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Home birth integration into the health care systems of eleven international jurisdictions

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Abstract

Background: The purpose of this study was to develop assessment criteria that could be used to examine the level of integration of home birth within larger health care systems in developed countries across 11 international jurisdictions.

Methods: An expert panel developed criteria and a definition to assess home birth integration within health care systems. We selected jurisdictions based on the publications that were eligible for inclusion in our systematic review and meta-analysis on planned place of birth. We sent the authors of the included publications a questionnaire about home birth practitioners and practices in their respective health care system at the time of their studies. We searched published peer-reviewed, non–peer-reviewed, and gray literature, and the websites of professional bodies to document information about home birth integration in each jurisdiction based on our criteria. Where information was lacking, we contacted experts in the field from the relevant jurisdiction.

Results: Home birth is well integrated into the health care system in British Columbia (Canada), England, Iceland, the Netherlands, New Zealand, Ontario (Canada), and Washington State (USA). Home birth is less well integrated into the health care system in Australia, Japan, Norway, and Sweden.

Conclusions: This paper is the first to propose criteria for the evaluation of home birth integration within larger maternity care systems. Application of these criteria across 11 international jurisdictions indicates differences in the recognition and training of home birth practitioners, in access to hospital facilities, and in the supplies and equipment available at home births, which give rise to variation in the level of integration across different settings. Standardized criteria for the evaluation of systems integration are essential for interpreting planned home birth outcomes that emerge from contextual differences.

KEYWORDS

delivery of health care, health services accessibility, home childbirth, midwifery, nurse-midwives

1 | INTRODUCTION

The integration of home birth within health care systems is an important factor in understanding differences in outcomes between studies examining the safety of home birth.[1] Contextual differences such as home birth regulations or guidelines, practitioner qualifications, and the availability of emergency care may be associated with differences in

maternal and newborn outcomes, and may limit the generalizability of findings in one jurisdiction to other settings.[2] For example, higher rates of transport from planned home birth to hospital are noted in jurisdictions where home birth is better integrated into the health care system, suggesting that good integration may be associated with clearer pathways to, and more timely access of, higher levels of care when intrapartum complications arise.[3,4] Although there is generally agreement that home birth integration might affect home birth outcomes, there has been limited research on this topic.

In conducting a systematic review and meta-analysis on birth outcomes for planned home births compared with planned hospital births, we sought to account for differences in home birth integration.[5] Whereas international comparisons of midwifery scopes and models of practice have been published,[6-8] there has been minimal international comparison of home birth integration into health care systems. To address this gap, we developed criteria to define home birth integration and gathered information pertaining to the integration of home birth within 11 international jurisdictions.

2 | METHODS

An expert panel of Canadian midwifery educators and home birth researchers developed criteria to examine the degree of home birth integration. Panel members generated a list of questions aimed at describing aspects of policy and practice that would influence home birth integration within a health care system. Questions were revised and collapsed by the panel into a final list of 12 questions shown in Table 1. From this list, we identified 4 main criteria for home birth integration into health care systems as follows. Home birth practitioners:

1. are recognized care practitioners within the health care system through regulation and legislation,
2. have received formal training,
3. have suitable access to hospital facilities, including a well-established system for emergency transport from a planned home birth and the ability to continue providing care after transport to hospital, and
4. carry emergency equipment and supplies.

We also examined additional features in each jurisdiction that we considered supportive, but not foundational, to home birth integration, included in Table 1.

The jurisdictions described in this paper were selected based on the publications that were eligible for inclusion in our systematic review and meta-analysis on planned place of birth (details of the eligibility criteria are described in a previous publication).[5] We sent the authors of these publications a questionnaire about home birth practitioners and practices in their respective health care system at the time of their studies. The questionnaire contained both open-ended and closed-ended questions to elicit the required information from Table 1. We also searched published peer-reviewed, non–peer-reviewed, and gray literature, and the websites of professional bodies, to independently corroborate information and to determine up-to-date conditions. Where information was lacking, we contacted experts in the field from the relevant jurisdiction.

TABLE 1 Questions used to evaluate home birth integration

Home birth care practitioner
What types of care practitioners attend planned home births?
Does the college, association, or regulator of midwives in this setting include home birth in the description of their scope of practice?
Are home birth care practitioners recognized in the jurisdiction under consideration as primary care practitioners of maternity care?
Are home birth care practitioners regulated?
Do home birth care practitioners require training?
Home birth eligibility, guidelines, and access
Are there policy statements, regulations, or clinical practice guidelines that home birth care practitioners use to determine eligibility for home births?
Does the Obstetricians & Gynecologists regulatory body or organization have a statement about home birth?
Are people required to pay a private fee to have a home birth?
Transport from home to hospital
Could a home birth care practitioner easily have a woman transferred to hospital by ambulance?
Do home birth care practitioners have admitting rights/privileges at hospital where the woman would be admitted?
Does the care practitioner who was providing care at home continue to care for the client in the hospital?
Emergency equipment
Do home birth care practitioners carry emergency equipment and supplies?

3 | RESULTS

The 11 included jurisdictions are Australia, British Columbia (Canada), England, Iceland, Japan, the Netherlands, New Zealand, Norway, Ontario (Canada), Sweden, and Washington State (USA).[1,9-25] Of the 15 questionnaires sent to study authors, 13 were returned, representing 9 of the 11 jurisdictions. We did not receive questionnaires representing Japan and Washington State. Our findings are summarized in Table 2.

