Mapping the Landscape of Canadian Midwifery Research: A Cross-Sectional Survey of Stakeholders to Identify Gaps and Strengths

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ABSTRACT

On the global stage, investing in midwifery research is crucial for improving health outcomes. Despite the initial stages of midwifery research in Canada, it remains unclear how international priorities align with Canadian midwifery needs. To address this, a national, web-based, anonymous survey was conducted from January to April 2023, targeting midwives, service users and policy and research experts. Utilising the Framework for Quality Maternal Newborn Care, the survey consisted of ranking, Likert scales and open-ended questions, with data analysed through descriptive statistics and thematic analysis. From 208 respondents across 8 provinces, findings highlighted strengths in intrapartum care research. Gaps identified included postpartum care, midwifery education and under-represented populations. Participants emphasised the need for enhanced midwifery research leadership and capacity, identifying labour and birth models of care as priority areas. These insights will inform future stakeholder dialogues on research priorities and capacity building.

RÉSUMÉ

Sur la scène mondiale, il est essentiel d'investir dans la recherche sur la pratique sage-femme pour améliorer les résultats en matière de santé. Malgré les premières étapes de la recherche sur la pratique sage-femme au Canada, on ne sait toujours pas comment les priorités internationales s'alignent sur les besoins de la pratique sage-femme au Canada. Pour y remédier, une enquête nationale anonyme en ligne a été menée de janvier à avril 2023 auprès de sages-femmes, d'utilisateurs de services et d'experts en politique et en recherche. S'appuyant sur le Cadre de référence pour des soins maternels et néonatals de qualité, l'enquête comprenait un classement, des échelles de Likert et des questions ouvertes, et les données

ont été analysées au moyen de statistiques descriptives et d'une analyse thématique. Les 208 personnes interrogées dans 8 provinces ont mis en évidence les points forts de la recherche sur les soins intrapartum. Les lacunes identifiées concernent les soins post-partum, la formation des sages-femmes et les populations sous-représentées. Les participants ont souligné la nécessité de renforcer le leadership et les capacités en matière de recherche sur la profession de sage-femme, en identifiant les modèles de soins pour le travail et l'accouchement comme des domaines prioritaires. Ces idées éclaireront les futurs dialogues des parties prenantes sur les priorités de recherche et le renforcement des capacités.

KEYWORDS

Midwifery, cross sectional studies, leadership, midwifery, capacity building, postnatal care, pregnancy, Canada, policy, research, pregnancy, infant newborn.

INTRODUCTION

The 2014 Lancet Series on Midwifery highlighted a critical gap in global childbirth research, emphasising the focus on managing pregnancy complications rather than prioritizing prevention, the promotion of normal childbirth and support for childbearing individuals. highlighting an unbalanced focus on complications during pregnancy and their management rather than prevention and promotion of normal or supporting childbearing individuals.[1] In response to this gap in evidence, the Quality Maternal and Newborn Care (QMNC) framework was developed to outline the essential components of high-quality care that all childbearing persons and their newborns should receive in order to improve outcomes for low-risk and high-risk pregnancies.[3] The framework identified the importance of midwifery care in achieving those outcomes.

Subsequent to this work, Soltani et al. and Kennedy et al.[5] described the need for research arising from the framework that would advance quality of care. The first set of global research priorities was focused on the promotion of normal birth, prevention of morbidity and mortality and supporting the psychosocial aspects of maternity care. Subsequent research has shown that the landscape of research funding and implementation is significantly influenced by power dynamics including gendered biases, cultural hierarchies and other systemic imbalances. These factors play a central role in determining which research studies receive financial support and which findings are translated into practice.[5] They proposed asking "different questions" and set out three research priority areas aimed at addressing critical knowledge gaps internationally, including: (i) examining effectiveness of full-scope midwifery models of care and reducing iatrogenic risk of overtreatment; (ii) describing aspects of care (biological attributes, sociocultural attitudes and health care provider behaviours) that optimise or disturb normal physiologic childbearing; and (iii) determining the indicators that are most valuable in assessing QMNC, including the views of service-users.[2,7] These research priority areas were established using a comprehensive systematic survey process involving international stakeholders. This was seen by our team of researchers in Canada as a call to action to examine our contributions to the global landscape of midwifery research.

