important. Assessment of risk can occur at varied time points during the pregnancy, as specified by local services and protocols.

Epidemiology

In Australia, 0.6% of women who gave birth in 2021 intended to and did so outside of a hospital setting, including at home. In Aotearoa New Zealand, almost 4% of all births took place in a home setting in 2019. During the COVID-19 pandemic, the percentage of women birthing at home in Aotearoa New Zealand increased to 7% in the 2nd quarter of 2020 (coinciding with the first lockdown), but then returned to 4% by the end of 2020.

6. Methods

The statement was developed according to approved RANZCOG processes, available in the <u>Manual for</u> Developing and Updating Clinical Guidance Statements.

The Research and Policy Teamⁱⁱⁱ searched for systematic reviews that compared planned home birth to planned hospital birth and reported outcomes requested by the SDP. The search terms are provided in Appendix C: Overview of the development and review process for this statement.

Systematic reviews included in the evidence summary were assessed for quality using the AMSTAR 2 critical appraisal tool. ¹⁰ Assessment of the rigour, certainty, and quality of the evidence was further undertaken using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approach.

Phrasing for recommendations differs according to the strength of evidence. Further explanation of recommendation types and classifications can be found in the <u>Manual for Developing and Updating</u> Clinical Guidance Statements for RANZCOG.

The Research and Policy Team were also provided with nine clinical protocols, local procedure manuals and eligibility checklists from health services with collaborative care arrangements and/or a publicly funded program for home birth:

- Belmont Midwifery Group Practice Homebirth Service (NSW)
- Homebirth Service Wollongong Hospital (NSW)
- Darwin Home Birth Service, Royal Darwin Hospital (NT)
- Alice Springs Hospital (NT)
- Planned Birth at Home Clinical Directive (SA)
- Monash Women's (Monash Health) (VIC)
- Western Health Homebirth Service (VIC)
- Public Home Birth Program Policy (WA)
- Booking to Birth at a Counties Manukau Health Primary Birthing Unit (NZ)

iii Literature search assistance provided by Ms Marian Showell, University of Auckland.



7. Clinical Questions and Recommendations

Detailed Evidence to Decision summaries for the clinical question, including the study results, absolute effect estimates, and certainity of the evidence for the reported outcomes, can be found in Appendix E- Evidence profiles.

Clinical Question 1

For women who are planning a home birth, compared to a hospital birth, what are the likely maternal and neonatal outcomes?

P^{iv}- Low risk nulliparous and parous women with a singleton pregnancy who are planning a home birth. I- Planned home birth, with provision of information and counselling that includes a discussion of benefits and harms, to support women to make an informed decision.

C- Planned hospital birth

O- Maternal: Morbidity and mortality; perineal injury; episiotomy; mode of birth (vaginal birth, assisted vaginal birth, caesarean birth); postpartum haemorrhage (PPH); type of pain relief; oxytocin augmentation; patient experience (PROM/PREMS); satisfaction; sense of empowerment; transfer rates (antenatal and postpartum); uterine rupture.

Neonatal: Neonatal intensive care unit (NICU) admission; Apgar score; perinatal mortality; hypoxic ischemic encephalopathy (HIE).

Summary of evidence

Sources

Systematic reviews comparing planned home births and hospital births for women considered low-risk (see Terminology), were considered in the literature search. One systematic review authored by Scarf et al., 2018 (search date January 2017) identified 28 observational studies from 10 countries, including eight studies from Australia and Aotearoa New Zealand, and reported outcomes associated with planned home birth, compared with hospital birth for low-risk women. This systematic review was selected for geographical relevance and recency of publication. The AMSTAR 2 assessment was rated as having moderate overall confidence in the results. Additional studies published after the search date of the systematic reviews were included if they reported on planned home births and hospital births and/or had outcomes from the PICO not otherwise reported. Data from birth centres or primary midwifery units were not included in the evidence summary.

In addition to the systematic review, two additional studies were included. 1) Homer et al., 2019, a retrospective cohort study analysing birth data comparing planned home birth to hospital birth across eight Australian states for low-risk women¹², and 2) Davies-Tuck et al., 2018, a population-based cohort study of all births in Victoria only for outcome data relating to Apgar score < 7 and HIE.¹³

All outcome data were extracted from the meta-analyses and individual studies, and where available, the data was also stratified by parity. A summary table of the outcomes, comparing the results for planned home birth and planned hospital birth with data from both the systematic review and the national Australian study is presented in Table 1- Maternal and neonatal outcomes associated with planned home birth compared with planned hospital birth. A full list of outcomes reported on can be found in Appendix E- Evidence profiles.

The evidence summary reported the following **benefits** for planned home birth for low-risk women:

Benefits for the woman

• Increased likelihood of unassisted vaginal birth [OR 2.93, 95% CI- 2.13-4.03]

iv Please note, PICO is a framework for developing a focused clinical question. The letters represent Population, Intervention, Comparator, Outcome. See RANZCOG Manual on Developing and Updating Clinical Guidance Statements-pp. 10 for further detail.