TABLE 2 Summary of jurisdiction home birth integration criteria

	Description of home birth integration			
Jurisdiction	**Professional recognition**	**Education**	**Transport**	**Emergency equipment**
Well integrated				
British Columbia (Canada)	Midwifery is regulated and legislated	Midwifery training is a 4-y direct-entry baccalaureate program	Midwives can easily have a client transferred to hospital by ambulance and have admitting rights/hospital privileges where clients would be admitted	Midwives carry emergency equipment and supplies to home births
England	Midwifery is regulated and legislated	Midwifery training includes either a 3-y direct-entry baccalaureate program, or an 18-mo postgraduate program after completion of a BSc Nursing	Midwives can easily have a client transferred to hospital by ambulance. NHS employee midwives have admitting rights/hospital privileges where clients would be admitted. Independent midwives usually do not have admitting rights/hospital privileges	Midwives carry emergency equipment and supplies to home births
Iceland	Midwifery is regulated and legislated	Midwifery training is a 2-y Master of Midwifery after completion of a BSc Nursing	Midwives can easily have a client transferred to hospital by ambulance and can remain as primary care practitioners after transport to the hospital when they are employees of the hospital, which is not always the case	Midwives carry emergency equipment and supplies to home births
Netherlands	Midwifery is regulated and legislated	Midwifery training is 4-y direct-entry baccalaureate program	Midwives can easily have a client transferred to hospital by ambulance. Transport from planned home birth to the hospital involves the client moving from primary midwifery care to secondary care and an obstetrician becoming the primary care practitioner	Midwives carry emergency equipment and supplies to home births
New Zealand	Midwifery is regulated and legislated	Midwifery training is a 3-y to 4-y direct-entry baccalaureate program	Midwives can easily have a client transferred to hospital by ambulance and have admitting rights/hospital privileges where clients would be admitted	Midwives carry emergency equipment and supplies to home births
Ontario (Canada)	Midwifery is regulated and legislated	Midwifery training is a 4-y direct-entry baccalaureate program	Midwives can easily have a client transferred to hospital by ambulance and have admitting rights/hospital privileges where clients would be admitted	Midwives carry emergency equipment and supplies to home births
Washington State (USA)	Certified nurse-midwives (CNM) and licensed midwives (LM) are regulated and legislated, and unlicensed midwives have received an exemption from regulation in the legislation	CNMs complete a Master of Midwifery after a baccalaureate nursing degree; LMs often complete a direct-entry program with training focused on out-of-hospital births, and there is a direct-entry route and a route for persons with a previous undergraduate degree to complete a Master of Midwifery; lay midwife students apprentice with practicing midwives	Midwives can easily have a client transferred to hospital by ambulance. CNMs typically have admitting rights/hospital privileges. A few LMs have admitting rights/hospital privileges, but most do not. Unlicensed midwives typically do not have admitting rights/hospital privileges	CNMs and LMs carry emergency equipment and supplies to home births. We found no evidence that unlicensed midwives carry emergency equipment and supplies to home births

(Continues)

TABLE 2 (Continued)

Jurisdiction	Description of home birth integration			
	Professional recognition	**Education**	**Transport**	**Emergency equipment**
Not well integrated				
Australia	Midwifery is regulated and legislated	Midwifery training is a direct-entry baccalaureate midwifery degree; dual-degree in midwifery and nursing; or a postgraduate midwifery degree after a nursing baccalaureate or equivalent degree	Midwives can easily have a client transferred to hospital by ambulance. Midwives typically do not have admitting rights/ hospital privileges where clients would be admitted	Midwives carry emergency equipment and supplies to home births
Japan	Midwifery is regulated and legislated	Midwifery training includes postgraduate studies at a college or a training school and is approximately 1 y in length after completion of a BSc Nursing	Midwives can easily have a client transferred to hospital by ambulance. Midwives typically do not have admitting rights/ hospital privileges where clients would be admitted	Midwives can conduct episiotomies, suture, and use antihemorrhagic agents only in limited circumstances
Norway	Midwifery is regulated and legislated	Midwifery training is a 2-y postgraduate college level diploma or Master of Midwifery after completion of a BSc Nursing	Midwives can easily have a client transferred to hospital by ambulance and have admitting rights/hospital privileges where clients would be admitted	Midwives do not have access to emergency equipment and supplies required for home births
Sweden	Midwifery is regulated and legislated	Midwifery training is a Master of Nursing with a concentration in nurse-midwifery after completion of a BSc Nursing	Midwives can easily have a client transferred to hospital by ambulance and do not have admitting rights/ hospital privileges where clients would be admitted	Midwives do not have access to emergency equipment and supplies required for home births

3.1 | Home birth care practitioners

In British Columbia, the Netherlands, New Zealand, and Ontario, all or most midwives provide care in the home setting, all or some of the time,[7,26-29] whereas, in Australia, England, Iceland, Japan, Norway, Sweden, and Washington State, a subgroup of midwives provide home birth care.[7,30-38] In all jurisdictions, except for Sweden, the midwives' or nurse-midwives' regulatory bodies outline in the scope of practice or standards for competence that midwives practice in home settings.[27,29,30,36,39-52] In Sweden, a publication by the association of midwives mentions the importance of client choice of birth place.[53] In British Columbia, the Netherlands, and Washington State, there are regulations that permit and govern physicians conducting nonemergency home birth; we did not find similar regulations for physician home birth in other jurisdictions.[54-56]

Midwives in the 11 jurisdictions are regulated, primary care practitioners of maternity care,[7,22,27-33,35,56-61] with some exceptions and variations. In Japan, midwives have the legal right to practice autonomously, but in practice, it can be limited;[14] decisions about client eligibility for midwifery care are made in collaboration with an obstetrician and clients have several examinations by an obstetrician throughout normal care.[35,48,62] In Washington State, midwives include certified nurse-midwives, licensed midwives, and unlicensed midwives. Certified nurse-midwives and licensed midwives are both regulated, autonomous care practitioners. Many licensed midwives are also nationally recognized as certified professional midwives. The small number of unregulated, unlicensed midwives, often referred to as "lay" midwives, are exempt from licensure if they do not advertise nor accept payment for their services.[4,63,64] In Ontario, Aboriginal midwives provide care to Aboriginal communities in home settings or birth centers, practicing under an exception clause in the Midwifery Act.[65] Aboriginal midwives are not discussed further because they were not included in the Ontario home birth research unless they were practicing as a registered midwife.

