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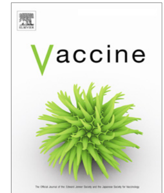

Suitable but requiring support: How the midwifery model of care offers opportunities to counsel the vaccine hesitant pregnant population

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ABSTRACT

Uptake of vaccination during pregnancy in Canada is lower than comparator countries. A recommendation from a trusted perinatal healthcare provider is a key opportunity to promote vaccine uptake and improve confidence. This study aims to identify barriers and opportunities to vaccination in midwifery care. Seventeen semi-structured telephone interviews with practicing midwives, educators and public health professionals with immunization training experiences were conducted. Documents pertaining to the midwifery profession (approx. 50) were reviewed. Inductive thematic analysis identified logistical, interprofessional, and information barriers preventing Canadian midwives from administering vaccines and counseling clients about vaccination, as well as opportunities to address each barrier. Key interventions at the level of logistics, training, and client information materials would help address barriers to the integration of midwives into the provision and recommendation of vaccines in perinatal care across Canada.

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1. Background

In Canada, seasonal influenza vaccine and acellular pertussis vaccine are recommended during each pregnancy. Estimates of coverage for these vaccines during pregnancy are well below 50 % in Canada [1–3] and are lower than in the UK [4], Australia [5], Ireland [6], and the United States [7]. New pregnancy vaccines for respiratory syncytial virus (RSV) and Group B Streptococcus (GBS) prevention in newborns are currently in development and may in the future be added to current recommendations. Increasing and sustaining high coverage rates will be critical to reduce risk of these infections [7], and others such as COVID-19. Pregnancy is a vital time in a person's life for forming opinions about vaccination with a baseline of evidence around vaccine safety, importance and efficacy [8]. Pregnant people are highly motivated to optimize their own health as well as the health of their yet to be born infant. The relationship between a pregnant person and their care provider is unique, and a trusting relationship may help inform or influence their vaccine attitudes. Vaccination during pregnancy is associated with higher infant vaccine coverage [9].

Midwifery in Canada was not widely accessible for much of the 20th century, but is becoming an increasingly available option in most provinces and territories. Registered Midwives are the fastest growing share of perinatal care providers in Canada, responsible for up to 25 % of births in British Columbia and 15 % of births in Ontario [10]. In Canada, midwives are primary healthcare providers with regulated midwifery services covered by publicly funded health insurance in most jurisdictions [11], and midwives work primarily as autonomous healthcare providers. A core principle

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and professional standard of Canadian midwifery model of care is informed choice, in which midwives encourage clients to make their own decisions about care by sharing evidence-based information on all choices available to them, including giving an overview of risk, benefit, and informing clients of alternatives [12–14]. The informed choice principle, similar to informed consent, aims to inform clients about treatment options and potential consequences [15,16], yet goes beyond informed consent in its commitment to respecting and supporting clients as autonomous decision makers, even though their choices may contravene current medical standards of care [13,17,18]. In other professions the declarative or presumptive approach to vaccine communication (e.g. 'today you are due for your vaccines') is often recommended [19]. Since it typically assumes the person is ready to vaccinate [20], this approach is perceived by some midwives to be too coercive to meet the standards of informed choice [21].

Midwives are trained to inform on and administer many routine vaccinations to clients and newborns, however it has not yet become a routine part of day-to-day midwifery practice in many regions [22], where they would instead be offered by a public health nurse, family physician, or pediatrician [23]. Midwives have historically been underutilized in Canadian vaccine research, delivery, and promotion [21,24]. With growing emphasis on vaccination during pregnancy and on informing parents about infant vaccines before birth, midwives are well-positioned to play a significant role in vaccine communication and delivery.

Vaccine promotion and delivery efforts in other countries increasingly include midwives; for example the Australian MumBubVax pilot project developed for use in midwifery settings, has shown promising results for optimising antenatal vaccine discussions and improving uptake of vaccination in pregnancy and infancy [25]. The Canadian Association of Midwives has partnered recently with the Public Health Agency of Canada (PHAC) to foster the capacity of midwives to provide vaccine counseling [26,27]. With Canadian midwifery becoming an increasingly mainstream option for perinatal care, questions have arisen regarding what strategies would best increase midwives' capacity to discuss and deliver vaccines. The objective of this article is to understand what barriers currently prevent Canadian midwives from administering vaccines and counseling clients about vaccination, as well as what opportunities exist for improved integration of vaccines and vaccine conversations into midwifery care.

