MARCH 2023

EVIDENCE SYNTHESIS

CONSIDERATIONS FOR THE INTEGRATION OF MIDWIVES AS VACCINE PROVIDERS IN HEALTH SYSTEMS IN CANADA

CAM ACSF
Midwives for everyone, everywhere
Des sages-femmes pour tous, partout

ACKNOWLEDGEMENTS

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Thank you

Our deepest thanks to all the midwives who participated in interviews with the Knowledge Leads on this project. We are grateful to you for taking the time to share with us your stories and experiences with providing midwifery care throughout the COVID-19 pandemic. Your voices are central to informing the findings of this evidence synthesis.

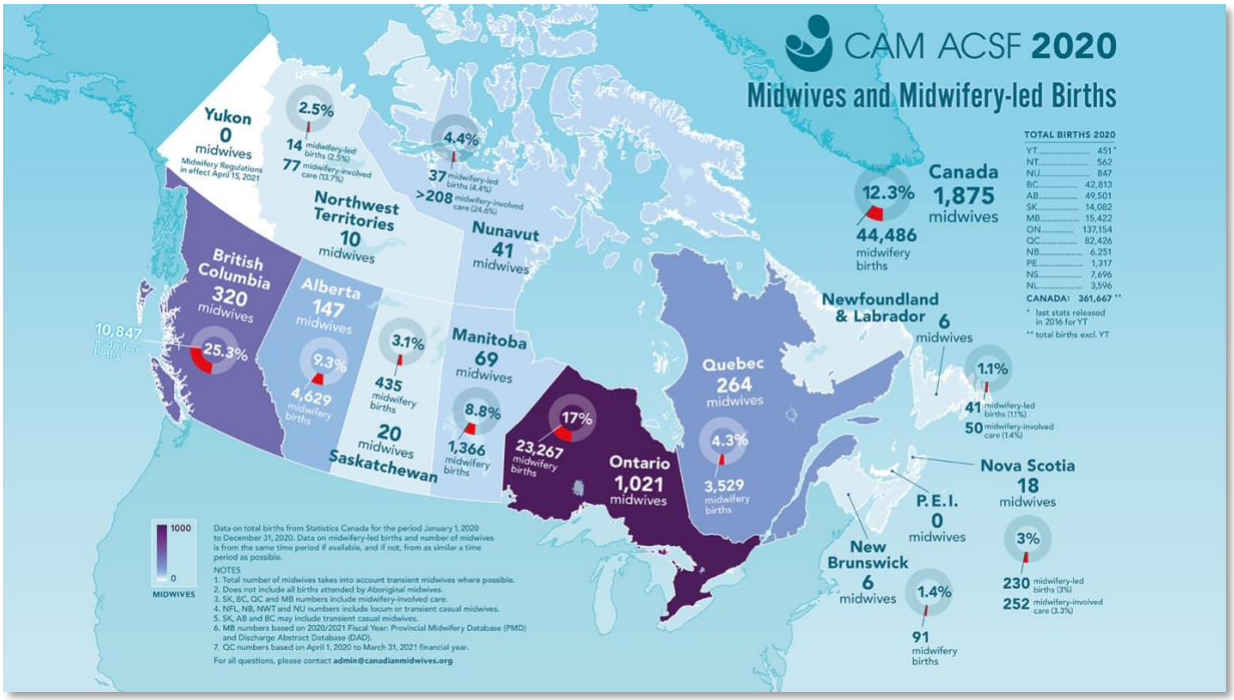
CONTENTS

BACKGROUND

Midwifery in Canada

Midwives are autonomous primary healthcare professionals who manage all aspects of care during normal pregnancy, labour, birth, and at least the first six weeks post-partum.[1] Midwives also play an important role in health counselling and education within families and communities, and their work encompasses sexual and reproductive health services more broadly.[2] The midwifery model of care centers on mutual respect between client and midwife, and evidence-based care and decision-making. In 2020, midwives provided care for approximately 12% of all births in Canada (Figure 1).[1] Demand is high for midwifery services and the number of midwifery attended births continues to grow each year.

Figure 1. Midwifery in Canada[1]



The Canadian Association of Midwives (CAM) provides leadership and advocacy for the profession of midwifery throughout Canada. Midwives are self-regulated and publicly funded in health systems in Canada. CAM promotes the development of the profession in the public interest and contributes the midwifery perspective to the national health policy agenda. As a part of education and information provision as an association, CAM develops and promotes evidence-based resources to support normal birth and the midwifery model of care.