Midwifery research in Canada has undergone significant evolution since midwifery practice was regulated in the first province over 30 years ago. Early research efforts prioritised the development of evidence-based policies and clinical guidelines to support the integration of midwives into health care systems. Alongside these foundational priorities, individual research interests shaped key areas of investigation. As the field continues to grow, it is essential to recognise this historical context while addressing emerging clinical topics, and population and policy challenges across the country. Midwifery researchers have an opportunity to strengthen collaboration and coordination to build a robust evidence base demonstrating the impact of midwifery care. As a first step to describe the landscape of existing Canadian midwifery research, we conducted a scoping review,[6] which highlighted that there has been relatively few randomised

controlled trials (RCTs), systematic reviews and prospective cohort studies. While Canadian midwifery researchers are recognised for conducting high-quality studies, several factors may have contributed to this limited number of experimental studies. These include funding constraints and a strong focus on qualitative research questions which align with midwifery's client-centred, experience focused model of care. This emphasis often leads to research questions that are less suited to RCTs or clinical trials. Other gaps in the evidence were a dearth of research on neonatal and postpartum clinical outcomes, with most studies focused on the prenatal and intrapartum periods. Research related to midwifery education also remain underexplored. Despite these gaps, Canadian midwifery research has grown exponentially since 1994. Expertise in qualitative methodologies, survey-based studies and research on care models for pregnancies without complications have expanded rapidly. The growth underscores the increasing capacity of midwifery researchers to address critical questions related to clinical practice, care organisation and provider roles.

Building on this understanding of the existing midwifery research in Canada and underpinned by the core content of the QMNC framework, we sought to engage national stakeholders to identify strengths, gaps and areas of opportunity within midwifery research and to use this understanding to shape a national research agenda. We designed a multi-phased modified Delphi study to facilitate deliberate dialogue and generate consensus. This paper reports on the initial step of this larger study, a national cross-sectional survey, intended to generate an understanding of what stakeholders perceive to be important to Canadian Midwifery research.

METHODS

Between January to April 2023, we surveyed midwifery stakeholders across Canada. The purpose of the survey was to examine the perspectives of midwives, student midwives, academics, researchers and policy about strengths and gaps od the Canadian midwifery research. The survey aimed to reach participants from all provinces and territories across Canada and was available in English. The survey was self-administered via REDCap through a direct link which included an electronic consent form. The study was approved by the Hamilton Integrated Research Ethics Board (HiREB Project ID: 14516).

Our sample size was based on an estimate of the known number of midwives, health care providers, student midwives, academic midwives, policy makers, service users and researchers across Canada to be approximately 1500 people. It is difficult to fully estimate the possible number of participants across the country from the various stakeholder groups. Using a 5% margin of error and a 95% confidence interval, we calculated our sample size to be 306 participants.

A combination of convenience and snowball sampling was used to distribute the national survey. Recruitment was done via email and social media. Inclusion criteria required that participants were able to communicate in English, both verbally and in writing. To ensure diverse sampling, the following groups were approached to ensure a wide reach into the Canadian midwifery community:

- Researchers/authors identified from our scoping review results.
- Colleagues and existing collaborators of research team members from previous collaborations and from the academic midwifery community.
- Members of the Canadian Association of Midwives (CAM), the National Council of Indigenous Midwives (NCIM) and the Canadian Association for Midwifery Education (CAM-Ed).
- Midwifery service users.

