

Women's experiences of planning a home birth with maternity care providers in middle to high-income countries: a systematic review protocol

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Protocol

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Abstract

Background: A woman's choice of birth place does not only influence her birth experience, but also impacts on maternal and neonatal outcomes. For healthy women who have had a straightforward pregnancy, a planned home birth supported by midwives and other maternity care providers, is now a recognised choice within their individual country's health care system. However, there is limited evidence on women's actual experiences of engaging with maternity care providers to plan for a home birth, especially within the context of middle to high-income countries where there is integration of maternity care services. Therefore, this systematic review will synthesise findings from previous studies, which have reported on women's experiences of planning a home birth in consultation with maternity care providers, in middle to high-income countries.

Methods: Using a systematic approach, we will develop a search strategy to identify relevant research studies on women's experiences of planning a home birth, with the support of their maternity care providers. Search terms will be iteratively developed using text words derived from the review aim, the PICO framework and database-indexed terms. In May 2020, the searches will be conducted on seven bibliographic databases: Ovid Medline, Embase, PsycInfo, and CINAHL plus, Scopus, ProQuest and Cochrane (Central and Library) from January 2015 to 26th May 2020. Supplementary searches will also be undertaken to identify additional articles. At least two reviewers will do the screening, quality appraisal, data extraction and analysis. Included studies will be appraised using a quality appraisal tool suited to the study design. Data will be analysed using either a narrative or thematic synthesis depending on the methodological design of the studies included.

Discussion: Review findings will provide useful recommendations to improve care and support provided for women when planning a home birth. We will publish review findings in a peer-reviewed journal and present it at relevant conferences while also sharing summaries with maternity care providers and service users via social media fora.

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Background

A woman's chosen place of birth impacts not only the type of birth, but also the number of unnecessary interventions that the mother and baby are exposed to during their labour and birth^{1–4}. Women who give birth in a midwife-led unit or at home, rather than an obstetric unit, experience lower rates of unnecessary interventions. These include amniotomy, augmentation of labour, instrumental vaginal birth, Caesarean Section, and opiate or regional analgesia^{5–7, 4}. There is also evidence that the outcomes for both multiparous and nulliparous women and babies of multiparous women who have birthed at home are equal to, if not better than those in other birth settings, for example women are less likely to experience 3rd or 4th degree perineal trauma, maternal infection or postpartum haemorrhage^{4–5, 8–9}. The Birthplace study also reported an increased incidence of adverse outcomes for the baby of nulliparous women who

had a planned home birth⁴. However, cohort studies on home birth have identified perinatal outcomes from home birth as low and not significantly different for infants of nulliparous women^{2,10}.

NICE⁸, continues to support a policy of offering all women with straightforward pregnancies a choice of birth settings including home, midwifery units (both alongside and freestanding) or obstetric unit). Coxon et al¹¹ conducted a qualitative synthesis of women's decision-making for a birthplace preference and choice. The review identified that women's choice of birthplace were influenced by how informed they were about available options, their right to choose, experiences of previous births, risk perceptions, safety concerns and their care-givers' views (including family, friends and healthcare professionals). Planning birth at home can be enabled by following an evidence-based guideline and co-produced resources for women and their partners¹².

A position statement on home birth by the International Confederation of Midwives¹³ states that *women have a right to home birth as a valid and safe option* (p. 1). They also state that women have a right to make an informed decision to give birth at home supported by a midwife within their own countries health care system. A recent joint statement by the Royal College of Midwives and Royal College of Obstetricians and Gynaecologists (RCOG)¹⁴ asserts that healthy women with low risk pregnancy may benefit from giving birth at home during the evolving Coronavirus (COVID-19) pandemic.

In a principle-based concept analysis, Beecher et al¹⁵ propose a theoretical definition of 'Women's experiences of their maternity care' as a *complex concept referring to women's interpretation of their care encounters within the maternity services. It is subjective in nature and evolves throughout the course of pregnancy, childbirth and the postpartum period. It is dependent upon a woman's individual needs and expectations, shaped by their personal circumstances and influenced by how their care is organised and delivered*'(p. 4). In their systematic review and meta-analysis, Rietsma et al¹⁵ identified that women who plan to birth at home may hold different values around birth outcomes. However, they also recognised that those who plan a home birth are less likely to experience unnecessary interventions and adverse birth outcomes.