CAM recognizes the National Council of Indigenous Midwives as a national voice of Indigenous midwifery in Canada. The National Council of Indigenous Midwives promotes clinically excellent, culturally safe sexual and reproductive care for Indigenous families and communities.

Midwives and vaccines

Midwifery provision of vaccines is dependent on jurisdiction, which varies within Canada and worldwide. A document review suggested that many countries do not have clear guidelines on midwives providing vaccination, resulting in confusion over scope of practice.[3] Within Canada for example, midwives in British Columbia have a scope of practice that includes prescribing and/or administering prenatal vaccines including seasonal influenza vaccine and Tdap vaccine, and postnatal vaccines that include measles/mumps/rubella and varicella vaccines, hepatitis B immune globulin, and hepatitis B vaccine.[4] It is important to note that there is significant variability with respect to midwives and vaccinations, and ongoing discussions as to midwives roles in health systems in the delivery of vaccinations.[4]

In a previously funded project by the Public Health Agency of Canada's (PHAC) Immunization Partnership Fund, an open-access, bilingual one-hour online course was created to support midwives practicing in Canada with science-based education regarding the vaccines and immunizations through pregnancy and post-partum. The Midwifery Immunization Communication e-course provides midwives the tools to have informed choice discussions around immunizations and vaccines, understanding that acceptance and uptake are improved when health professionals introduce the role of immunization in the prenatal period. The aims of the course include:

- background and explanation for midwives' role in public health immunization education and vaccination programs;
- developing responsive evidence-based informed choice discussions;
- resources to address immunization and vaccine-related client concerns and frequently asked questions; and
- integrating best practice into midwives' clinical management of vaccination.[5]

Vaccine hesitancy

The reasons for vaccine hesitancy are layered, ranging from a lack of trust in the effectiveness and safety of the vaccines themselves, the healthcare delivery systems for vaccines, as well as the underlying motivations of those who establish vaccine policies.[6] The COVID-19 pandemic brought to light many systemic inequities with respect to risk of infection, access to COVID-19 vaccines, and access to health and social supports. For example, racialized populations in Canada experienced an increased risk in COVID-19 infections, high mortality rates, and lower vaccination uptake rates.[7] Research from the initial months of COVID-19 vaccine availability in Canada shows that some groups in Canada were more likely to report COVID-19 vaccine hesitancy.[6] These include Black Canadians, Indigenous peoples, newcomers, and younger adults, among others.[6] Many of these groups were also more likely to experience other social and structural barriers to accessing vaccinations.[6]

With respect to midwives and vaccinations, some research suggests that those who have not experienced safe, reliable and trusting relationships with health professionals, may have a higher level of trust in midwives, as a result of the association of midwifery with the natural birth movement and integrative health more generally.[8] Recent research commissioned by PHAC indicated that midwives may encounter vaccine-hesitant clients at a higher rate than other health professionals.[9] Midwives bring unique contributions to community-based care, having built trusting relationships with local families and communities, making them well-suited to information and education provision around vaccinations.

AIMS

This is CAM's third project funded by PHAC's Immunization Partnership Fund. The overarching goal of the project is to increase full vaccination (4 doses) against COVID-19, with a specific focus on pregnant people and hard to reach populations. The Government of Canada recommends vaccination against COVID-19 (mRNA COVID-19 vaccine and booster doses) during pregnancy and breastfeeding, which aligns with the research evidence on the safety and efficacy of the COVID-19 vaccine during pregnancy.[10, 11] Vaccination against COVID-19 during pregnancy has been found to reduce the severity of infection and risk of hospitalization, including infants under 6 months of age.[10, 12]

The project objectives are to:

1) build health professionals capacity as vaccination promoters and providers by developing evidence-based tools on the importance of COVID-19 vaccines and other vaccines;
2) support community-based COVID-19 education, promotion, and outreach by developing tailored and evidence-based information for pregnant people, and supporting mechanisms and initiatives that reduce and remove barriers to vaccination; and
3) build capacity for evidence-based vaccination communication by supporting midwifery associations in Canada to develop communications and public engagement strategies to foster evidence-based dialogue around vaccines.

This evidence synthesis is part of the project's first and third objectives, which builds an evidence-based resource for health professionals, midwifery associations, and health system decision makers to inform midwives' roles as vaccine providers in health systems in Canada. The evidence synthesis is also a tool to support and inform objectives 2 (communities of practice) and 3 (midwifery associations in Canada to develop communications strategies) of the project.