The survey questions were developed by the research team, based on our scoping review and on the elements of the QMNC Framework, from the Lancet series (Appendix A). The QNMC framework was created following a multi-method approach, integrating principles from traditional systematic review methodology with interpretive analysis to synthesise a structured framework compromising distinct six categories.[1–2] These six categories informed the questions in our survey and included care providers, philosophy, values, organisation of care, practice categories for all pregnancies (effective education, health promotion, assessment

and care planning and promotion of normal processes) and practice categories for pregnancies with complications (first-line management of complications, neonatal and medical obstetric services).[2] Our survey questions were presented in a variety of formats, including ranking of topics and Likert Scales to measure participant attitudes and agreement. Open-ended responses were also invited. Survey items were tested for face validity by five individuals to ensure the survey measured what was intended. Minor revisions were made to questions following feedback.

Data were exported from REDCap to Microsoft Excel. Data cleaning involved removing ineligible responses, incomplete and duplicate entries. Descriptive statistics were used to analyse results and to understand general patterns in the data. Responses to open-ended questions were analysed using reflexive thematic analysis based on Braun and Clarke.[7]

RESULTS

We received 237 survey responses. After blanks, duplicates and incomplete surveys were removed, 231 completed surveys were included for analysis. Participants' demographics are summarised in Table 1. Participants could select all categories that represented their stakeholder voice. Practicing midwives were the largest stakeholder group (n=96), with many of whom also identifying as being in other stakeholder groups (Table 2). Diversity of roles across stakeholder groups was present in our final sample (Table 2). Most participants were from Ontario (60%), followed by Alberta and British Columbia (11% each), Manitoba (8%) and Quebec (5%). Fewer than 1% of participants were from New Brunswick, Newfoundland and Labrador, and Nova Scotia. No participants were from Northwest Territories, Nunavut, Prince Edward Island, and Yukon and Saskatchewan.

Table 1. Survey participants.

Stakeholder group	n	%
Practicing midwife	96	41.6
Midwifery student/trainee	47	20.3
Midwifery service user	38	16.5
Health care professional	17	7.4
Involved in midwifery regulation and or policy	16	6.9
Other connection to midwifery	10	4.3
Graduate student	7	3
Total	231	100

Table 2. Breakdown of midwife participants who identified in more than one stakeholder group.

Midwife participants' additional stakeholder groups	n=78
Midwifery preceptors	57
Service user	30
Midwifery educator	24
Researcher	16
Involved in midwifery regulation and/or policy	16
Graduate students	12

The survey began by asking participants to identify key areas of importance based on the QMNC framework. Participants placed high importance on research exploring organisation and models of care (Figure 1). This category addresses access to good-quality midwifery services, adequate resources and integrated and coordinated care across settings. There was strong support from participants on the importance of these aspects of care with over 95% agreement when responses of "important" and "very important" were combined: accessibility of care (96%, n=198), adequate resources (96%, n=198) and integrated/coordinated care (95%, n=196).

Similarly, when asked about the aspects related to midwifery philosophy–optimising childbearing, supporting autonomy and appropriate use of interventions, over 90% selected "important" or "very important" (Figure 2).

Next, participants were asked about the importance of clinical skills and professional roles. Ninety-four per cent responded that "strong clinical, interpersonal and cultural competency" skills among midwives were important or very important (Figure 3).