In British Columbia, the Netherlands, New Zealand, and Ontario, basic midwifery education requires completion of a 4-year, direct-entry, baccalaureate degree in midwifery.[28,29,56,59,66] In Iceland, Japan, Norway, and Sweden, students complete a baccalaureate nursing degree and then postgraduate studies in midwifery or nurse-midwifery—further details are provided in Table 2.[8,16,52,62,67,68] Australia, England, and Washington State have multiple educational pathways. In Australia, routes include direct-entry, baccalaureate midwifery degree; dual-degree in midwifery and nursing; and postgraduate midwifery degree after a nursing baccalaureate or equivalent degree.[69] In England, midwifery training is either a 3-year, direct-entry, baccalaureate program or an 18-month, postgraduate program after a nursing baccalaureate degree.[70] In Washington State, certified nurse-midwives complete a Master of Midwifery after a baccalaureate nursing degree.[71,72] Licensed midwives complete a direct-entry program with training focused on out-of-hospital births, with the option for persons with a previous undergraduate degree to complete a Master of Midwifery.[73-75] Lay midwives apprentice with a practicing midwife.[64,73]

3.2 | Home birth eligibility, guidelines, and client access

Jurisdictional or national home birth guidelines address health assessment and/or eligibility criteria in Australia, British Columbia, England, Japan, the Netherlands, Norway, and Ontario.[8,26,31,35,45,76-78] In New Zealand, choice of home birth is considered a right and there are no eligibility guidelines; however, there are referral guidelines and recommendations which may influence choice of birth place.[79,80] In Washington State, eligibility for home birth is based on general recommendations and guidelines for referral to physicians.[30,81] In Iceland, there are national guidelines supporting client choice of birth place, but no clinical home birth guidelines.[82] In Sweden, there are no national guidelines or recommendations about choice of birth place or clinical practice.[31]

In some countries, obstetrical organizations have statements on home birth. In England, the Royal College of Midwives (RCM) and the Royal College of Obstetricians and Gynaecologists support home birth for women with uncomplicated pregnancies.[83] The College of Physicians and Surgeons of British Columbia supports choice of home birth after clients are advised about potential benefits and risks.[55] The Royal Australian and New Zealand College of Obstetricians and Gynaecologists does not endorse home birth.[84] The American College of Obstetricians and Gynecologists is against home birth but recognizes that each woman has the right to make a medically informed decision about her delivery.[85] The Canadian, Dutch, Icelandic, Norwegian, and Swedish societies of obstetricians and gynecologists, and the College of Physicians and Surgeons of Ontario do not have official statements on home birth. We were unable to confirm whether the Japan Society of Obstetrics and Gynecology has a statement on home birth.

Midwifery care and home birth costs are fully covered by publicly funded health care systems in British Columbia, Iceland, Japan, the Netherlands, New Zealand, and Ontario.[7,29,31,32,35,56,59,86] In England, all home birth costs are publicly funded when clients choose National Health Service (NHS) community or hospital midwives; however, clients may pay for the services of independent midwives.[87,88] In Norway, the Labor and Welfare

Administration pay for midwifery attendance at home births, but do not fund on-call time or travel to clients' homes.[16,58] In most of Sweden, there is no public funding for home birth;[22,34] however, in the county of Stockholm, the council provides financial support to midwives who attend home births with suitable candidates as defined by the county.[31] In Australia, there are some publicly funded home birth programs,[89] but they are not widely available.[13,31] In Washington State, the government-sponsored health insurance program Medicaid provides funding for low-income families without or with inadequate medical insurance.[90] Medicaid covers costs for clients with low-risk pregnancies for planned home births facilitated by licensed midwives, nurse-midwives, or physicians.[54] Unlicensed midwives are not legally allowed to collect money or goods for their home birth services.[4]

3.3 | Transport from home to hospital

Midwives can easily arrange ambulance transport for clients from planned home births to the hospital in British Columbia, England, Iceland, Japan, the Netherlands, New Zealand, Norway, Ontario, Sweden, and Washington State.[14,30,31,40,56,82,88,91-95] There are home birth transport guidelines in British Columbia, Japan, New Zealand, Ontario, and Washington State.[80,92,93,96-99] In England, the RCM requires midwives to have hospital arrangements in place for planned home births before providing home birth services, to ensure a safe and smooth transport when required.[88]

In Australia and Iceland, challenges with emergency transportation from planned home birth to the hospital were identified in rural areas because of geographic challenges.[82,100] Obstetrical guidelines emphasize that Australia has a poorly developed infrastructure for planned home birth because vast distances in rural settings and heavy traffic in the large cities make expedient transfers from home to hospital difficult.[84]

Formal hospital affiliations also contribute to the ease with which midwives can transfer from a planned home birth to hospital. Most midwives have hospital admitting privileges or a similar mechanism to ensure their clients' access to hospitals where they would be transported to in British Columbia, the Netherlands, New Zealand, Norway, and Ontario.[7,26,99,101] In Iceland, midwives can remain as primary care practitioners after transport to the hospital when they are employees of the hospital, which is not always the case, and otherwise can provide labor support.[31,91] In Washington State, licensed midwives mainly provide out-of-hospital birth and only a few licensed midwives have held hospital privileges allowing them to provide care in hospital after transport from a planned home birth. Certified nurse-midwives mainly offer hospital birth, but those who offer home birth can also provide care in hospital.[30] In England, community and independent midwives generally facilitate home births, whereas hospital midwives often only work in affiliated hospitals.[7,38] Community midwives are NHS employees and can remain as the primary care practitioner after transport from home to hospital. Independent midwives are usually not NHS employees, although some independent midwives work part-time in an NHS unit. Some NHS units issue honorary contracts to independent midwives that allow them to remain as primary care practitioners after transport to hospital; however, generally, independent midwives cannot work as the primary care practitioner in hospital but stay to provide labor support.[87,102] In the Netherlands, transport from planned home birth to the hospital involves the client moving from primary midwifery care to secondary care and an obstetrician becoming the primary caregiver.[103] In Japan, home birth midwives typically cannot provide care in hospital and care is transferred to a physician after transport to hospital; home birth midwives often stay to provide labor support in hospital.[94] In Australia and Sweden, home birth midwives typically do not continue to provide care in hospital settings, and physicians or hospital midwives become responsible for care after transport.[7,22,104]