Little is known regarding women's actual experiences of engaging with maternity care providers to plan for a home birth. The dynamics of the woman-healthcare provider relationship in planning for a home birth within the context of a middle to high-income country where women have access to an integrated community and hospital maternity care system, is worthy of investigation. Previous reviews have looked at maternal and neonatal outcomes^{16–18,1} and comparison between planned hospital and planned home births^{19–20}. Others have examined post-partum issues²¹, model of care for childbearing women²², integration of home birth into a healthcare system²³ and scope of hospital transfers during homebirth^{24–25}. A recent review by Hill²⁶ looked at women's experiences of planning a home birth. This review did not follow systematic review methodology and included four papers. A systematic review of studies on women's experiences of planning a home birth is needed to provide an in-depth understanding of what matters to women, including their information and support needs. Insights gleaned from such a

systematic review could potentially help to enhance woman-healthcare provider interactions in planning for a home birth and inform future service provision to maximise positive experiences for women, planning to birth their babies at home. Therefore, the aim of this systematic review is to synthesise findings from previous studies, which have reported on women's experiences of planning a home birth in consultation with maternity care providers in middle to high-income countries.

Methods

An important starting point for any review is operational definitions of the concepts under review. Given the rise in literature reporting on unassisted or free birthing, on Babies Born before Arrival (BBA's) to hospital, and the increased visibility of birthing supported by unregistered attendants, operational definitions of planned home birth and maternity care providers are central.

Operational definition of terms

We define:

Planned home birth

as an informed decision by women to birth their baby at home with the support of maternity care providers.

Maternity care providers

as healthcare providers involved in supporting women to plan their birth at home. These will include midwives, obstetricians, general practitioners, (G.Ps) anesthetists, paediatricians, and paramedics.

Rationale for focus on planned homebirth in middle- and high-Income Countries

The organisation of health care differs between countries and between low and middle-income countries and middle and high-income countries. The focus of this review is on middle and high-income countries. The classifications are provided below.

Country Classification

According to the World Bank classification²⁷, high-income countries (also known as developed countries) are countries with per capita gross national income (GNI) of at least \$12,476 as of 2018. For example, Argentina, Australia, Barbados, Canada, Chile, Croatia, Denmark, New Zealand, France, Germany, Finland, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States of America etc. Middle-income countries have per capita GNI between \$1,025 and \$12,476 as of 2018. For example, Angola, Bangladesh, China, Cameroon, Ghana, India, Kenya, Indonesia, Nigeria, Pakistan, Philippines, Sri Lanka,

Sudan, Tunisia, Vietnam, Zambia. Low-income countries are those with GNI per capita of \$1,025 or less as of 2018. For example, Afghanistan, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Democratic Republic of Congo, Eritrea, Ethiopia, Gambia, Guinea, Guinea Bissau, Haiti, Korea, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Niger, Rwanda, Sierra Leone, Somalia, South Sudan Tajikistan, Syrian Tanzania, Togo and Uganda, Yemen Rep.

Search strategy

Using a systematic approach²⁸, we will develop a search strategy to identify relevant research studies on women's experiences of planning a home birth, with the support of their maternity care providers. Search terms will be iteratively developed using text words derived from the review aim, the PICO framework²⁹ (Population, Intervention, Comparison and Outcome) (Table 1) and database-indexed terms. Broadly, search terms will be words related to: (home birth OR childbirth) AND plan AND experience (see appendix 1 for a detailed draft of the Medline search). We will test and refine the search strategy for accuracy on Ovid Medline prior to running it on other databases. This refined search strategy will be utilised on seven bibliographic databases: Ovid Medline, Embase, PsycInfo, and CINAHL plus, Scopus, ProQuest and Cochrane (Central and Library) from January 2015 to 26th May 2020. We decided on January 2015 as our cut off point for the searches as the publication of the NICE clinical guideline (CG190) on Intrapartum Care for Healthy Women and Babies was December 2014, which advocated for home birth as a choice of place of birth for women. In line with the Peer Review of Electronic Search Strategies (PRESS) guidelines³⁰, we will develop the search strategy in consultation with an experienced subject librarian, which will be checked by at least two authors.

We will tailor the refined search terms to each database's indexing requirement. Boolean operators 'AND' and 'OR' will be used to combine search terms as appropriate. We will also use quotation ("") and truncation (*) marks to capture possible variations of the search terms on each database. We will further conduct supplementary searches to identify additional articles, which we may have missed during the electronic database searches. This will include back chain referencing of included papers (hand searching of reference lists), consultation with members of the Regulation and Quality Improvement Authority (RQIA) Planning to Birth at Home in Northern Ireland¹² guideline development group, professional networks and grey literature search (for example, OpenGrey). We will run the searches again on the selected databases prior to the final analysis in order to identify any article newly published since our last search. We will manage search results with the bibliographic databases Endnote, Refworks and Covidence. Deduplication of retrieved articles will be undertaken on Endnote and Covidence using a systematic method³¹. The review is registered on the International Prospective Register of Systematic Reviews (PROSPERO: Registration ID: CRD42018095042)