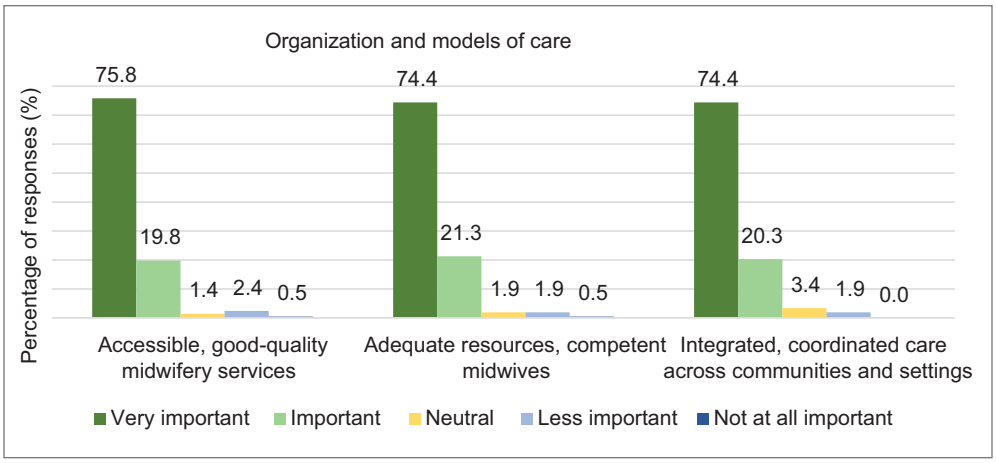

Figure 1. Participant responses: Importance related to aspects of models of care.

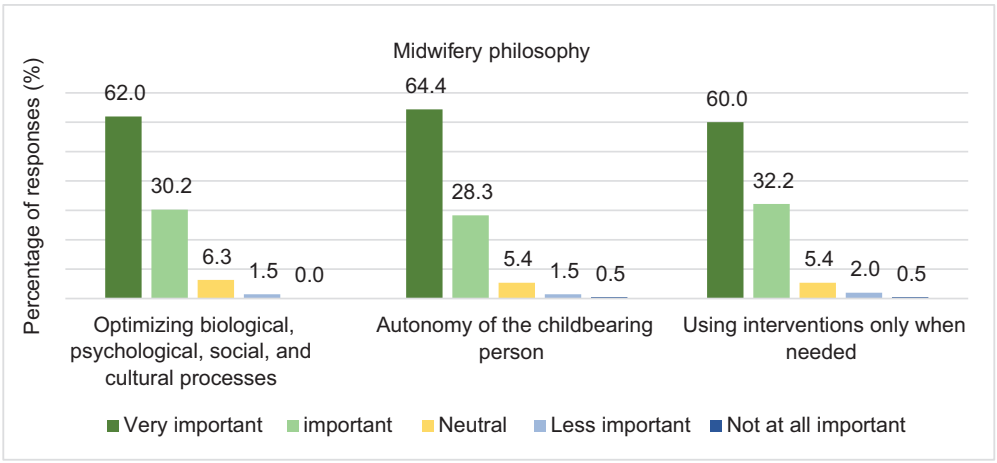

Figure 2. Participant responses: Importance related to aspects of midwifery philosophy.

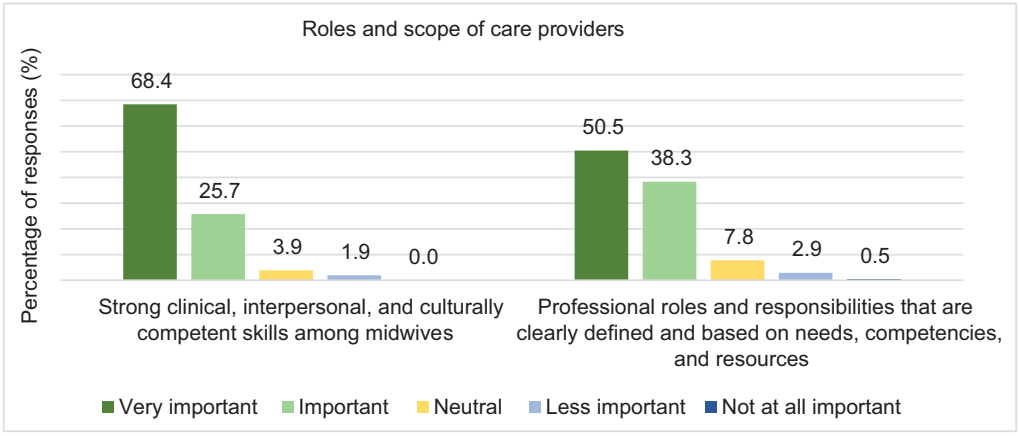

Figure 3. Participant responses: importance related to aspects of roles and scope of practice.

The clinical practice categories from the QMNC framework of "first-line management of complications" (90% important/very important) and "promotion of normal pregnancy, birth" and "postpartum" (87% important/very important) scored highest for importance among respondents.