3.4 | Emergency skills and equipment

Midwives are trained in emergency skills and bring emergency equipment and supplies to home births in Australia, British Columbia, England, Iceland, Japan, the Netherlands, New Zealand, Ontario, and Washington State.[4,31,40,56,76,88,105-110] In England, the Royal College of Midwives does not have guidelines for emergency equipment and supplies but encourages local or regional level agreement and decision making about equipment and supplies.[88] In British Columbia, midwives are required to carry emergency equipment when they attend labors, regardless of the stage of labor or planned place of birth.[106] In Ontario, the College of Midwives prescribes an essential equipment list that includes home birth emergency equipment and supplies.[109] In Australia, the College of Midwives recommends that midwives undertaking home births should have appropriate skills and equipment to manage emergencies.[76] In New Zealand, the College of Midwives has some recommendations about the emergency equipment and supplies that self-employed midwives should carry, and the Midwifery Council sets the emergency skills training requirements.[107] In Japan, midwives are trained in and carry neonatal resuscitation equipment to home births;[94,110] there are restrictions on the use of episiotomies, suturing, and anti-hemorrhagic medications for emergency situations when the client and infant are in danger.[111] In Norway and Sweden, midwives do not have access to equipment required for home births, such as instruments, suture material, and medication.[31]

4 | DISCUSSION

4.1 | Categorization of jurisdictions: well integrated and less well integrated

We found home birth to be well integrated into the health care systems in British Columbia, England, Iceland, the Netherlands, New Zealand, Ontario, and Washington State. These jurisdictions meet our 4 foundational criteria of home birth integration. Licensure, regulation, and education are critical in ensuring midwifery care standards and accountability.[112] Midwives' recognition in the professional community establishes relationships with other care practitioners and an understanding of responsibilities during emergency transport from home settings to hospital. Carrying emergency equipment ensures that midwifery care in home settings is comparable to basic hospital settings. Emergency transportation from planned home birth to hospital facilitates timely access to additional care when complications arise.

Additional factors contribute but are not foundational to home birth integration. Clinical guidelines and protocols have the potential to support care provision and care practitioner decision making. In British Columbia, England, New Zealand, the Netherlands, Ontario, and Washington State, there are midwifery regulatory guidelines on home birth clinical practice, client eligibility, and/or consultation and transfer of care standards. In Iceland, there are national guidelines and policy for home birth choice, but no clinical guidelines or formal consult and transfer of care protocols during labor.[82]

Midwives in well-integrated jurisdictions provide care in hospitals where their clients are admitted after transport from planned home birth to hospital; however, in England and Iceland, some home birth and independent midwives do not provide care in hospitals, and in Washington State, most licensed midwives do not provide care in hospitals. England and Iceland have quality emergency transportation from planned home birth to the hospital. In Iceland, the professional community has good communication during transport from planned home birth to hospital.[82] In England, independent midwives are recommended to inform the obstetrical unit head of midwifery when they are attending home births to ensure open communication and coordinated care with the obstetrical unit.[87] Although there are no social or knowledge barriers to transfer from a planned home birth to hospital, in Iceland there are notable geographical challenges to emergency transportation in rural areas.

Home birth is less well integrated into the health care systems in Australia, Japan, Norway, and Sweden. These jurisdictions meet some, but not all, of our home birth integration criteria, and within this category, there are numerous differences between jurisdictions. Of note, in Washington State, midwives who are unlicensed are not well integrated. When home birth outcomes are examined in any setting, it is important to understand who is attending such births.

In Japan and Norway, although home birth clinical guidelines ensure standards and guide decision making, only some midwives provide home birth, and there are not well-supported systems for clients to access midwives who attend home births. In Japan, midwives' professional autonomy is limited: Midwives are trained in emergency skills and carry emergency equipment to home births, but there are restrictions on the usage of episiotomies, suturing, and antihemorrhagic medications. In Norway, midwives do not have access to emergency equipment for home births. Although both countries have good emergency transportation from planned home birth, midwives typically do not continue to provide care in hospital after transport from a planned home birth.

In Australia, there are college guidelines on home birth clinical practice, client eligibility, and consultation and transfer of care, and midwives are recommended to carry emergency equipment to home births. Choice of home birth is limited because most midwives are hospital employees.[7] A significant barrier for practitioners is that home birth care practitioner indemnity insurance is not available in Australia, thereby putting midwives who facilitate home birth at professional and financial risk.[13,31] Despite this significant challenge, some midwives provide home birth services.[113]

A further potential barrier to home birth acceptance in Australia stems from obstetrical guidelines that emphasize the long distances required to transport from home birth to hospital in many rural jurisdictions. These guidelines fail to recognize that women in rural and remote settings are faced with the challenges of travel and intrapartum care access regardless of choice of birth place. Other jurisdictions such as British Columbia, Norway, and Ontario have similar geographic challenges, yet home birth is integrated and supported.

In Sweden, there are no national guidelines or recommendations about planned home birth. Midwives do not have access to equipment required for home births. There is good emergency transportation; however, midwives who provide home birth do not typically continue providing care in hospitals.

As previously mentioned, the jurisdictions examined were the settings of articles included in our systematic review and meta-analysis.[5] Whereas most publications were national, Australia, Canada, and the United States were state or province specific. In Canada and the United States, health care is regulated at the provincial/territorial or state level, including professional licensure, regulation, and funding.[63] In some Canadian jurisdictions midwifery is not legislated, regulated, or funded,[114] thus national generalizations on home birth integration cannot be made. In contrast, in Australia midwifery regulation and the most funding and policy-making occur on

a national level; however, there may be other differences between states that limit generalization of the findings.[115-117]

Home and hospital birth public funding can reduce barriers to and financial motivation for choice of birth place. In all well-integrated jurisdictions, public funding for maternity care is available for both hospital and home birth costs. In less well-integrated jurisdictions, differences include the following: home birth public funding in Japan, costs partially covered in Norway, costs covered by private insurance or Medicaid in Washington State, and funding for home birth costs not widely available in Australia and Sweden. Throughout the United States, there is no universal health coverage and costs are associated with home and hospital birth. Private insurance may cover some expenses, as does Medicaid, although Medicaid coverage varies between each state. As home birth costs are generally lower than hospital costs, there may be financial motivations to choose home birth and these clients may be less willing to transfer to the hospital.[2] Conversely, in Australia and Sweden, home birth is outside the financial reach of many people, limiting the choice of birth place for these populations.