The aims of the evidence synthesis are to understand the barriers and facilitators to the implementation and integration of midwives as vaccine providers in health systems in Canada (see Figure 2 for sources of evidence). First, we reviewed the peer-reviewed literature to examine the role of midwifery in vaccination, then we focused on the literature related to COVID-19 vaccination. Second, we completed a review across Canada to understand the current state of midwifery as it is related to vaccination. Lastly, we conducted key informant interviews with midwives and other health system stakeholders throughout Canada to ground the findings in local practice, values, needs, and preferences. Where possible, we actively sought participation and inclusion of racialized and Indigenous midwifery voices.

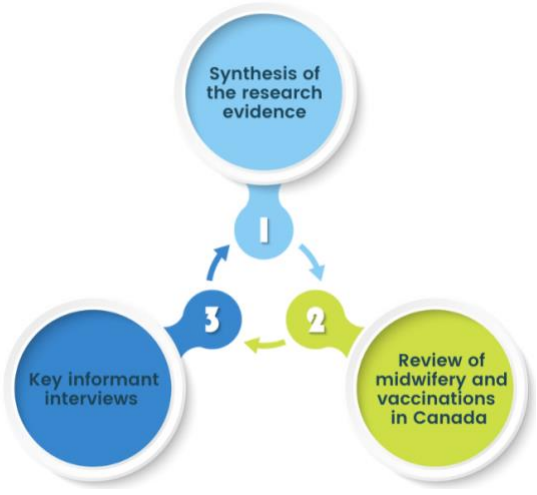


Figure 2. Sources of evidence

APPROACH

Synthesis of the research evidence

In October of 2022 we searched the following three databases to identify relevant research evidence (systematic reviews and primary studies): MEDLINE (U.S. National Library of Medicine's bibliographic database), Cochrane Library (high-quality health evidence database), and Health Systems Evidence (database of evidence related to health systems). We conducted broad searches using "midwi*" AND "vaccin*" as a keyword in Health Systems Evidence and Cochrane Library. In MEDLINE we refined the searches using medical subject headings (MeSH) and keywords based on the following concepts: midwifery and vaccination. The results from the searches were assessed by two reviewers on the research team for inclusion. Articles were included if they explored the role of midwifery in vaccination.

For each article included in the evidence synthesis, we documented the type of research, and any findings related to regulatory arrangements; governance components; financial components; the ways in which vaccines are delivered; external considerations; and intersectional components of power and privilege that underpin the evidence (Figure 3).

Jurisdictional scan

We reviewed publicly available resources between September and December 2022 to get a clearer picture of midwifery and vaccinations across health systems in the country. The website search included:

1) national-level organizational websites (e.g., Government of Canada, Public Health Agency of Canada, First Nations and Inuit Health Branch, and Canadian Midwifery Regulators Council);
2) provincial and territorial ministries of health and Indigenous health boards;
3) provincial and territorial midwifery associations and the National Council of Indigenous Midwives;
4) provincial and territorial statutes and regulations, and Indigenous health boards; and
5) targeted internet searches for media (e.g., news articles and press releases).