Table 1
PICO Framework

Population	<p>Inclusion Criteria</p> <ul style="list-style-type: none"> • Women who planned or are planning a home birth within the context of a middle or high-income country in consultation with maternity care providers <p>Exclusion criteria</p> <ul style="list-style-type: none"> • Women who had an unplanned or unassisted/free home birth • Women planning a home birth without consulting with a professional maternity care provider • Women who planned or are planning a home birth within the context of a low-income country (low income countries are excluded because their healthcare provision or context is different to that of middle to high-income countries)
Intervention/Exposure	Primary studies which: (1) focused on the planning phase of the home birth experience for women (planned home birth as defined above) and (2) reported on women's experiences of planning their home birth with their maternity care providers
Comparator	Not applicable
Outcome(s)	<ul style="list-style-type: none"> (i) Women's experiences of planning a home birth (ii) Women's perceptions of their consultation with maternity care providers to plan a home birth

Identification and selection of studies

Studies will be identified and selected based on the following inclusion and exclusion criteria:

Inclusion criteria

Primary studies, which investigated women's experiences of planning a home birth within the context of middle and high-income countries, reported in English language and published between January 2015 and May 2020 will be included. Studies that report on women's experience and/or perceptions of their consultation with maternity care providers when planning a home birth will be also be included.

Exclusion criteria

We will exclude grey literature, which lacks a clear methodology (for example, editorials and books), conference abstracts whose full papers cannot be accessed and PhD and MSc dissertations. We will also exclude studies focused on healthcare professionals' or partners' views on home birth planning. We will exclude home birth studies that lack clear separate data on women's experiences of the planning phase of the home birth, and studies conducted in low-income countries.

Screening

Following deduplication on Endnote, we will upload the remaining articles into a systematic review management software by Cochrane³² to manage the screening process in a rigorous and transparent approach in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines (PRISMA)³³. At least two reviewers (MH, OB or PG) will independently screen the titles and abstracts of retrieved studies to remove irrelevant articles. Two authors will resolve any conflicts and if not possible, a third author will review and then all three authors will reach agreement. Two authors (MH, OB or PG) will then screen the full text of potentially relevant articles against the review's inclusion and exclusion criteria. We will resolve differences in opinion through discussion (by a minimum of two authors) to reach a mutual agreement. We will report the study selection process on a PRISMA diagram (see Fig. 1).

Quality appraisal

At least two reviewers (MH, OB or PG) will independently appraise the quality of the included studies using an appraisal tool relevant to each study's methodological design. We will appraise studies using the Critical Appraisal Skills Programme (CASP) tool³⁴ suited to each study's design. For example, qualitative studies will be assessed using the CASP tool for qualitative studies. We will appraise RCT studies (if included), using the CASP tool for RCTs, although we do not expect to find any RCTs due to the nature of the review question. We will assess other quantitative studies (non-RCTs), using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) tool³⁵. Mixed Methods studies will be assessed using the Mixed Methods Appraisal (MMAT) tool³⁶. We will assess risk of bias in RCTs (if included) using the Cochrane risk of bias tool³⁷ and the Confidence in the Evidence for Reviews of Qualitative Research (CERQual) tool³⁸ for qualitative studies.

Data extraction

At least two reviewers will extract data using a standardised form on MS Excel or MS Word. Conflicts will be resolved through discussion. We will systematically extract data on outcomes related to women's experiences on planning a home birth with their maternity care providers. We will extract data on the study title, author(s) and year of publication, study setting, methodology, population, key findings, quality appraisal score and key conclusions. Where possible, we will attempt to retrieve missing data in relevant studies by contacting the corresponding author.

Data Analysis

At least two reviewers will analyse aggregate data from the final included studies and resolve any conflict through discussion. The approach for data analysis will be determined by the methodological design of the included studies. If the studies are not sufficiently homogenous (for example, inclusion of a mixture of qualitative and quantitative studies), we will conduct a narrative synthesis. If all studies included are qualitative studies, we will undertake a thematic synthesis³⁹. NVivo 12 software will be used to manage the data analysis process where appropriate.

Discussion

Findings will be discussed in relation to existing research. Review findings will provide useful recommendations to improve the experiences of women planning a home birth. We will publish review findings in peer-reviewed journal, and present at relevant conferences while also sharing summaries with maternity care providers and service users via social media fora.