Participants were asked to rank their perception of the importance of certain aspects of clinical care, including phases of care and areas of focus in relation to research priorities. Neonatal and postpartum care were ranked as being of lowest or second last importance (74%, n=147; 63%, n=125, respectively), while labour and birth was prioritised (75%, n=144).

When asked about the perceived importance of research topics areas within the profession (Figure 4), participants scored research devoted to organisation of care as the most important (61%, n=122) while philosophy and values were identified as least important (52%, n=104).

The survey also contained open-ended questions which asked participants about the future of midwifery research in Canada. Participants highlighted strengths of midwifery research, specifically the focus on client-centred research, and the growth and passion that are present across the country for advancing Canadian midwifery research.

Participants identified lack of funding opportunities, lack of time and compensation for practicing midwives to engage in research activities, lack of capacity for undertaking research because of demands of clinical work and limited opportunities for research training as challenges. One participant with a policy and research background described the significant barriers that exist:

> *The lack of earmarked funding for midwifery research, relatively few PhD level midwives, burn out in midwifery workforce, lack of recognition for midwives and midwifery research … few to no midwifery research positions, few midwifery specific graduate programs … exclusion of midwives from clinical scholar/fellowship program.*

Participants made suggestions about future directions for midwifery research. They highlighted key aspects of capacity building and the need to develop researchers across the country. They described a need for more opportunities for mentorship and research training, and development of new collaborative research groups that include alliances and consortiums where midwives are integrated into academic centres. One participant captured this when they stated:

> *I have been engaged in midwifery research for over 15 years in Canada and internationally and while it has been an uphill battle, it has also been a wonderful experience to contribute to the expansion of midwifery research in Canada and work with so many brilliant and passionate midwives.*

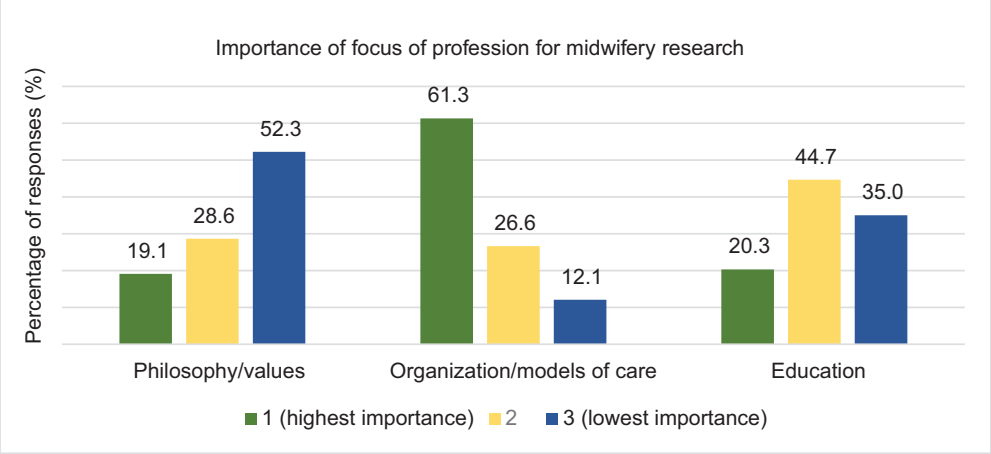

Figure 4. Participant responses: importance of nonclinical topic areas.

Others mentioned the desire to be "*included and recognized internationally as a credible source of knowledge*" and expressed uncertainty about how to engage in midwifery research. One midwifery educator stated how they felt:

> *Generally feeling uninformed about how to become involved with it. E.g., are there opportunities to become involved with ongoing projects? Even with a graduate thesis under me, I feel like more education or opportunities are needed for midwives to learn how to become involved in research. ie how to write grant proposal, how to look for funding, etc.*

There was awareness of the need for infrastructure and funds to support researchers and to prioritise voices from equity-deserving groups such as BIPOC and Indigenous peoples. Participants were also aware of the need to improve dissemination of research findings and thereby increase the visibility of Canadian research internationally.