- Increased likelihood of intact perineum [OR 2.72, 95% CI- 2.56- 2.90]
- Reduced likelihood of severe perineal trauma (third and fourth-degree tears) [OR 0.04, 95% CI- 0.04- 0.05]
- Reduced likelihood of caesarean section birth [OR 0.35, 95% CI- 0.27-0.46]
- Reduced likelihood of instrumental birth [OR 0.37, 95% CI 0.24-0.58]

Benefits for the baby

- There was a **small reduction** in risk for NICU admission [OR 0.71, 95% CI- 0.55 0.92] in the systematic review data¹¹ but **little or no reduction** [OR 0.63, 95% CI- 0.39-1.01] in Australian national data.¹²
- There was **little to no increase** in rates of early neonatal death (< 7 days) for nulliparous [OR 0.99, 95% CI- 0.73-1.36] or multiparous women [OR 1.03, 95% CI- 0.69- 1.54], noting that this outcome is rare, regardless of planned or actual place of birth.
- There was **little to no increase** in rate of stillbirth [OR 0.94, 95% CI- 0.75- 1.17] regardless of parity and difference reported for composite outcome of stillbirth and early and late neonatal death. [OR 1.55, 95% CI- 0.65-3.69]. It is noted these outcomes are rare, regardless of planned or actual place of birth.

Intrapartum transfer

• Intrapartum transfer to a hospital setting/obstetric unit is **common** for women planning a home birth. Transfer rates were not reported in either the systematic review or the national Australia study. ^{11, 12} Safer Care Victoria (State government organisation) published an evidence summary of 20 planned home birth studies in 2021. Eight studies reported average transfer rates of 14% (range 9 to 28%). For nulliparous women, the average transfer rate was 34% (range 22 - 52%) and for parous women, the transfer rate was lower at 6% (range 3 - 11%). ¹⁴

Harms for the baby

- No harms were identified for individual neonatal outcomes.
- The Birthplace in England prospective cohort study, included within the systematic review reported data from 2008 to 2010 using a composite outcome that included'; stillbirth (5%), early neonatal death (NND) < 7 days (7%), neonatal encephalopathy (NE) (40%); meconium aspiration syndrome (MAS) (34%); brachial plexus injury (9%), bone fractures (13%), and suggested an increase in this combined outcome for women having their first baby at home (OR 1.75, 95% CI- 1.07- 2.86, NNH 1 in 125), but not for women having their second or subsequent baby at home (parous). The systematic review only reported the stillbirth outcome from the Birthplace in England study individually (and not by parity). The systematic review only reported the still birth outcome from the Birthplace in England study individually (and not by parity).
- The Homer et al., 2019 study also included a composite outcome (stillbirth, early and late neonatal death), however, the study **did not report an increase** in adverse outcomes with planned home birth, regardless of parity.

Other evidence

It is acknowledged another recent systematic review by Hutton et al., 2019 and several individual studies also reported outcomes associated with planned home birth compared with planned hospital birth. He while the systematic review was not selected for inclusion, there is significant overlap in the studies included in the Scarf et al 2018., publication, in addition to consistent outcome data. Three peer-reviewed observational studies in the US were also noted to be of relevance, however this data included women with identified risk factors for adverse pregnancy outcomes who planned to birth at home. As this Clinical Guidance Statement determined high-risk pregnancies to be out of scope, evidence summarised in Table 1- Maternal and neonatal outcomes associated with planned home birth compared with planned hospital birth., it cannot be generalised to unselected populations.

^v (% in brackets is % of each outcome in the composite)



Limitations in the evidence

- Data from the systematic review include data from the Homer et al., 2014 study. The data from Homer et al., 2019 includes the data from Homer et al., 2014, which reported on outcomes for 712 home births. The overlap is 3% (712 home births were reported in Homer et al., 2014 and 8212 home births were reported in Homer et al., 2019). The data was not pooled, and thus double counting is avoided.
- Data in the systematic review included five large cohort studies from the Netherlands. A sensitivity analysis conducted by the Research and Policy Team did not find any differences in the outcomes when this data was excluded.
- The grouping of six different adverse outcomes into a composite single outcome in one prospective cohort study (Birthplace in England) may over emphasise harm that does not have long term consequences, as mortality outcomes such as stillbirth are combined with an outcome such as MAS, which is rarely associated with mortality or severe long-term morbidity.
- All evidence was graded as low or very low certainty, due to inconsistency, indirectness (where studies included primary birthing centres) and large confidence intervals (in some studies only). Using the GRADE methodology, all observational studies are graded low and although there are some reasons that they may be upgraded, the research team did not consider the criteria for doing so was met.
- It is possible that the women who had planned home births were lower risk than the women who had a planned hospital birth, however as few studies reported detailed risk factors for planned home births and planned hospital births separately, it is not possible to explore this as a reason for the birth outcomes in either setting.
- It could be considered that as women having a planned home birth are pre-screened as low risk that fewer adverse events would be expected in this group. However, as outcomes such as neonatal mortality and HIE are rarely reported in either planned home or hospital births, it may be unreasonable to expect a statistically significant difference between the two places of birth. The evidence in this statement does not report either an increase or decrease in adverse perinatal events with either place of birth in low-risk women. Larger studies of place of birth may report different harms and benefits.