2. Methods

We used qualitative narrative inquiry [28] and inductive thematic analysis [29] of key informant interviews and relevant documents to identify challenges and opportunities for Canadian midwives counseling and administering vaccination in pregnancy. This study received approval from the Research Ethics Boards of the UBC Children's and Women's Research Ethics Board. All participants provided oral or written informed consent.

2.1. Participant Recruitment

We purposively recruited [30] currently-practicing registered midwives; midwives involved in training, regulation, or continuing education for the field of registered midwifery; and key public health professionals with expertise in vaccination training and education in Canada. Potential participants were identified with the assistance of discipline-specific and province-specific collaborators. Forty people were contacted. Invitations were sent via email on a rolling basis to collect a maximally diverse sample with regard to: province, training period (pre/post regulation of midwifery in Canada), practice status (actively practicing midwifery or not), and relationship to immunization training (participant, midwife leader, non-midwife instructor). Recruitment stopped when interviews were no longer adding meaningful diversity to the study themes.

2.2. Setting

In Canada, scope of practice for all health professions is mandated provincially. While this study focuses on midwifery care, other perinatal care providers (e.g., family physicians, obstetricians) also provide or refer for vaccination during pregnancy, and were included in the overarching study within which this midwifery analysis took place. In provinces where legislation permits midwives to prescribe and administer vaccines, informed choice conversations begin with the pregnant client and continue up until 6 weeks postpartum. Midwifery clients make informed choices about routine medications offered at the time of birth, such as Vitamin K and erythromycin. Although though the first round of infant vaccines is offered once the family has discharged from care, during the pregnancy midwives will often initiate the discussion about routine vaccine schedules with their clients. As illustrated in Table 1, the scope of practice for midwives, pertaining to vaccine administration (separate from prescription or recommendation), varies according to provincial or territorial regulation. While the authority to administer a vaccine is widely permitted, the midwifery pharmacopeia varies from one jurisdiction to another. Several provinces and territories have permissive legislation for a broad sweep of many of the vaccines recommended by the Public Health Agency of Canada, while others do not (see Table 1).

2.3. Data collection

Graduate and postgraduate qualitative health researchers (WP, DG, HM, MT) conducted semi-structured telephone English interviews of 30–60 min in length with seventeen participants, from April 2018 to January 2020. Interviews explored the participants' relationships to midwifery, experiences with training programs, knowledge of existing immunization practices in their jurisdiction, views and beliefs about vaccination in pregnancy, and suggestions for improvements to existing practices, using open-ended questions. Interviews were audio recorded and transcribed. Participants were assigned pseudonyms and invited to review the final de-identified transcripts for accuracy. Documents collected for analysis included formal documentation of the midwifery profession from each of the six Canadian provinces such as statements of professional standards, legislation, registration requirements, federal immunization program resources, regulatory standards, practice guidelines, and patient communication reference material. Documents were collected via internet search, and by request to provincial regulators and associations.

2.4. Data analysis

Interview transcripts and text documents were managed and coded in NVivo Software (QSR International) by a postdoctoral researcher with a background in social science (WP). Codes and categories were reviewed and assessed in collaboration with the research team (WP, DG, JB, HM). An inductive thematic analysis according to emergent themes was applied. Following Braun and Clarke's [29] model in which data are analyzed holistically, data were coded inductively (codes were identified based on the data) and statements were grouped together as themes emerged relating to barriers and facilitators to addressing vaccine hesitancy and increasing vaccine uptake among midwifery clientele. All authors contributed to the analysis.

Table 1
Scope of vaccine practice for midwives by province/territory*.

	Alberta	British Columbia	Manitoba	New Brunswick	Nova Scotia	Northwest Territories	Ontario	Quebec	Saskatchewan
Hepatitis B	✓	✓	✓	✓	✓	✓	✓	✓	✓
Measles, mumps, and rubella (MMR)*	✓	✓	✓	✓	✓	✓	✓	✓	✓
Seasonal influenza		✓	✓	✓	✓	✓			✓
Varicella*		✓		✓	✓	✓			✓
Bacillus Calmette–Guérin (BCG)*		✓	✓	✓	✓				✓
Tetanus, Diphtheria, Pertussis (Tdap)		✓		✓	✓				✓

*Should not be administered in pregnancy but may be offered and administered in the post partum period while the client is still in midwifery care.

* At the time of data collection, Newfoundland, Nunavut, Prince Edward Island, and Yukon either did not have clear vaccine regulations for midwives or did not yet regulate midwifery.