In some countries, support for home birth differs between midwifery and obstetrical organizations. Whereas we did not use obstetrical position statements as a criterion for determining the degree of home birth integration, we collected this information because it provides insight into the interprofessional climate about home birth. Of note, British Columbia and England have supportive obstetrical statements about home birth and are judged to have well-integrated home birth services.

4.2 | Strengths and limitations

Our research provides a systematic comparison of the status of home birth integration in 11 different jurisdictions using objective criteria. This paper does not examine home birth integration across all nations. Although the provision of home birth services differs internationally, in general, in the 11 included jurisdictions registered midwives are predominantly the practitioners for home birth.[21,31,82] Information on midwives providing home birth services has a greater literature presence than information on other practitioners. As a result, this paper focuses on home birth integration with midwives as the primary practitioners and does not consider the impact of physicians, traditional birth attendants, aboriginal or indigenous midwives, and informal birth attendants, and their contribution to the integration of home birth in their jurisdiction.

4.3 | Conclusions

We judged home birth to be well integrated into the health care system in British Columbia, England, Iceland, the Netherlands, New Zealand, Ontario, and Washington State, and less well integrated into the health care system in Australia, Japan, Norway, and Sweden.

This paper is the first to analyze the components of home birth integration and compare jurisdictions, which is needed to compare planned home birth outcomes while considering contextual differences. Our work can serve as a basis for broader comparisons across all industrialized countries with regulated professions who provide home birth.

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REFERENCES

1. Hutton EK, Reitsma AH, Kaufman K. Outcomes associated with planned home and planned hospital births in low-risk women attended by midwives in Ontario, Canada, 2003-2006: a retrospective cohort study. *Birth*. 2009;36:180-189.
2. Hutton EK. The safety of home birth. *J Obstet Gynaecol Canada*. 2016;38:331-336.
3. Blix E, Kumle M, Kjaergaard H, Øian P, Lindgren HE. Transfer to hospital in planned home births: a systematic review. *BMC Pregnancy Childbirth*. 2014;14:179.
4. Palmer R, Levine A, Reisner DP, et al. Smooth transitions: enhancing the safety of planned out-of-hospital birth transfers. Olympia: Washington State Department of Health, Perinatal Advisory Committee; 2015:1-44.
5. Hutton EK, Reitsma A, Thorpe J, Brunton G, Kaufman K. Protocol: systematic review and meta-analyses of birth outcomes for women who intend at the onset of labour to give birth at home compared to women of low obstetrical risk who intend to give birth in hospital. *Syst Rev*. 2014;3:55.
6. Hilbert-West S. CMBC Midwifery Scope and Model of Practice Review. College of Midwives of British Columbia; 2015:1-51. http://cmbc.bc.ca/wp-content/uploads/2015/10/Jurisdictional-Review-Midwifery-Scopes-and-Models.pdf. Accessed July 17, 2017.
7. Malott AM, Davis BM, McDonald H, Hutton E. Midwifery care in eight industrialized countries: how does Canadian midwifery compare? *J Obstet Gynaecol Canada*. 2009;31:974-979.
8. Emons JK, Luiten MIJ. *Midwifery in Europe: an Inventory in Fifteen EU-Member States*. Leusen, Netherlands: Deloitte & Touche; 2017. http://www.deloitte.nl/downloads/documents/website_deloitte/GZpublVerloskundeinEuropaRapport.pdf. Accessed June 30, 2017.
9. Wiegers TA, Keirse MNC, van der Zee J, Berghs GAH. Outcome of planned home and planned hospital births in low risk pregnancies: prospective study in midwifery practices in the Netherlands. *Br Med J*. 1996;313:1309-1313.
10. Halfdansdottir B, Smarason AK, Olafsdottir OA, Hildingsson I, Sveinsdottir H. Outcome of planned home and hospital births among low-risk women in Iceland in 2005-2009: a retrospective cohort study. *Birth*. 2015;42:16-26.
11. Hutton EK, Cappelletti A, Reitsma AH, et al. Outcomes associated with planned place of birth among women with low-risk pregnancies. *CMAJ*. 2015;188:E80-E90.