Conclusion

Based on the systematic review evidence examined, which has only been considered for in the specific context of women without identified risk factors for adverse pregnancy outcomes, planned home birth is associated with an increased likelihood of vaginal birth and intact perineum, reduced likelihood of severe perineal trauma (third and fourth-degree perineal tears), and reduced likelihood of intrapartum interventions such as caesarean birth and instrumental births. Intrapartum transfer to an obstetric unit was reported as more common for nulliparous women (1 in 3) than multiparous women (1 in 17), although frequency of transfer events has varied in other included studies.^{7, 15} Based on the studies considered as evidence in this statement (See- Summary of evidence), there was little or no increase in perinatal morbidity or mortality reported for the cohort of women without identified risk factors for adverse pregnancy outcomes, regardless of parity (GRADE- low quality).

Recommendation 1

Evidence-based recommendation

Conditional: Women considering a home birth should discuss the place of birth with clinicians. It is suggested that this discussion includes the evidence relating to maternal and neonatal outcomes associated with planned home birth compared to hospital birth, for women without identified risk factors for adverse pregnancy outcomes.

GRADE of evidence: Low



Good Practice Point 1

GPP: It is recommended that publicly funded home birth programs should include protocols which cover eligibility criteria and include referral processes, planning for transfer, escalation of care pathways, appropriate training of staff, required equipment, suitability of home environment, and personnel requirements.



Table 1- Maternal and neonatal outcomes associated with planned home birth compared with planned hospital birth.

The following table provides a summary of maternal and neonatal health outcomes, as reported in the included evidence, for planned home births and planned hospital births.

Outcome		Home Birth	Hospital Birth	Odds Ratio (95% CI)	Source and study design	Explanation
Stillbirth	All births (International data)	0.04% (1 in 2500)	0.05% (1 in 2000)	0.94 (0.76-1.17)	Scarf LS, Rossiter C, Vedam S <i>et al</i> 2018. Systematic review.	Stillbirth (SB) is rare. There is little or no difference in stillbirth for planned home birth or hospital birth, regardless of whether the birth was a first or subsequent birth. GRADE: Low
	Nulliparous	0.05% (1 in 2000)	0.06% (1 in 1666)	1.20 (0.32-4.51)		
	Multiparous	0.03% (1 in 3333)	0.03% (1 in 3333)	1.04 (0.73-1.50)		
Stillbirth in	National Australian data	0.11% (1 in 909)	0.08% (1 in 1250)	1.55 (0.65-3.69)	Homer CSE, Cheah SL, Rossiter C, et al 2019. Cohort study.	Stillbirth and neonatal deaths (NND) are rare.
labour, early and late neonatal death (NND).	Primiparous	<5*2	0.08 (1 in 1250)	2.12 (0.58-7.82)		There is little or no difference in SB and all NND for planned home birth or hospital birth, regardless of whether the birth was a first or a subsequent birth. GRADE: Low
	Multiparous	<5*	0.07 (1 in 1430)	1.29 (0.40-4.14)		

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	All births (International data)	0.04 (1 in 2500)	0.03% (1 in 3333)	1.00 (0.78-1.27)		Early NND is rare. There is little or no difference in early NND for planned home birth or hospital birth, regardless of whether the birth was a first or a subsequent birth. GRADE: Low
Early NND up to seven days	Nulliparous	0.05% (1 in 2000)	0.05% (1 in 2000)	0.99 (0.73-1.36)	Scarf LS, Rossiter C, Vedam S <i>et al</i> 2018. Systematic review.	
	Multiparous	0.03% (1 in 3333)	0.03% (1 in 3333)	1.03 (0.69-1.54)		
	All births (International data)	0.24% (1 in 416)	0.8% (1 in 125)	0.71 (0.55-0.92)		Admission to NICU is uncommon.
NICU admission	Nulliparous	0.3% (1 in 333)	0.4% (1 in 250)	1.11 (0.65 – 1.89)	Scarf LS, Rossiter C, Vedam S <i>et al</i> 2018. Systematic review.	There is little or no difference in admission to NICU for planned home birth or hospital birth, regardless of whether the
	Multiparous	0.1% (1 in 1000)	0.2% (1 in 500)	0.74 (0.61-1.87)		birth was first or a subsequent birth. GRADE: Low
NICU/SCBU admission <48 hours	National Australian data	0.5% (1 in 200)	0.8% (1 in 125)	0.63 (0.39-1.01)	Homer CSE, Cheah SL, Rossiter C, et al 2019. Retrospective cohort study.	Admission to NICU within 48 hours is uncommon. There is little or no difference in admission to NICU for planned home birth compared to hospital birth. GRADE: Low



Hypoxic ischemic encephalopathy (HIE) ⁴		0.03% (1 in 3202)	0.2% (1 in 500)	0.82 ^ (0.05-13.18)		HIE is rare. There is little or no difference in HIE for planned home birth compared to hospital birth. GRADE: Very low
Apgar score < 7 at 5 mins. ⁴	All births (Victoria, Australia)	0.9% (1 in 111)	1.2% (1 in 83)	0.73 ^ (0.50-1.05)	Davies-Tuck <i>et al.,</i> 2018. Population-based cohort study.	Apgar score <7 at 5mins is uncommon. There is little or no difference in HIE for women who have a planned home birth compared to women who have a planned hospital birth. GRADE: Very low
Instrumental birth	All births (International data)	5.7% (1 in 17)	14.3% (1 in 7)	0.37 (0.24-0.58)	Scarf LS, Rossiter C, Vedam S <i>et al</i> 2018. Systematic review.	Instrumental births are common. There are decreased likelihood of instrumental birth for women who have a planned home birth compared with women who have a hospital birth. GRADE: Low