3. Results

There were 17 participants, for a response rate of 42.5 %. Participants had diverse backgrounds in education, practice, and expertise. Most participants were practicing midwives in one of six Canadian provinces (n = 12), while some had suspended practice to teach and do research (n = 3), and others were non-midwives involved in vaccine education efforts with midwives (n = 2). The number of years in practice was not systematically collected, but for those (n = 13) who provided it, the response ranged 1 to 30 years, with an average of 12 years. Documents collected (56 total) included statements of professional standards, legislation, registration requirements, regulatory standards, practice guidelines, patient hand-out information materials, and vaccine communication training materials. Documents provided insights into the regulatory standing of vaccines in midwifery care by jurisdiction.

Overall, our analysis found that barriers to midwives counselling clients and administering vaccines included vaccine funding and logistics, historically contentious interprofessional relations, lack of detailed information about vaccine risks and benefits, and lack of communication supports tailored to the midwifery context. Midwives' existing clinical skillsets, expanding the scope of midwifery practice by two additional weeks (from six to eight weeks postpartum) to encompass initiation of the infant vaccine series, and expanding education and training curricula were cited as opportunities for improved integration of vaccination services into midwifery care. See Table 2.

3.1. Barriers

Key challenges to integrating vaccine counselling and administration were identified in the funding and logistics of vaccine provision, the state of interprofessional relations, and in the lack of appropriate information resources both to keep midwives themselves up to date and to facilitate the vaccine discussion with midwifery clientele.

Table 2
Table of themes.

Theme	Subtheme
Barriers	• Time • Costs • Cooperation • Trust • Appropriate level of detail
Opportunities	• Scope of practice • Formal education • Continuing education • Decision support tools (take-home) • Point of care communication tools

3.1.1. Logistical barriers: Time and costs

For some, the administration of vaccines in their practice was not perceived as logistically feasible. Leslie, a midwifery educator not practicing, explained the "capital costs of getting that equipment and then the ongoing costs of maintaining it" were significant barriers. Jodi a midwife who practiced in a small urban centre and had recently begun administering influenza vaccine at her practice, was concerned that "more and more" things were being added to midwives' scope of care, without compensation for the additional work. Fiona, a midwife working in an urban centre who was working towards setting up vaccination in her shared practice, cited the additional time and work involved in keeping vaccine records and keeping up with provincially mandated reporting posed a significant challenge. Not providing vaccines at the point of care for logistical reasons was seen as a barrier to improving uptake. Clients often had to obtain a prescription and then find another provider who could administer the vaccine. The ability to provide vaccines at the point of midwifery care, explained Ellen, a midwife who worked in a small urban centre, "would make a huge difference in terms of people actually getting vaccinated." If this were the case, she added, she would be able to say, "Hey, we're going to talk about the vaccine in a couple weeks. It'll be recommended you receive it. If you want to receive it, you could just get it at your next appointment."

3.1.2. Interprofessional barriers: Cooperation and trust

Midwifery became a regulated health profession in Canada in the 1990s. Relative to other health professions, midwives' clinical expertise has been discredited and continues to lack widespread recognition [13,31]. This history of tense interprofessional relations was perceived by one midwife as impeding the expansion of scope of practice into vaccine delivery. In Ellen's hospital, some interventions, such as epidurals, had been withheld from midwives' privileges until recently because physicians "didn't view them as colleagues that could or should provide medical care." Participants stated recognizing midwives' ability to effectively counsel clients on vaccination was important to integrate the profession into efforts to increase vaccine coverage. Document review suggested that some jurisdictions do not have clear guidelines on midwifery and vaccination, resulting in confusion around their role in immunization, particularly for infant immunization.

Addressing interprofessional barriers is not a complete solution in itself, since even in care settings where interprofessional relations are good and there are established referral routes, the way in which a referral is made can have a big impact on client vaccine

hesitancy. Client trust in vaccines may be eroded in the course of a referral or 'handoff' to another provider, which might happen in a jurisdiction where midwives are not permitted to administer vaccines, or where they may not be equipped with resources to vaccinate. As one participant suggested, interprofessional collaboration could help facilitate a successful transfer of midwifery clients to a trusted nearby vaccine provider. As Michele, a public health professional, said, even by deferring the vaccine conversation to other HCPs, midwives might "plant that seed of doubt, unknowingly" by signalling they might not be the best person to lead the vaccine discussion. Parents with lingering concerns about vaccines, she suggested, may be missing out in not holding the vaccine conversation with their most trusted provider (their midwife), since switching over to a doctor, for example, creates a "disconnect both in terms of model of care and approach." Client hesitancies may best be addressed through informed choice conversations with their trusted midwife, but confidently making a direct referral to a trusted vaccine provider could help smooth the transition.