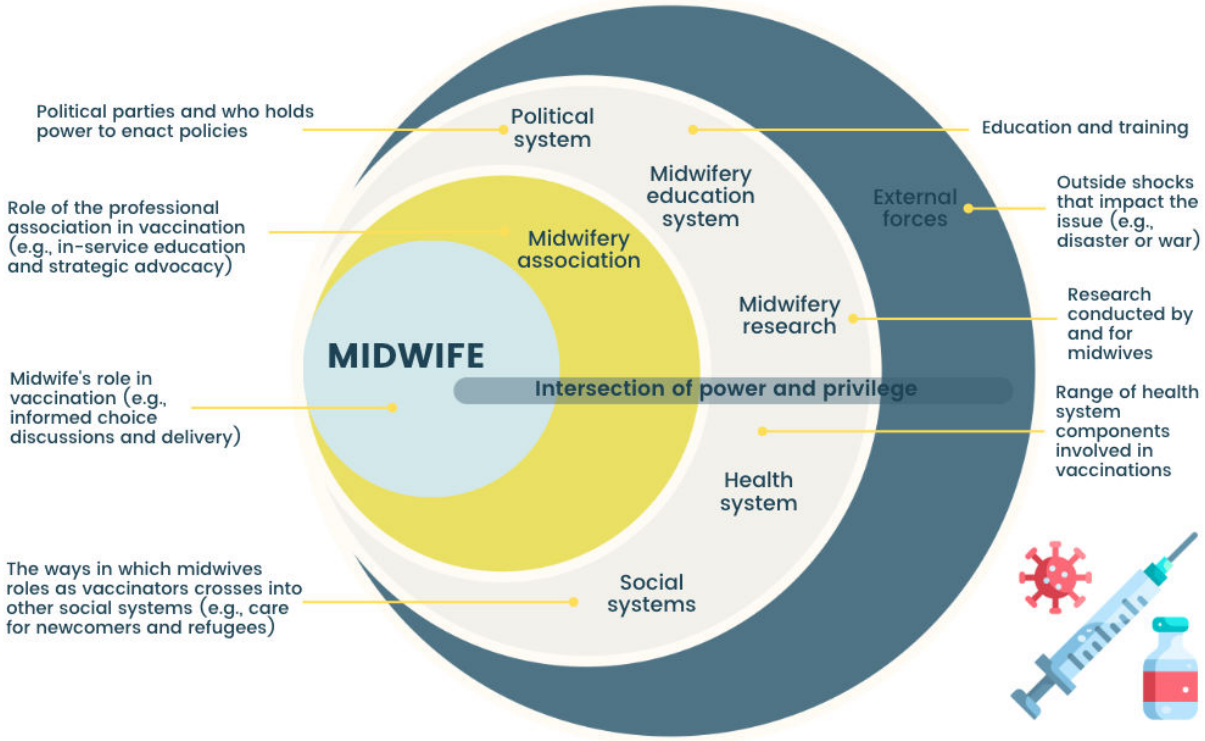
We defined jurisdictions in two ways: 1) the various regulatory bodies for midwives throughout Canada; and 2) the various Indigenous governance structures and territories and how midwifery care is placed within these Indigenous systems. We recognize that this second way of collecting and analyzing data is new to us as Knowledge Leads, and therefore will likely adapt and change over time as we gain understanding of Indigenous ways of governing and how midwifery is considered in these contexts. Important to note that in many Indigenous communities, midwifery is governed by the community and therefore there exists many variations and nuances within these categories themselves. Regulatory midwifery bodies include British Columbia; Alberta; Yukon; Northwest Territories; Saskatchewan; Manitoba; Ontario; Quebec; Nova Scotia; New Brunswick; Newfoundland Labrador; and Prince Edward Island. Indigenous governance and systems with Indigenous midwives we purposefully sought information on include: Nunavut (Kivalliq and Kitikmeot regions); Nunivak; Labrador Innu; Eeyou Istchee communities (Cree territories located in what we call Quebec), and Ontario Indigenous midwifery programs and their communities (Tsi Nón:we Ionnakerátstha Six Nations of the Grand River Territory and Seventh Generation Midwives of Toronto). Appendix A provides the full results of the jurisdictional scan.

Key informant interviews

Between September and December 2022, we conducted informal semi-structured key informant interviews with relevant stakeholders across Canada to better understand midwives' experiences with vaccinations, and more specifically throughout the COVID-19 pandemic. We also asked participants to offer insights into the main barriers and facilitators to the implementation and integration of midwives as vaccine providers in health systems in Canada. In total, we gathered evidence from 39 participants who were either midwives, midwifery regulators, midwifery association leadership, and/or health system policy makers.

Figure 3 outlines the framework we used to understand midwives' roles as vaccine providers. At the centre of the figure is the individual midwife and their role in the delivery of informed choice discussions regarding vaccines and immunization, as well as administration of vaccines. The next layer is understanding how professional midwifery associations can support midwives in vaccination through examples such as in-service education opportunities and strategic advocacy (i.e., position statements). The following layer includes: 1) political system: who (political parties) holds the power to make decisions; 2) midwifery education system: vaccination-related education and training of new midwives; 3) midwifery research: vaccination-related research that is conducted by and for midwives; 4) health system: broad range of health system components that are involved in vaccination; and 5) social systems: the ways in which midwives roles as vaccine providers intersects with social systems, which can include providing midwifery care to new comers and refugees. External forces are shocks outside the issue of midwives' roles as vaccine providers that can have an unexpected impact, such as economic recession, severe weather events, or war. Underpinning each area is the intersection of power and privilege, understanding that these factors impact who has access to resources and the ways in which individuals or groups are affected by the problem.