Caesarean births	All births (International data)	2.1% (1 in 48)	9.6% (1 in 10)	0.35 (0.27-0.46)		Caesarean births are common. There are decreased likelihood of caesarean birth for women who have a planned home birth compared with women who have a hospital birth. GRADE: Low
Vaginal births	All births (International data)	90.5% (1 in 1)	54.4% 1 in 2	2.93 (2.13-4.03)		Vaginal births are very common. There is increased likelihood of
Vaginal birth. ²	National Australian data	95.2% (1 in 1)	79.3% (1 in 2)	2.72 (2.63-2.81)	Homer CSE, Cheah SL, Rossiter C, et al 2019. Retrospective cohort study.	vaginal birth for women who have a planned home birth compared to women who have a hospital birth. GRADE: Low
	All births (International data)	43.9% (1 in 2.2)	43.7% (1 in 2.2)	1.15 (1.06-1.25)	Scarf LS, Rossiter C, Vedam S <i>et al</i> 2018. Systematic review.	Intact perineum following birth is very common .
Intact perineum	National Australian data	47.2% (1 in 2)	26.6% (1 in 4)	2.72 (2.56-2.90)	Homer CSE, Cheah SL, Rossiter C, et al 2019. Retrospective cohort study.	There is increased likelihood of an intact perineum for women who have a planned home birth than woman who have a hospital birth. GRADE: Low



Episiotomy	National Australian data	2.6% (1 in 38)	17.3% (1 in 6)	0.13 (0.10-0.15)	Homer CSE, Cheah SL, Rossiter C, et al 2019. Retrospective cohort study.	Episiotomy is very common in hospital births. There is a decreased likelihood of an episiotomy for women who have a planned home birth than women who have a hospital birth. GRADE: Very low
Severe perineal trauma (third and fourth-degree tears)	All births (International data)	2.0% (1 in 50)	3.2% (1 in 31)	0.73 (0.55–0.96)	Scarf LS, Rossiter C, Vedam S <i>et al</i> 2018. Systematic review.	Severe perineal tears are common. There is a decreased likelihood
Severe perineal trauma (third and fourth-degree tears). ²	National Australian data	0.9% (1 in 111)	2.0% (1 in 50)	0.53 (0.36–0.73)	Homer CSE, Cheah SL, Rossiter C, et al 2019. Retrospective cohort study.	of severe perineal tears for women who have a planned home birth than women who have a hospital birth. GRADE: Low (Homer 2019), Scarf 2018 (Very low)
Post partum haemorrhage (PPH) ≥1000ml	All births (International data)	2.8% (1 in 36)	1.6% 1 in 62)	0.73 (0.55-0.96)	Scarf LS, Rossiter C, Vedam S <i>et al</i> 2018. Systematic review.	PPH is common . It is uncertain if women who
PPH with blood transfusion. ²	National Australian data	0.54% (1 in 185)	0.53% (1 in 187)	1.08 (0.73-1.60)	Homer CSE, Cheah SL, Rossiter C, et al 2019. Retrospective cohort study.	have a planned home birth are more likely or less likely to have an PPH than women who have a hospital birth as the evidence is conflicting. GRADE: Very low



Augmentation with oxytocin. ²	National Australian data	3.4% (1 in 29)	16.5% (1 in 6)	0.19 (0.16-0.22)	Homer CSE, Cheah SL, Rossiter C, et al 2019. Retrospective cohort study.	Oxytocin augmentation in common. There is a decreased likelihood of augmentation with oxytocin for women who have a planned home birth than women who have a hospital birth. GRADE: Low
Epidural or spinal anaesthetic. ²	National Australian data	3.3% (1 in 30)	13.8% (1 in 7)	0.22 (0.19-0.26)	Homer CSE, Cheah SL, Rossiter C, et al 2019. Retrospective cohort study.	Epidural or spinal anaesthetic is common. There is a decreased likelihood of epidural for women who have a planned home birth than women who have a hospital birth. GRADE: Low
Mother admitted to Intensive care unit (ICU) ²	National Australian data	0.14% (1 in 714)	0.38% (1 in 263)	0.41 (0.15-1.08)	Homer CSE, Cheah SL, Rossiter C, et al 2019. Retrospective cohort study.	ICU admission of the mother is uncommon. There is little or no difference in admission to ICU for planned home birth compared to hospital birth. GRADE: Low



Intrapartum	Nulliparous	Average 34% (range 22 to 52%)	Safer Care Victoria 2021.	Intrapartum transfer is very common for women having their first baby at home.
transfers from home to hospital ⁵	Multiparous	Average 6% ((range 3-11%)	Systematic review/evidence summary.	Intrapartum transfer rates are reduced for women having their second (or more) baby at home. GRADE: Low

Box 1 Descriptors of frequency

- Very Common- from 1 in 10 or more
- Common- 1 in 10 to 1 in 100
- Uncommon- 1 in 100 or 1 in 1000
- Rare- 1 in 1000 to 1 in 10,000
- Very rare- 1 in 10,100 to 1 in 1000,00

Box 3 Outcomes included in PICO not reported in included studies

Maternal

- Mortality (due to rare occurrence)
- Sense of empowerment/satisfaction
- PREMS/PROMS
- Uterine rupture (not reported due to scope only including women who are low risk)

Box 2 GRADE descriptors

GRADE		DEFINITION
High	$\oplus \oplus \oplus \oplus$	We are very confident that the true effect lies close to that of the estimate of the effect
Moderat	re ————	We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
Low	$\oplus \oplus \ominus \ominus$	Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.
Very low	0000	We have very little confidence in the effect estimate: the true effect is likely to be substantially different from the estimate of the effect.