3.1.3. Information barriers: Appropriate level of detail

While Canadian midwives are adept at assessing statistical evidence and critically appraising research literature [18], many midwives lacked time to keep up with evolving evidence and some worried they were ill-equipped to respond to client concerns. In order to meet the standards of informed choice, Leslie explained, midwives are required to detail "what the risks and benefits are associated with each of the choices their client might make [and] what the community [care] standards are."

Carine, a midwifery educator noted that while she felt confident authorities had properly researched the recommended vaccines, she and other midwives rarely saw the actual research or decision-making processes behind the recommendations in enough detail to be able to perform an informed choice discussion with a client. She would like midwives to feel comfortable answering questions such as "Why was the decision taken to give [vaccines] so young, and what kind of effect can it have to the immune systems of the small children, compared to giving the same vaccine a bit later?" and "Is the risk of getting a side effect bigger than the risk of getting the disease?" Carine further explained not having access to concise summaries of emergent research findings on the safety and efficacy of vaccines was compounded by the problem of midwives being short on time.

> If you have something summarized and then people can go click on a link or get the real research behind it easily, that would be very, very helpful. But getting only the real research without any summaries, I don't think people have the time to read 10 research [papers].

Fiona and Angela, both midwives working in urban centres, described referring to a book and website from a different province to help answer client questions when materials from their own jurisdiction were insufficient. Fiona felt that midwives were ill-equipped to respond to questions about vaccine risks and thus unlikely to be able to properly facilitate an informed choice discussion on vaccination. "Most of the midwives don't want to start answering the details of, like, what is in the vaccine. Or, what are the risks of formaldehyde or mercury? Or how much mercury is in the vaccine? And what does that mean for the child and for the baby?" As a result, Fiona thought many would defer vaccine discussions to other care providers because they were unable to facilitate an informed choice discussion.

3.2. Opportunities

Opportunities for integrating vaccine counselling and administration into midwifery care were identified as expanding the scope of practice, expanding formal and continuing education on vaccination and creating decision, and communication tools for use at the point of care tailored specifically to the needs of midwives that incorporate the informed choice model of care.

3.2.1. Logistical opportunities: Expanding scope of practice

Expanding both the length of scope of practice and the ability to prescribe infant and pregnancy vaccines were cited as opportunities. For participants, the fact midwifery care typically ends after six weeks postpartum was the reason infant vaccines typically were not considered part of midwifery care and were discussed rarely. If scope were expanded past the six-week mark, explained Carine, a midwifery educator, midwives "would be well situated to provide [vaccines]," particularly in areas where "it's hard to get appointments with a family physician or there aren't other people [public health] around who are providing newborn vaccines." Broadening scope could also avoid the transfer to a less trusted provider.

3.2.2. Training opportunities: Expanding formal and continuing education

Midwives' potential to play a bigger role in vaccination is bolstered by their existing specialised clinical skillsets and strong relationships of trust with clients. Midwives are trained to read and interpret scientific evidence, and some participants stated their training had already prepared them to translate such evidence for their clients in the context of discussing vaccines. Current midwifery training covers the administration of injections and some participants reported extensive formal training in the science of immunity. This has not always been universally covered, but responses suggested growth in this area. Leslie saw midwives as "well situated to provide [newborn vaccines]," requiring only some key additions to formal training and continuing education. "All the underlying principles behind vaccination and the administration of vaccines, that's all there… It would be very, very simple to add based on the general kind of knowledge, skills and judgement that midwives have."

Participants suggested that curricula borrowed from interdisciplinary settings should be tailored to midwives' needs. Expanded formal training in public health and vaccination had increased competence and confidence in vaccine knowledge for two participants. Until her midwifery training, Kelly, a midwife practicing in a suburban area, had "a very different personal opinion about vaccinations." After a presentation by a public health professional during her schooling, she had been struck by how "the risk of the illness is so much greater than the risk of the vaccination… I remember that just hit me viscerally." Rebecca, a midwife practicing in a rural area, had likewise changed her mind about vaccines after a presentation during her schooling. The talk had given her "a lot more confidence in the research out there. That it's not as fuzzy as some would suggest in the, in the public sphere… it's actually not as grey or contestable when you actually look at the clinical research." Afterwards, she felt "really well equipped to take that information back to the clinical scenario with a patient and disseminate it."