12. de Jonge A, Geerts C, van der Goes B, Mol B, Buitendijk S, Nijhuis J. Perinatal mortality and morbidity up to 28 days after birth among 743 070 low-risk planned home and hospital births: a cohort study based on three merged national perinatal databases. *BJOG Int J Obstet Gynaecol*. 2015;122:720-728.
13. Homer CS, Thornton C, Scarf VL, et al. Birthplace in New South Wales, Australia: an analysis of perinatal outcomes using routinely collected data. *BMC Pregnancy Childbirth*. 2014;14:206.
14. Hiraizumi Y, Suzuki S. Perinatal outcomes of low-risk planned home and hospital births under midwife-led care in Japan. *J Obstet Gynaecol Res*. 2013;39:1500-1504.
15. de Jonge A, Mesman JAJM, Manniën J, Zwart JJ, van Dillen J, van Roosmalen J. Severe adverse maternal outcomes among low risk women with planned home versus hospital births in the Netherlands: nationwide cohort study. *BMJ*. 2013;346:f3263.
16. Blix E, Huitfeldt AS, Øian P, Straume B, Kumle M. Outcomes of planned home births and planned hospital births in low-risk women in Norway between 1990 and 2007: a retrospective cohort study. *Sex Reprod Healthc*. 2012;3:147-153.
17. Nove A, Berrington A, Matthews Z. Comparing the odds of postpartum haemorrhage in planned home birth against planned hospital birth: results of an observational study of over 500,000 maternities in the UK. *BMC Pregnancy Childbirth*. 2012;12:130.
18. Miller S, Skinner J. Are first-time mothers who plan home birth more likely to receive evidence-based care? A comparative study of home and hospital care provided by the same midwives. *Birth*. 2012;39:135-144.
19. Brocklehurst P, Hardy P, Hollowell J, et al. Perinatal and maternal outcomes by planned place of birth for healthy women with low risk pregnancies: the Birthplace in England national prospective cohort study. *BMJ*. 2011;343:d7400.
20. van der Kooy J, Poeran J, de Graaf JP, et al. Planned home compared with planned hospital births in the Netherlands. *Obstet Gynecol*. 2011;118:1037-1046.
21. de Jonge A, van der Goes B, Ravelli A, et al. Perinatal mortality and morbidity in a nationwide cohort of 529 688 low-risk planned home and hospital births. *BJOG Int J Obstet Gynaecol*. 2009;116:1177-1184.
22. Lindgren HE, Destad IJR, Christensson K, Hildingsson IM. Outcome of planned home births compared to hospital births in Sweden between 1992 and 2004. A population-based register study. *Acta Obstet Gynecol*. 2008;87:751-759.
23. Janssen PA, Lee SK, Ryan EM, et al. Outcomes of planned home births versus planned hospital births after regulation of midwifery in British Columbia. *CMAJ*. 2002;166:315-323.
24. Pang JWY, Heffelfinger JD, Huang GJ, Benedetti TJ, Weiss NS. Outcomes of planned home births in Washington State: 1989–1996. *Obstet Gynecol*. 2002;100:253-259.
25. Janssen PA, Saxell L, Page LA, Klein MC, Liston RM, Lee SK. Outcomes of planned home birth with registered midwife versus planned hospital birth with midwife or physician. *Can Med Assoc J*. 2009;181:377-383.
26. College of Midwives of Ontario. *Home and Out-of-Hospital Births*. Toronto, Canada: Author; 2013.
27. College of Midwives of Ontario. *The Ontario Midwifery Model of Care*. Toronto, Canada: Author; 2013.
28. New Zealand College of Midwives. About Lead Maternity Carer (LMC) services. https://www.midwife.org.nz/women-in-new-zealand/about-lead-maternity-carer-lmc-services/. Published 2017. Accessed May 19, 2017.
29. Midwifery Council of New Zealand. *Midwifery Scope of Practice and Qualifications*. New Zealand: Author; 2010.
30. Midwives' Association of Washington State. *MAWS Position Statement: Planned Births at Home and in Freestanding Birth Centers by Women Under the Primary Maternity Care of Midwives in Washington*. Washington: Author; 2013.
31. Lindgren H, Kjaergaard H, Olafsdottir OA, Blix E. Praxis and guidelines for planned homebirths in the Nordic countries—an overview. *Sex Reprod Healthc*. 2014;5:3-8.
32. International Confederation of Midwives. ICM Midwives Association Directory—Iceland. http://internationalmidwives.org/our-members/?aid=39. Published 2017. Accessed May 17, 2017.
33. Australian College of Midwives. *Scope of Practice for Midwives in Australia*. Canberra City: Author; 2016:1-8.
34. Hildingsson I, Waldenstrom U, Radestad I. Swedish women's interest in home birth and in-hospital birth center care. *Birth*. 2003;30:11-22.
35. Kataoka Y, Eto H, Iida M. Outcomes of independent midwifery attended births in birth centres and home births: a retrospective cohort study in Japan. *Midwifery*. 2013;29:965-972.
36. Igarashi T, Nakayama T. Birth environment facilitation by midwives assisting in non-hospital births: a qualitative interview study. *Midwifery*. 2014;30:877-884.
37. MacDorman M, Mathews T, Declercq E. *Home Births in the United States, 1990–2009*. Hyattsville, MD: National Center for Health Statistics; 2012.
38. Guy's and St. Thomas NHS Foundation Trust. Community midwifery; 2017. http://www.guysandstthomas.nhs.uk/our-services/maternity/care-at-home/community-midwifery.aspx. Published 2017. Accessed July 21, 2017.
39. Wiesman J. *Midwifery Scope of Practice Sunrise Review*. Olympia: Washington State Department of Health; 2013:1-171. http://www.doh.wa.gov/Portals/1/Documents/Pubs/631045.pdf. Accessed July 27, 2017.
40. Svangerskap, fødsel og barseltid i trygge hender. Helsedirektoratet. helsedirektoratet.no; 2017. https://helsedirektoratet.no/retningslinjer/nasjonal-retningslinje-for-hjemmefodsel-svangerskap-fodsel-og-barseltid-i-trygge-hender. Accessed July 5, 2017.
41. Australian College of Midwives. *Position Statement on Homebirth Services*. Canberra City: Author; 2011.
42. Australian College of Midwives. *Australian College of Midwives National Midwifery Guidelines for Consultation & Referral 3rd Edition Issue 2*. Canberra City: Author; 2015.
43. Nursing and Midwifery Board of Australia. Registration standards nursing and midwifery. Australian Health Practitioner Registration Agency; 2017. http://www.nursingmidwiferyboard.gov.au/Registration-Standards.aspx. Published 2011. Accessed May 15, 2017.
44. Aitink M, Goodarzi B, Martijn L. *Voor continuïteit en kwaliteit Beroepsprofiel van de verloskund*. Utretch, Netherlands: Koninklijke Nederlandse Organisatie van Verloskundigen; 2013:1-43.
45. College of Midwives British Columbia. *Statement on Home Birth*. British Columbia, Canada: Author; 2005.
46. College of Midwives of British Columbia. *Midwifery Model of Practice*. British Columbia, Canada: Author; 1997.