Home Births (C-Obs 2)

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Data sources:

- 1.Scarf et al., 2018 Data from systematic review and meta-analysis of 25 studies
- 2. Homer et al., 2019 Australian data only and reported adjusted OR (adjusted for maternal age, country of birth, gestational age and parity).
- 4. Davies-Tuck et al., 2018 (HIE and Apgar score data only)
- 5. Safer Care Victoria, 2021 (data on intrapartum transfer only).

Notes to table:

- Data with ^ were calculated by the RaPT using an online calculator (Stat Calc).
- Cells marked * <5 are unable to report data or calculate incidence.
- Terms used in table are as reported in each study.
- There was no data reported on maternal deaths.
- All studies followed an intention to treat analysis. That is, participants remained in the same cohort regardless of place of actual birth (i.e., if a woman planned to give birth at home, she remained in the 'planned home birth' cohort even if the birth occurred in hospital.

Home Births (C-Obs 2)

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8. Legal and ethical implications

Adverse outcomes may occur in any place of birth, even in women without identified risk factors for adverse pregnancy outcomes. As part of this statement update, coronial inquest and case findings published within the past 10 years where maternal and/or neonatal deaths occurred in the context of a home birth, were reviewed. RANZCOG acknowledges recommendations, including development of an information resource which advises of risks and safety to inform decision-making on the place of birth²⁰⁻²² and the importance of communication between all registered health professionals involved in a woman's maternity care and within a collaborative home birth service.²³

9. Recommendations for future research

- Prospective data collection for low-risk women who have planned home birth, or birth in a birth centre/unit or obstetric unit.
- Outcomes of the home birth programs/collaborative services in Australia and Aotearoa New Zealand.
- Data on maternal and neonatal/perinatal outcomes stratified and grouped by parity.
- Routine collection of patient outcomes (PREMS/PROMS) to establish an understanding of how provision of maternity care can be improved for women, wherever they prefer and plan to give birth.
- Detailed data on risk factors amongst planned births at home compared to planned hospital births.
- Studies assess planned home birth compared with planned hospital birth for outcomes associated with maternal satisfaction with birthing experiences and breastfeeding.



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11. Links to relevant College Statements

- Evidence-based Medicine, Obstetrics and Gynaecology (C-Gen 15)
- Birth after previous caesarean section (C-Obs 38)
- Maternal suitability for models of care, and indications for referral within and between models of care (C-Obs 30)
- Shared Maternity Care in Australia (<u>WPI-9</u>)
- Maternal and perinatal data collection (C-Obs 40)

12. Links to relevant Consumer resources

13. Links to relevant RANZCOG Learning modules

None identified.

14. Useful links/support groups



Appendices

Appendix A: Women's Health Committee Membership

Name	Position on Committee
Dr Scott White	Chair and Councillor
Dr Gillian Gibson	Deputy Chair, Gynaecology
Dr Anna Clare	Deputy Chair, Obstetrics
Associate Professor Amanda Henry	Member and Councillor
Dr Samantha Scherman	Member and Councillor
Dr Marilla Druitt	Member and Councillor
Dr Frank O'Keeffe	Member and Councillor
Dr Kasia Siwicki	Member and Councillor
Dr Jessica Caudwell-Hall	Member and Councillor
Dr Sue Belgrave	Member and Councillor
Dr Marilyn Clarke	Aboriginal and Torres Strait Islander Representative
Professor Kirsten Black	SRHSIG Chair
Dr Nisha Khot	Member and SIMG Representative
Dr Judith Gardiner	Diplomate Representative
Dr Angela Brown	Midwifery Representative, Australia
Ms Adrienne Priday	Midwifery Representative, Aotearoa New Zealand
Ms Leigh Toomey	Community Representative
Dr Rania Abdou	Trainee Representative
Dr Philip Suisted	Māori Representative
Prof Caroline De Costa	Co-opted member (ANZJOG member)
Dr Steve Resnick	Co-opted member

Appendix B: Statement Development Panel Membership

Name	Position on SDP
Dr Kasia Siwicki	Chair
A/Prof Alexis Shub	Member (CMFM). Resigned 18/05/2023. ⁶
Dr Brian Peat	Member
Dr Jennifer Retsinas	Member
Dr Shaylee Iles	Member
Dr Siew Goh	Member
Prof Linda Sweet	Member, Australian midwifery representative
Ms Adrienne Priday	Member, Aotearoa New Zealand midwifery representative
Ms Tessa Kowaliw	Member, Consumer representative
Research & Policy Team	Position
Professor Cindy Farquhar	Dean of Research & Policy
Ms Jinty Wilson	Head of Research & Policy
Ms Katie Coulthard	Senior Coordinator, Research & Policy

⁶ A/Prof Alexis Shub MFM has actively participated on the Statement Development Panel up to the initial review of the draft statement by the RANZCOG Women's Health Committee. A/Prof Shub resigned from the SDP on 18th May 2023. The Women's Health Committee thank A/Prof Shub for her participation and significant contributions to this work.