While most participants were aware of existing vaccine resources, such as online training programs offered by the Society for Obstetricians and Gynecologists of Canada (SOGC) and the Canadian Pediatric Society, these resources were not universally perceived as appropriate for midwifery. Ellen, a midwife practicing in a suburban area worried that some midwives would see these as too persuasive to fit with the informed choice model of care. "I've done the SOGC one and I think that's not going to be too helpful for midwives." Several participants expressed expanding the curriculum of midwifery training programs to include more on the vaccine immunology, history of vaccines and vaccine preventable illnesses,

and safety and efficacy of vaccines currently recommended in pregnancy would facilitate the integration of vaccine knowledge and discussion into midwifery care standards. Shirley, a midwifery educator, suggested midwives would benefit from learning, "how these particular vaccinations have been researched with full randomized control trials." To suit the needs of midwives, she added, training curricula should include "a discussion about history and balancing risks and benefits when we look at the whole population and perhaps a little course on epidemiology" to further the understanding of herd immunity.

3.2.3. Information opportunities: Decision and communication tools at the point of care

Communication tools, such as vaccine decision support materials that fit with informed choice, were cited as areas for improvement. In addition to first giving a concise breakdown of the science behind the public health recommendation of pertussis vaccination in every pregnancy, Fiona thought a provider guide with "some sort of simple informed choice discussion outline, like a point form thing" would go a long way to support midwives. Leslie agreed, midwifery decision support resources should answer questions about vaccines such as "What are the options? What are the risks and benefits? What's the current state of the research, including research gaps?" She added to meet the professional standards for the principle of informed choice, a good resource would also help the midwife walk the client through "potential consequences" before making a choice about vaccinating. Materials could explain herd immunity (if many opt out), as well as the relative individual risks of vaccinating versus those associated with contracting vaccine preventable disease. Participants suggested client decision support materials might be presented online, with links to original research, which would be helpful for concerned clients seeking direct access to evidence. Leslie suggested that "in terms of recommendations, it's always handy to have, either a website that you can refer people to or a place where you can link to where they can access an information pamphlet."

Several participants were optimistic that with the right resources, midwives could do a great deal to respond to clients' concerns about vaccines. Ellen, who had begun to discuss vaccines in detail with clients, thought this had led to positive outcomes. "I have seen a greater number of people receiving [Tdap and seasonal influenza vaccines] this year, and I think it's just because we've made a better effort to discuss [it with] them."

4. Discussion

Midwives experienced barriers to promoting and delivering vaccination, but real opportunities exist to leverage the midwifery model of care to improve vaccine uptake among midwifery clients in Canada. Vaccine communication and delivery by midwives is complicated by a number of factors including logistical barriers around time and expense, interprofessional relations that either discourage midwives' participation in administering vaccines or inadvertently seed doubt about vaccinating by deferring the vaccine conversation to other providers, and a lack of midwifery-designed information resources. Though midwives commonly convey standard public health recommendations to their clients, they perceive a lack of access to research summaries in the ideal format to address the questions of their vaccine hesitant clients. Some of these information resources exist, but are not promoted to midwives. In other cases, these are not tailored to the midwifery model of care's informed choice model of in-depth informative dialogue.

Despite these challenges, key opportunities to further integrate vaccination into midwifery care exist, including an expansion of the scope of practice to encompass vaccine delivery in pregnancy and infancy in provinces where it is currently restricted, optimizing vaccine education for midwives, and adapting decision support tools and communication resources to meet the needs of midwives and their clients. Midwives are committed to informed choice decision making, including as it relates to infant/childhood vaccinations through the informed choice model, and our results suggest that this may leave practitioners in need of information supports tailored to use in this context. Bettinger et al. found that although midwives are likely to provide service to people who are already vaccine hesitant, the majority were somewhat comfortable providing perinatal vaccines and over 60 % administered them at least occasionally [32]. This suggests midwives are an untapped resource in efforts to improve vaccine uptake across Canada. Our findings here support this, while echoing prior findings of Dubé et al. who showed while midwives seek to detail the pros and cons of vaccination to help clients make informed decisions, many lack the information they feel is necessary to do so [21]. Building client-provider rapport is important in addressing vaccine hesitancy [33,34], and since midwives build trust over the course of many visits, this opportunity may be lost if a client must seek vaccination from another less-trusted provider. Issues with interprofessional trust and cooperation are not new or limited to vaccination. Since infant and pregnancy vaccines are not typically administered by a midwife, clarifying midwives' role in immunization would be beneficial, particularly in jurisdictions without clear guidelines. Promoting wider recognition of midwives as valued health professionals capable of discussing vaccines with clients could improve their ability to provide vaccine counseling. In the U.S., both the American College of Obstetricians and Gynecologists and the American College of Nurse Midwives endorse the Adult Immunization Schedule annually [35]. In Canada, bringing midwives to the decision-making table for matters of vaccine regulation and the development of immunization care standards for pregnant people may facilitate the integration of midwifery into vaccine delivery and promotion and reinforce their standing as capable allies for promoting vaccine uptake.