Figure 3. Framework for understanding midwives' roles as vaccine providers



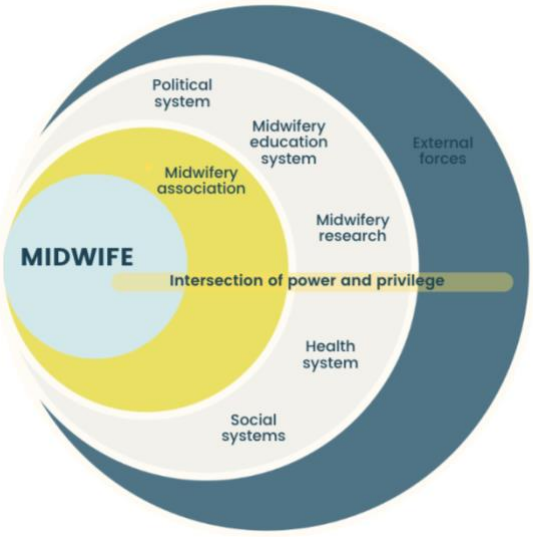
FINDINGS

We present our findings below by the main elements our framework for understanding midwives' roles as vaccine providers (Figure 3). Our findings are informed by 23 relevant peer-reviewed articles from our searches of bibliographic databases, 39 key informant interviews with health systems' stakeholders in Canada, and a review of publicly available resources related to the role of midwifery and vaccination across all the health systems in Canada (see Appendix A for full results of the jurisdictional scan).

Intersection of power and privilege

Impacts of racism and colonialism in Canada

Power and privilege intersect each of the elements that we identified as relevant to understanding midwives' roles as vaccine providers (the midwife at the individual level, role of the midwifery association(s), political system, education system, research system, health system, social system, and external forces). As such, we begin the findings section of our evidence synthesis by first recognizing the historical and ongoing impacts of racism and colonialism in Canada. Historical and current experiences of systemic racism, medical experimentation, and mistreatment in healthcare has led to mistrust of health professionals and the health system more broadly, impacting vaccination uptake and following of recommendations.[13, 14, 15] Systems of oppression negatively impact health.



Research has shown that Indigenous peoples in Canada were disproportionately at risk of adverse outcomes for COVID-19. [14] The impacts of anti-Indigenous racism at both the individual level (e.g., denial of treatment in healthcare based on Indigenous identity) and structural racism through policy legacies (e.g., social segregation through the residential school system and Sixties Scoop) are significant.

Black populations have deeply-rooted mistrust of the medical system and science, due to many examples of medical experimentation, non-consensual treatment, and abuse.[13] Intergenerational trauma from these and modern day microaggressions and abuses, such as coercion and minimalization,[15] results in the vaccination hesitancy among Indigenous, Black, and People of Colour (IBPOC) today.[13] For vaccine uptake to be improved in these communities, delivery of recommendations from health professionals within the community are an important consideration.[15]

Impacts of gender on midwifery

The midwifery workforce is gendered, which impacts the division of labour within health systems.[16] For example, many health professionals believed that beyond the birth dose of hep B, vaccine discussions were the responsibility of primary care nurses and other health professionals who care for women and children after birth.[17] Specific to the COVID-19 pandemic, midwives experienced incredible marginalization among their other health professionals colleagues, lacking financial support, recognition as frontline health workers, access to essential PPE, and difficulties taking time off when exposed to COVID-19.[16] Health professions that are gendered, such as midwifery experience higher rates of job insecurity, marginalization, devaluation, and abuse.[16] The COVID-19 pandemic magnified these biases in healthcare, highlighting the lack of recognition and support for midwifery compared to other health professionals.[16]

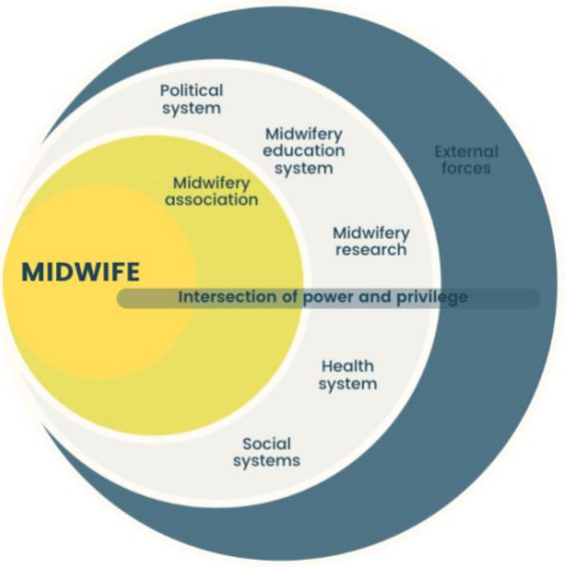
> *"Maternity care and women's health issues are severely undervalued, which one midwife labelled as "the most disgusting example of misogyny." Many midwives desired for their value as healthcare workers to be recognized by other health professions and leadership."*[16]