Appendix C: Overview of the development and review process for this statement

i. Declaration of interest process and management

Declaring interests is essential in order to prevent any potential conflict between the private interests of members, and their duties as part of RANZCOG Women's Health Committee or working groups.

A declaration of interest form specific to guidelines and statements (approved by the RANZCOG Board in September 2012). All members of the Statement Development Panels, Statement and Guideline Advisory Group (SaGG) and Women's Health Committee were required to declare their relevant interests in writing on this form prior to participating in the review of this statement.

Members were required to update their information as soon as they become aware of any changes to their interests and there was also a standing agenda item at each meeting where declarations of interest were called for and recorded as part of the meeting minutes.

There were three perceived conflicts of interest noted during the process of updating this statement. Ms Tessa Kowaliw declared involvement as a casually contracted freelance consultant in the healthcare sector (including co-author of clinical guidelines). Prof Linda Sweet, Ms Ady Priday and Dr Kasia Siwicki declared previous involvement in health services guidelines. Prof Linda Sweet is also noted as an editor of journal publication *Women and Birth*.

ii. Steps in developing and updating this statement

This statement was developed in July 2022-May 2023 by the C-Obs 2 Home Births Statement Development Panel, a working group established by the Women's Health Committee. It was most recently reviewed by the Women's Health Committee and RANZCOG Council in July 2023. The Women's Health Committee carried out the following steps in reviewing this statement:

- Declarations of interest were sought from all members prior to reviewing this statement.
- Structured clinical questions were developed and agreed upon.
- Two recent systematic reviews were identified and a further search for studies from Australia and Aotearoa New Zealand was done.
- At the July 2023 meeting of the Women's Health Committee, the existing consensus-based recommendations were reviewed and updated (where appropriate) based on the available body of evidence and clinical expertise, as set out in the Methodology section below.

RANZCOG statements are developed according to the standards of the Australian National Health and Medical Research Council (NHMRC), which includes the use of GRADE methodology. The Evidence to Decision framework embedded within the MAGIC (Making GRADE the Irresistible Choice) digital platform (https://magicevidence.org) is used to publish the updated statement recommendations. The recommendations published by RANZCOG are approved by the RANZCOG Women's Health Committee, Council and Board respectively. The processes used to develop RANZCOG clinical guidance statements are described in detail at: https://ranzcog.edu.au/wp-content/uploads/2022/08/Manual-for-developing-and-updating-clinical-guidance-statements.pdf

iii. Developing recommendations using GRADE methodology

The relevant GRADE assessments for each recommendation are presented within the online platform used to structure the clinical guidance statement (MAGICapp; https://magicevidence.org/magicapp/).



Appendix D: Full Disclaimer

Purpose

This Statement has been developed to provide general advice to practitioners when counselling women who are considering or planning a home birth and should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any person. It is the responsibility of each practitioner to have regard to the particular circumstances of each case. Clinical management should be responsive to the needs of the individual person and the particular circumstances of each case.

Quality of information

The information available in this statement is intended as a guide and provided for information purposes only. The information is based on the Australian/New Zealand context using the best available evidence and information at the time of preparation. While the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) has endeavoured to ensure that information is accurate and current at the time of preparation, it takes no responsibility for matters arising from changed circumstances or information or material that may have become subsequently available. The use of this information is entirely at your own risk and responsibility.

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These terms and conditions will be constructed according to and are governed by the laws of Victoria, Australia.



Appendix E- Evidence profiles

Benefits and harms

Substantial net benefits of the recommended alternative

Research evidence

A systematic review of 28 studies comparing maternal and perinatal outcomes by planned place of birth (home vs hospital) was identified (Scarf et al., 2018). Twenty-five papers were included in the meta-analysis. Nine publications included data from cohorts in Australia and Aotearoa New Zealand. The complete meta-analysis, including forest plots, were reviewed, and summarised by the research team.

One retrospective cohort study of birth data collected through administrative sources published after the study's search date (2000- 2016) comparing outcomes from planned homebirth and hospital birth across eight Australian states was also included (Homer et al., 2019). 12

The studies reported on the following outcomes:

- Stillbirth
- Early neonatal mortality (0-7 days)
- Admission to neonatal intensive care unit (NICU)
- Normal vaginal birth
- Instrumental birth
- Caesarean section
- Intact perineum
- Episiotomy
- Severe perineal trauma (3rd or 4th degree tear)
- Postpartum haemorrhage (PPH) >1000mL
- Neonatal encephalopathy and hypoxic ischemic encephalopathy
- Syntocinon
- Epidural or spinal anaesthetic
- Mother admitted to ICU
- Intrapartum transfers