Logistical barriers further compound the vaccine delivery challenges faced by midwives. Logistical barriers described by participants were similar to those cited elsewhere by other healthcare provider types, including cost of obtaining a vaccine refrigerator to maintain the cold chain, record-keeping, and lack of compensation [36]. With key improvements to vaccine education and training, and possible expansions to scope of care, midwives are well positioned to provide evidence-based information and administer vaccines. In order to close the gap between national vaccine recommendations and clinical practice in Canada, Mijović et al. suggest taking a systems approach to the delivery of vaccination (eg. considering provider/practice, and health system factors simultaneously) in order to address confusion stemming from the patchwork nature of health jurisdiction present in Canada and potentially other jurisdictions [11]. As our participants suggested, midwives, especially those practicing in regions with limited access to other vaccine-providing HCPs, can be powerful allies to public health vaccination efforts. In areas where clients are more likely to receive their vaccine from another health care provider, clarifying referral routes and updating professional education and training may help ensure that midwifery clientele receive thorough and compelling vaccine information.

Jarrett et al. suggest that strategies for addressing vaccine hesitancy should be carefully tailored according to population and context [37]. Creating vaccine communication resources that better fit the informed choice model of care represents a promising opportunity to encourage successful vaccine conversations between midwives and clients. These could include such resources as vaccine communication training, a website, fact sheets, and parent reminders, developed in collaboration with midwives and public health

authorities. To meet the standards of informed choice, supports for integrating vaccine discussion and delivery into midwifery practice should be developed in collaboration with midwives. At the level of policy, expanding the scope of practice from six to eight weeks (as is done in German midwifery care [38]), and financial and logistical supports for vaccine provision should also be considered. Unifying provincial regulations to universally permit the administration of both infant and pregnancy vaccines would remedy confusion in regions with unclear rules. Being uniquely positioned to access vaccine hesitant parents, midwives should be considered a valuable resource in the effort to encourage vaccination in pregnancy and infancy.

4.1. Strengths and limitations

This study applied rigorous qualitative methods to a diverse sample of Canadian midwives and public health professionals. Study credibility was enhanced by participant transcript review, study population feedback on preliminary findings (e.g., at annual meeting of the Canadian Association of Midwives), discussion and debriefing among the study team, and use of quotes to exemplify the raw data (participants' own words) [39]. Validity of the analysis was tested through triangulation of multiple data sources (interviews with different types of informants, documents) multiple investigators within the study team, and methods (narrative inquiry and inductive thematic analysis) [40].

Given the researchers' affiliation with a vaccine research centre, it is possible that some of the most vaccine-hesitant midwives might not have wished to participate in this study, in which case we may not have captured the full range of perspectives among Canadian midwifery. Further, social desirability bias may have caused some participants to portray themselves or their professions as different—for example, more evidence-based—than what is actually enacted in day-to-day practice. Finally, these data were collected prior to the COVID-19 pandemic, and therefore this analysis does not include any changes to professional attitudes and practice that have occurred during or as a result of related events.

5. Conclusions

Canadian midwives are well-suited to the task of administering vaccines and engaging in client discussions about vaccination in pregnancy and infancy. This qualitative thematic analysis of interviews with midwives, immunization professionals, and midwifery educators, as well as textual documentation pertaining to the profession, finds that key interventions at the level of logistics, training, and client information materials would help address barriers to the integration of midwives into the provision of vaccines in perinatal care across Canada. Expanding scope of practice, enhancing formal and continuing education on the subject of vaccines and immunity, and tailoring communication for use by midwives at the point of care may encourage demand for vaccines among midwifery clientele.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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