One midwife respondent commented that midwifery is "*missing the connection to utilizing research at the level of practice … research used to inform policy changes … or to create education models or care models … support of funding to implement the research that addresses and undo racism in birthing/healthcare structures.*"

Finally, participants were given the opportunity to suggest topics for future research. The ideas spanned the breadth of care from conception to postpartum and beyond to include general sexual and reproductive wellness. Themes of leadership, rural and remote health care, improving access to care for clients, interprovincial and interprofessional collaborations and sustainability within the profession were prominent.

DISCUSSION

This study employed a cross-sectional survey of Canadian midwifery stakeholders to identify gaps and strengths in the current midwifery research. The QMNC framework, which described high-quality maternity care from a global lens, and which has informed international benchmarks in education, training and research priorities[8,21] was used to evaluate the breadth and scope of the existing Canadian midwifery research from the perspectives of midwives, students, academics, researchers, policy-makers and service users. Stakeholders across Canada viewed the categories of the QMNC framework as relevant and important to Canadian research.[9] Specifically, our participants held multiple and diverse roles within the profession and offered valuable perspectives from across the country. Because of the mixed group of stakeholders, we had expected to see some variation in responses because of their different perspectives and contexts within Canadian midwifery. However, there was strong agreement across all survey items. This finding reinforces the value of the QNMC framework for delineating core components of midwifery and suggests it is suitable as a tool for guiding research priorities. This is one of a growing number of studies demonstrating the utility of the QMNC framework. Although its application to research priorities was novel, it has been used to evaluate and measure clinical interventions, models of care and to inform policy.[9,10]

Our findings show that, from the perspectives of midwifery stakeholders, client-centred research, underpinned by high-quality methods, conducted in interdisciplinary teams, and grounded in Canadian midwifery-led values and philosophies, is highly valued. Further, we identified that research in the areas of organisation and models of care, along with first-line management of clinical complications, was seen as important within the Canadian context. Evaluation of care models is a significant area of interest for many midwifery researchers,[11] and Canadian midwifery may have important perspectives to add based on our strong foundation of continuity of care and choice of birthplace. The intrapartum period of care was identified as being the phase of care where participants viewed research to be highly salient, whereas the neonatal and postpartum phases of care were seen as less important. However, this may change since midwives are developing innovative ways to provide postpartum care to midwifery clients and others in their communities, and there may be a need to evaluate the impact of these interventions. The autonomy of the childbearing person and respectful maternity care were emphasized along with the

need for midwives who have strong clinical, interpersonal and culturally competent skills. This is congruent with the midwifery philosophy of care and the desire of midwives to promote normal processes and provide individualised, person-centred care.[8] Putting pregnant people at the heart of respectful midwifery care was highly valued by our participants. These findings are crucial for moving forward with development of research priorities, which will optimise how resources are used to promote high-quality research which improves care for clients.[12,13]

At present, our findings suggest Canadian midwifery research faces a bottle neck where resources are not adequate to meet the growing demand and need for evidence-based Canadian midwifery research and practice. Increased funding mechanisms, specifically for funding earmarked for midwifery-led Canadian Midwifery research priorities, is urgently needed. Furthermore, the open-ended responses in our study highlighted that research capacity building and infrastructure are needed to address three key areas: growing the number and the leadership capacity of midwives who conduct research, ensuring stable funding for research and training of researchers and minimising inequities in research and knowledge translation of research into practice across the vast Canadian geography and its underrepresented populations. Our findings align with international studies which have emphasised the need for building capacity in midwifery research.[16,20] For example, researchers in sub-Saharan Africa and Australia have outlined the need for strengthening research networks to foster collaboration and for building clinician-researcher leadership skills.[14,15] Spelten et al., using a framework by Cooke, examined research capacity building in the Netherlands and argued that investments across all aspects of the profession are required to boost research capacity within the field of midwifery.[17–20] Building a research culture relies on mentorship, an important component of professional sustainability, to support midwives interested in developing expertise in research.[12,16]

Limitations of our study included possible selection bias since not all parts of the country were equally represented and presumably only those with a vested interest in research were likely to respond to the survey. In addition, our response rate was lower than anticipated. However, when combined with our recent scoping review [7] and qualitative results within the survey, these results provide a comprehensive picture of the strengths and gaps in Canadian midwifery research.