Additional considerations

A large prospective cohort study (Brocklehurst et al 2011., /Birthplace in England Collaborative 2012), included in the Scarf et al., 2018 meta-analysis, found planned homebirth was associated with increased OR for the composite outcome of perinatal morbidity/mortality (stillbirth, early NND < 7 days, Neonatal encephalopathy (NE); Meconium Aspiration Syndrome (MAS;) brachial plexus injury, fractured humerus and fractured clavicle). ¹⁵ On the NICE website under Appendix A, the numbers and proportions of the individual components of the composite adverse outcome measure from this study were reported; stillbirth (5%), early NND < 7 days (7%), NE (40%); MAS (34%); brachial plexus injury (9%), bone fractures (13%). ²⁴



Summary of evidence

Benefits

Scarf et al., 2018 found planned home birth for low-risk women may be associated with:

Maternal

- Increased likelihood of unassisted vaginal birth [OR 2.93, 2.13-4.03]
- Increased likelihood of intact perineum [OR 2.72, 2.56- 2.90]
- Significantly lower likelihood of 3rd and 4th degree perineal tears [OR 0.04, CI 0.04-0.05]
- Significantly lower likelihood of caesarean section [OR 0.35, 0.27-0.46] and instrumental birth (OR 0.37 (95% CI 0.24-0.58)

Neonatal

- There was no/little difference between planned place of birth for the following outcomes:
- Small reduction in risk for NICU admission [OR 0.71, 0.55 0.92]
- No increase in rate of early neonatal death < 7 days for nulliparous women [OR 0.99, 0.73-1.36] or multiparous women [OR 1.03, 0.69-1.54].
- No increase in rate of stillbirth [OR 0.94, 0.75-1.17] regardless of parity
- No statistically significant difference reported for composite outcome of stillbirth and early and late neonatal death [OR 1.55, 0.65-3.69] (Homer et al., 2019)

No other benefits associated with planned place of birth were reported for any additional perinatal outcomes.

<u>Harms</u>

Maternal

The need to transfer to a hospital setting/obstetric unit is common for women planning a home birth. While transfer rates were not specifically reported in the Scarf and Homer systematic reviews (ibid), an evidence summary published by Safer Care Victoria found 9- 28% (average 14%) of women in 20 studies were transferred in the intrapartum period. Intrapartum transfer was 34% (range 22 to 52%) for women having a planned home birth for first time mothers but is reduced for mothers having their second (6% (range 3 to 11%) baby.

Neonatal

No harms were identified for individual neonatal outcomes. The Birthplace in England study reported data from 2008 to 2010 using a composite outcome (% in brackets is % of each outcome) that included the following; stillbirth (5%), early NND < 7 days (7%), NE (40%); MAS (34%); brachial plexus injury (9%), bone fractures (13%) and suggested an increase in home births for first time mothers (OR1.75, 95% CI 1.07 to 2.86) but not for multiparous women. A later study of Australian home births (Homer 2019) used a different composite outcome of stillbirth, early and late NND and did not report an increase in adverse outcomes with home birth regardless of parity. The systematic review by Scarf et al 2018 reported the Birthplace England adverse outcomes separately.



Certainty of the Evidence

Low

Certainty of evidence graded as low due to inconsistency, indirectness (where studies included primary birthing centres), large confidence intervals (in some studies). The quality of evidence was upgraded due to included studies due to large cohort size (Homer et al., 2019, Brocklehurst et al 2011., 2012, De Jonge et al., 2013, 2015).^{25, 26}

- Data from the systematic review include data from the Homer et al., 2014 study. The data from Homer et al., 2019 includes the data from Homer (ibid), which reported on outcomes for 712 home births. The overlap is 3% (712 home births were reported in Homer et al., 2014 and 8212 home births were reported in Homer (ibid)). The data was not pooled, and thus double counting is avoided.
- Data in the systematic review included five studies from the Netherlands. A sensitivity
 analysis was undertaken to remove the larger Dutch cohort study which was potentially
 deemed incomparable due to significant differences in healthcare service models. With the
 exception of NICU admissions, the removal of the Dutch cohort data did not impact the
 perinatal and maternal outcomes. Therefore, data from The Netherlands cohort studies
 remains within the evidence summary.
- The grouping of six different adverse outcomes into a composite single outcome in one
 prospective cohort study (Birthplace in England) may over emphasise harm that does not
 have long term consequences, as mortality outcomes such as stillbirth are combined with
 an outcome such as MAS, which is rarely associated with mortality or severe long-term
 morbidity.
- All evidence was graded as low or very low certainty, due to inconsistency, indirectness
 (where studies included primary birthing centres) and large confidence intervals (in some
 studies only). Using the GRADE methodology, all observational studies are graded low and
 although there are some reasons that they may be upgraded the research team did not
 consider that the criteria for doing so was met.
- It is possible that the women who had planned home births were lower risk than the women who has a hospital birth but as few studies reported detailed risk factors for home births and hospital births separately it is not possible to explore this as a reason for the birth outcomes in either setting.
- It could be considered that as women having a planned home birth are pre-screened as low risk that fewer adverse events would be expected in this group. As outcomes such as neonatal mortality and HIE are rarely reported in either home or hospital births, then it may be unreasonable to expect a statistically significant difference between the two places of birth. The evidence in this statement does not report either an increase or decrease in adverse perinatal events with either place of birth in low-risk women. Larger studies of place of birth may report different harms and benefits.