Abbreviations

CASP Critical Appraisal Skilled Programme

CERQual Confidence in the evidence for Reviews of Qualitative Research

GNI Gross National Income

MMAT Mixed Methods Appraisal Tool

MLU Midwifery-Led Unit

NICE National Institute for Health and Care Excellence

PICO Population, Intervention, Comparator and Outcome

PRISMA Preferred Reporting Items for Systematic Reviews and Meta-Analysis

RQIA Regulation and Quality Improvement Authority

RCT Randomised Controlled Trial

Declarations

Ethical approval and consent to participate:

This is a protocol for a systematic review, which utilises published data, and therefore ethical approval was not required.

Consent for publication:

Not applicable

Availability of data and materials:

Not applicable

Competing interests:

The authors declare they have no competing interests.

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Authors' contributions:

MH and PG conceived the review and designed the study. All authors (MH, OB and PG) contributed to the writing of the protocol and will contribute to the collection, analysis and interpretation of the data. PG is the guarantor of the review.

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Figures

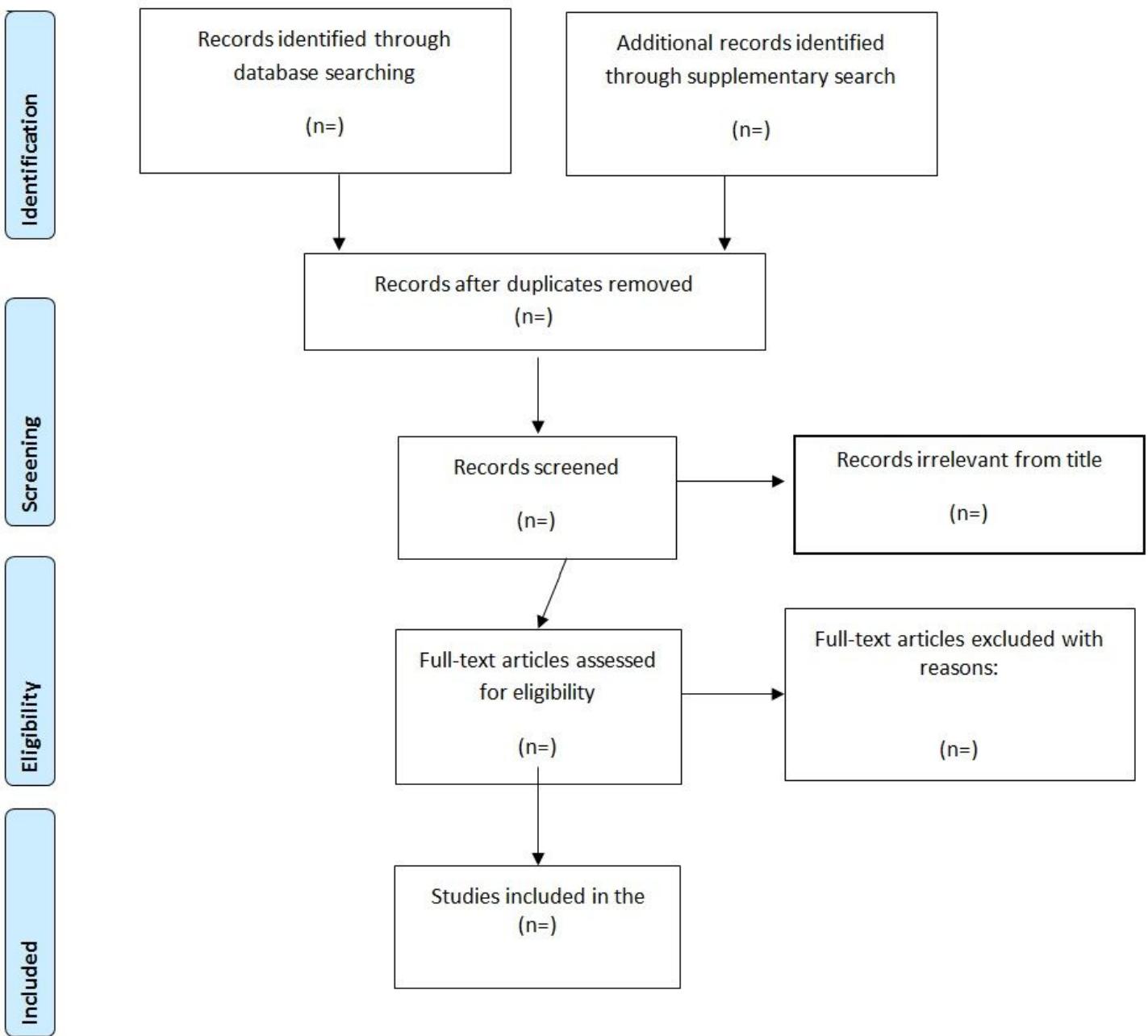


Figure 1

PRISMA flow chart for reporting the search (PRISMA 2015)