47. American College of Nurse-Midwives. *Definition of Midwifery and Scope of Practice of Certified Nurse-Midwives and Certified Midwives*. Silver Spring, MD: Author; 2011.
48. Japanese Nursing Association. *Midwifery in Japan*. Tokyo, Japan: Department of Health Promotion Policy; 2015:1-23.
49. Nursing and Midwifery Council. *Standards for Competence for Registered Midwives*. London: Author. https://www.nmc.org.uk/globalassets/sitedocuments/standards/nmc-standards-for-competence-for-registered-midwives.pdf. Accessed July 17, 2017.
50. Swedish Association of Midwives. *Description of Competence for Registered Midwives* (translated by the Swedish Association of Midwives). Sweden: Author, 2006:1-17.
51. Westlund K. Personal correspondence. 2017.
52. *Faglegar lagmarkskrofur*. Reykjavík, Iceland: Directorate of Health; 2012.
53. Svenska Barnmorskeförbundets. *10-punktsprogram för en God vård i samband med barnafödande*. Stockholm, Sweden: Author; 2011.
54. Washington Apple Health (Medicaid). *Planned Home Births and Births in Birthing Centers Billing Guide*. Olympia: Washington State Health Authority; 2017.
55. College of Physicians and Surgeons of British Columbia. *Professional Standards and Guidelines—Planned Home Births*. Vancouver: Author; 2009.
56. Zondag L, Cadée F, de Geus M. *Midwifery in the Netherlands*. Utrecht, The Netherlands: Royal Dutch Association of Midwives; 2017:1-16.
57. Midwife. legitimation.socialstyrelsen.se. https://legitimation.socialstyrelsen.se/en/educated-outside-eu-and-eea/midwife. Published 2017. Accessed June 30, 2017.
58. Sjöblom I, Lundgren I, Idvall E, Lindgren H. Being a homebirth midwife in the Nordic countries—a phenomenological study. *Sex Reprod Healthc*. 2015;6:126-131.
59. Association of Ontario Midwives. Midwifery Q & A Ontario Midwives. ontariomidwives.ca. http://www.ontariomidwives.ca/midwife/q-a. Published 2017. Accessed May 17, 2017.
60. College of Midwives of British Columbia. About us. cmbc.ca. http://cmbc.bc.ca/about-cmbc/about-us/. Published 2015. Accessed May 17, 2017.
61. Health Professions Act—Midwives Regulation. www.bclaws.ca. http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/281_2008. Published 1996. Updated 2017. Accessed May 17, 2017.
62. Brett I. History of midwifery in Japan. *Midwifery Today*. 2015; 201:58-60.
63. Yang YT, Kozhimannil KB. Making a case to reduce legal impediments to midwifery practice in the United States. *Women's Heal Issues*. 2015;25:314-317.
64. Midwifery Education and Accreditation Council. Becoming a midwife. meacschools.org http://meacschools.org/becoming-a-midwife/. Published 2017. Accessed July 21, 2017.
65. Government of Ontario. Midwifery Act, 1991, S.O. 1991, c. 31. https://www.ontario.ca/laws/statute/91m31. Published 1991. Updated 2011. Accessed August 4, 2017.
66. Midwives Association of British Columbia. Education. www.bcmidwives.com. https://www.bcmidwives.com/education.html. Published 2017. Accessed May 17, 2017.
67. Swedish Medical Center Seattle and Issaquah. FAQs about Swedish midwifery services. www.swedish.org. http://www.swedish.org/services/swedish-midwifery/faq#trained. Published 2017. Accessed June 30, 2017.
68. Lukasse M, Marie Lilleengen A, Margrethe Fylkesnes A, Henriksen L. Norwegian midwives' opinion of their midwifery education—a mixed methods study. *BMC Med Educ*. 2017;17:80.
69. Government of Western Australia Department of Health Nursing and Midwifery Office. Pathways. ww2.health.wa.gov.au http://ww2.health.wa.gov.au/~/media/Files/Corporate/general documents/nursing and midwifery/PDF/Pathways-booklet-2016.ashx. Accessed May 15, 2017.
70. Nursing and Midwifery Council. Becoming a Midwife. www.nmc.org.uk. https://www.nmc.org.uk/education/becoming-a-nurse-or-midwife/becoming-a-midwife/. Published 2015. Accessed May 24, 2017.
71. American College of Nurse-Midwives. Essential Facts About Midwives. www.midwife.org. http://www.midwife.org/Essential-Facts-about-Midwives. Published 2016. Accessed May 18, 2017.
72. American College of Nurse-Midwives. Pathways to Midwifery Education. www.midwife.org. http://www.midwife.org/midwifery-education-programs. Accessed June 28, 2017.
73. Midwives Alliance North America. Become a Midwife. mana.org. https://mana.org/resources/become-a-midwife. Published 2016. Accessed July 21, 2017
74. Midwives Alliance of North America. Types of Midwives. mana.org. https://mana.org/about-midwives/types-of-midwife. Published 2016. Accessed July 21, 2017.
75. Bastyr University. Master of Science in Midwifery Degree. bastyr.edu. https://bastyr.edu/academics/midwifery/masters/ms-midwifery. Accessed July 26, 2017.
76. Australian College of Midwives. *Guidance for Midwives Regarding Homebirth Services*. Australia: Author; 2011.
77. National Institute for Clinical Excellence. Intrapartum care for healthy women and babies—guidance and guidelines. www.nice.org.uk. https://www.nice.org.uk/guidance/cg190/chapter/Recommendations#place-of-birth. Published December 2014. Updated February 2017. Accessed June 16, 2017.
78. College of Midwives of British Columbia. *Indications for Planned Place of Birth*. British Columbia, Canada: Author; 2015.
79. Calvert S. Personal correspondence. 2017.
80. *Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines)*. Wellington, Australia: Ministry of Health; 2012:1-36.
81. Midwives' Association of Washington State. Indications for Discussion, Consultation and Transfer of Care in a Home or Birth Center Midwifery Practice. www.washingtonmidwives.org http://www.washingtonmidwives.org/for-hcprofessionals/indications-consultation2.html. Published 2016. Accessed June 5, 2017
82. Hálfdánsdóttir B, Ólafsdóttir ÓÁ, Smárason AK, Hildingsson I. *Planned Home Births in Iceland: Premise, Outcome, and Influential Factors [dissertation]*. Reykjavík, Iceland: University of Iceland; 2016.
83. Royal College of Obstetricians and Gynaecologists/Royal College of Midwives. *Home Births*. Joint statement No. 2. London: Authors; 2007.
84. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. *Home Births*. Victoria, Australia: Authors; 2014:1-9.