CONCLUSIONS

Canadian midwifery researchers are key contributors to the growing body of global midwife-led research. Using the QMNC framework in our survey was an innovative approach to understand and map Canadian research priorities. The survey results provide a picture of stakeholders' perceptions of priority areas to be pursued by researchers underpinned by respectful, person-centred care that promotes autonomy. Our findings reflect the early stage of development of Canadian midwifery-led research and highlight a demand for enhanced educational opportunities, mentorship programmes and infrastructure development. The identification of gaps related to postpartum care, neonatal outcomes, education and underserved populations underscore critical areas for focused attention. These findings will form the next step toward priority-setting efforts aimed at shaping a national midwifery research agenda.

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APPENDIX

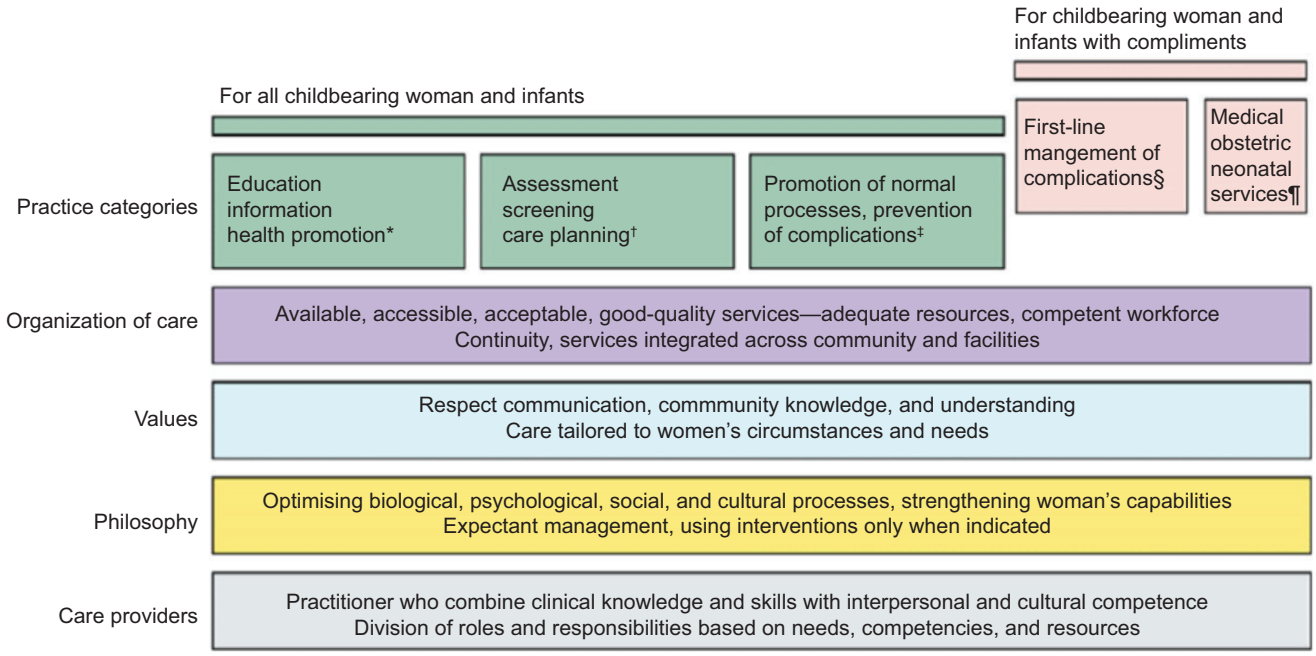

Figure A1. QMNC Framework.