Values and preferences

Substantial variability is expected or uncertain

Research evidence

The included systematic review and additional retrospective cohort study did not report qualitative outcomes. Relevant studies were identified through an additional literature search and as suggested by SDP members.

Cultural values are an important consideration in facilitating birth in any setting, including birthing at home. Hunter et al., 2011 reported some Māori women may choose to birth at home so family can be present and cultural practices incorporated.²⁷

Hauck et al., 2020 prospective cohort study (qualitative) reported women (n = 211) in Western Australia chose homebirth for avoidance of unnecessary intervention (58.8%), comfort/familiarity of home (34.1%), freedom to make own choices (25.6%) and having more continuity of care (24.2%). This was consistent with national survey data (Sassine et al 2021) in Australia, which additionally reported 32% of 1681 women surveyed reported their previous hospital experience as 'traumatic' and attributed this to pursual of homebirth for their subsequent pregnancies. The study also identified interest in continuous care from a known midwife and the birth environment being familiar and private as other reasons why women expressed interest in birthing at home.⁵

Parity may be a factor of influence for a woman's preference. Dixon et al., 2014 and Sweet et al., 2022 both reported, that in Aotearoa New Zealand and Australia respectively, women who plan a home birth are more likely to be multiparous.^{7, 28}

Additional considerations

A qualitative study found it was important for registered health professionals to manage a woman's expectations when discussing and planning for home birth in case transfer may be required. (Sweet et al., 2023).²⁹

Resources Factor not considered

Evidence review of economic studies of homebirth compared with hospital birth was determined out of scope for this statement update.



Equity

Important issues, or potential issues not investigated

Research evidence

Summary

In a study of 16,453 low-risk women planning place of birth in Aotearoa New Zealand, (Hunter et al., 2011) (approx. 9% Māori, 6.7% Pacific Islands women), 11.29% had planned a home birth- the results found a high association between intended and actual place of birth, with 83% of women who planned birth at home did so. Multiparous women were more likely to give birth as planned (at home) compared with primiparous women- this result was statistically significant.²⁷

There was no data identified reporting on equity of access to homebirth services in Aotearoa New Zealand. The same study (Hunter (ibid) reported 9% and 7% of planned home births were for Māori and Pacific Islands women respectively. Of those, 96.5% achieved a home birth.

There were no studies examining the accessibility of homebirth programs for Aboriginal and Torres Strait Islander women in Australia identified. One survey of 187 Aboriginal and/or Torres Strait Islander women who gave birth in Queensland between 2011-2012 found only 97.3% birthed in a public hospital, with only one respondent reporting a home birth. However, 66% of survey respondents said they did not have a choice for place of birth and 60% of women who were required to relocate to give birth indicated they would have stayed in their local communities instead, if given the choice (Parker, McKinnon and Kruske 2014).³⁰

Equity issues may also arise for women who live outside the recommended transfer time of 15-35 minutes (dependent on jurisdiction) from home to hospital via ambulance. Blums, Donnellan-Fernandez and Sweet 2022 reported 15% of 830 women who were surveyed had an interest in a homebirth but there were no local services (public or private) available in their area. Inequity may be increased for women who live in rural and remote areas.³¹

Sassine et al., 2021 also reported women who choose homebirth in Australia face barriers due to cost and limited numbers of home birth services either provided within publicly funded homebirth programmes or by private practicing accredited midwives (PPMs).⁶

Acceptability

Important issues, or potential issues not investigated

Research evidence

The included systematic review and additional retrospective cohort study did not report qualitative outcomes. Relevant studies were identified through an additional literature search and as suggested by SDP members.

Summary

Generally seen as acceptable and desirable to some women and midwives. It is acknowledged that there will be differences in interpretation of the available data and its applicability. There will be debate among obstetricians, midwives, and paediatricians about the place of planned birth at home in a health system, but as per recent Australian coroners' recommendations it is important



registered health professionals are aware of existing home birth services, midwifery group practice and other collaborative programs available.

A study authored by Sweet et al., 2023 found greater interprofessional respect and trust was reported by clinicians where collaborative care models were in place. This was associated with reported ease of transfer of care from home to hospital.²⁹

It is likely home birth is an acceptable option for women who choose to have a home birth, who are low-risk and meet the suitability criteria for a publicly funded home birth service. Sassine et al., 2021 reported low rates of women who found their home birth experience to be traumatic (5%).⁶

Feasibility

Important issues, or potential issues not investigated

Research evidence

The included systematic review and additional retrospective cohort study did not report qualitative outcomes. Relevant studies were identified through an additional literature search and as suggested by SDP members.

Summary

Feasible for health services with Midwifery Group Practice (MGP)/collaborative model of care capacity- most publicly funded homebirth programs/services are part of an MGP.

Feasible within periphery of large metropolitan/regional hospital catchment area, but barriers to accessing home birth services may reduce feasibility in rural and remote areas of Australia.



Version	Date of Version	Pages revised / Brief Explanation of Revision
V3.0	July/ 2023	RANZCOG Women's Health Committee and Council
V2.0	July/2017	RANZCOG Women's Health Committee
V1.0	March/1987	RANZCOG Women's Health Committee

Policy Version:	Version 3.0
Policy Owner:	Women's Health Committee
Policy Approved by:	RANZCOG Women's Health Committee and Council
Review of Policy:	July / 2028