85. The American College of Obstetricians and Gynecologist. *Planned Home Birth Committee Opinion*. Washington, DC: Authors; 2017:1-6.
86. Midwives Association of British Columbia. Frequently Asked Questions. www.bcmidwives.com. https://www.bcmidwives.com/faq.html. Published 2017. Accessed June 28, 2017.
87. Royal College of Midwives. *Facilitating Women's Choice of Midwife: RCM Guidance: Practical Approaches to Managing with Flexibility*. London: Authors; 2017.
88. Jokinen M. Personal correspondence. 2017.
89. Catling-Paull C, Foureur MJ, Homer CSE. Publicly-funded homebirth models in Australia. *Women Birth*. 2012;25:152-158.
90. American Pregnancy Association. Medicaid for pregnant women. americanpregnancy.org. http://americanpregnancy.org/planning/medicaid-for-pregnant-women/. Published 2017. Accessed July 21, 2017.
91. Hálfdánsdóttir B. Personal correspondence. 2017.
92. College of Midwives Ontario. *Ambulance Transport*. Toronto, Canada: Authors; 2014:1-2.
93. Grigg CP, Tracy SK, Tracy M, Schmied V, Monk A. Transfer from primary maternity unit to tertiary hospital in New Zealand—timing, frequency, reasons, urgency and outcomes: part of the Evaluating Maternity Units study. *Midwifery*. 2015;31:879-887.
94. Eto H. Personal correspondence. 2017.
95. Kataoka Y, Masuzawa Y, Kato C. Maternal and neonatal outcomes in birth centers versus hospitals among women with low-risk pregnancies in Japan: a retrospective cohort study. *Jpn J Nurs Sci*. 2018;15:91-96.
96. Home Birth Summit. Best Practice Guidelines: Transfer from Planned Home Birth to Hospital. www.homebirthsummit.org. http://www.homebirthsummit.org/wp-content/uploads/2014/03/HomeBirthSummit_BestPracticeTransferGuidelines.pdf Published date unknown. Accessed June 29, 2017.
97. College of Midwives of Ontario. *Consultation and Transfer of Care*. Toronto, Canada: Author; 2014.
98. Midwives Association of Washington State. *Planned Out-of-Hospital Birth Transport Guideline*. Seattle, WA: Author; 2011:1-8.
99. College of Midwives of British Columbia. *Policy for Home Birth Transport Plan*. British Columbia, Canada: Author; 2005.
100. Nursing and Midwifery Board of Australia. Fact Sheet Safety and Quality Guidelines for Privately Practising Midwives. www.nursingmidwiferyboard.gov. http://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/FAQ/Fact-sheet-Safety-and-quality-guidelines-for-privately-practising-midwives.aspx. Published 2017. Accessed June 2, 2017.
101. Blix E. Personal correspondence. 2016.
102. Baird B, Murray R, Seale B, Foot C, Perry C. *Midwifery Regulation in the United Kingdom*. London: Nursing and Midwifery Council; 2015.
103. Amelink-Verburg M, Verloove-Vanhorick S, Hakkenberg R, Veldhuijzen I, Bennebroek Gravenhorst J, Buitendijk S. Evaluation of 280 000 cases in Dutch midwifery practices: a descriptive study. *BJOG Int J Obstet Gynaecol*. 2007;115:570-578.
104. Lindgren HE. Personal correspondence. 2016.
105. Royal Dutch Organization of Midwives. Resuscitation of the Newborn in the Home or Similar Circumstances. www.knov.nl. http://www.knov.nl/vakkennis-en-wetenschap/tekstpagina/545-2/reanimatie-van-de-pasgeborene-in-de-thuissituatie-of-vergelijkbare-omstandigheden/hoofdstuk/821/reanimatie-van-de-pasgeborene-in-de-thuissituatie-of-vergelijkbare-omstandigheden/. Published November 21, 2018. Accessed May 24, 2017.
106. College of Midwives of British Columbia. *Required Equipment and Supplies for Home Birth Setting*. British Columbia, Canada: Author; 2013.
107. Midwifery Council of New Zealand. Professional Standards: What Are the On-Going Practice Requirements? www.midwiferycouncil.health.nz. https://www.midwiferycouncil.health.nz/professional-standards/what-are-going-practice-requirements. Published date unknown. Accessed July 14, 2017.
108. New Zealand College of Midwives. *Self-Employed Midwife Going into Business*. Christchurch, New Zealand: Author; 2008.
109. College of Midwives of Ontario. *Essential Equipment, Supplies and Medications*. Toronto, Canada: Author; 2015.
110. Japanese Midwives Association. *Midwifery Practice Guideline 2014*. Tokyo, Japan: Author; 2014.
111. Kataoka Y, Nakayama K, Yaju Y, Eto H, Horiuchi S. Comparison of policies for the management of care for women and newborns during the third stage of labor among Japanese hospitals, clinics, and midwifery birth centers. *Int J Childbirth*. 2015;5:200-209.
112. Renfrew MJ, Mcfadden A, Bastos MH, et al. Midwifery and quality care: findings from a new evidence-informed framework for maternal and newborn care. *Lancet*. 2014;384:1129-1145.
113. Dahlen HG, Homer CSE, Tracy SK, Bisits AM. Planned home and hospital births in South Australia, 1991–2006: differences in outcomes. *Med J Aust*. 2010;192:726-727.
114. Canadian Association of Midwives. Midwifery Across Canada. canadianmidwives.org. https://canadianmidwives.org/midwifery-across-canada/. Published 2017. Accessed August 15, 2017. 114
115. Australian College of Midwives. About Us—Australian College of Midwives. www.midwives.org.au. https://www.midwives.org.au/about-us. Published 2017. Accessed August 14, 2017.
116. Nursing and Midwifery Board of Australia. Home. www.nursingmidwiferyboard.gov.au. http://www.nursingmidwiferyboard.gov.au/. Published 2017. Accessed August 14, 2017.
117. The Commonwealth Fund. Health Care System and Health Policy in Australia. www.commonwealthfund.org. http://www.commonwealthfund.org/grants-and-fellowships/fellowships/australian-american-health-policy-fellowship/health-care-system-and-health-policy-in-australia. Published 2017. Accessed August 15, 2017.

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