The example of access to essential PPE during the pandemic was a recurrent theme in the data. During initial waves of the pandemic, when PPE distribution was limited, many midwives were given less supplies than they needed, and only given access for use in home births.[16] This left midwives to find and supply their own PPE, at their own expense.[16] Midwives were also excluded from financial aid meant to support health professionals in implementing safety measures in their clinics.[16] Finally, despite COVID-19 being classified as an occupational risk illness for nurses, which should have enabled access to coverage for COVID-19 exposure, midwives reported difficulties attempting to use this process to access sick benefits, despite exposure.[16]

Midwife - individual level factors

Throughout the literature, midwives were positioned as a 'solution' to improve vaccination uptake.[3, 18] However very few articles addressed the tension this creates, as it places the onus on midwives to balance the midwifery philosophy of informed choice with public health agendas of vaccine advocacy.[4, 17, 19, 20] Midwives place clients' bodily autonomy and informed choice at the forefront when providing care generally, and especially when discussing vaccination.[4, 20] However, the goal of vaccine promotion could result in clients being pushed towards vaccination,[21] rather than making an informed choice for themselves. Midwives pushing for vaccination could also risk the therapeutic relationship between client and midwife.[4]

In the key informant interviews, midwives expressed the importance of understanding the legacies of colonialism and racism in relation to their IBPOC clients (e.g., impacts of forced sterilization). An important nuance to the informed choice discussions that midwives lead with their clients, is the additional layer of a trauma informed approach to these discussions. We heard examples from midwives of the trust that was built with clients and community through trauma informed care, which supports clients to seek healthcare when needed. Similarly, many midwifery interviewees described that they play the role of system navigator for their clients. During emergency lockdowns related to COVID-19, midwives described serving as conduits for their clients between different health and social services in order to support their clients' needs. Examples included coordination of care with public health, as well as social services such as housing supports and translation services.



Consistently in the literature, midwives were shown to provide client-centred, individualised care and informed choice, when it came to discussing and providing vaccination information to their clients.[3, 19, 20, 22, 23] They saw their role as providing thorough evidence-based information, including benefits, risks and alternatives,[3] and often saw this approach as more important than the decision itself.[19] A client's decision was found to be impacted by an explicit recommendation or lack thereof, as well as the level of trust in their midwife.[15, 24, 22]

The values underpinning informed choice and the right of the client to make their own healthcare decisions were not always reflected in the wider community of health professionals.[19] There was a concern found in the review of the literature that midwives may face increased surveillance over their practices, particularly when conducting informed choice discussions, and when supporting clients in decisions that contravene public health recommendations.[23] There is a need for other health professionals to recognize midwives' ability to effectively counsel their clients on vaccination, to better integrate midwives skillset in primary healthcare.[3]

We collected many examples of midwives responding to individual client and community needs related to COVID-19. In jurisdictions where midwives were not able to administer COVID-19 vaccinations we heard of the different ways in which midwives liaised with public health to ensure access for their clients. We heard examples of midwives using their role as trusted community members to provide essential COVID-19 information and education (e.g., working with elders in Indigenous communities and working with bishops in Amish communities).

Midwives often described in their interviews a sense of duty and calling to want to respond to the COVID-19 crisis and a desire to participate in mass vaccination campaigns. They viewed their skillset as trained health professionals extremely applicable vaccination administration. We heard many stories on both ends of the spectrum - midwives being declined in their jurisdiction from participating in vaccinations to midwives being integrated and valued members of COVID-19 vaccination efforts. In areas where midwives participated in COVID-19 vaccinations, there were numerous positive stories of their clinical excellence in this role. Examples included high patient experience ratings in hospital-led vaccination campaigns and suitability for vaccination administration in pediatric populations.

In our search of publicly available resources, we found a number of examples of ways in which midwives worked to respond to their community needs provide COVID-19 vaccinations (Figure 4). Seventh Generation Midwives Toronto created a home visit vaccination program for Indigenous people, close contacts, and household members. In the summer of 2021, a vaccine clinic pow wow was held the University of Toronto to support First Nations, Inuit and Métis people with a culturally safe services in which Seventh Generation Midwives Toronto participated in vaccine administration.

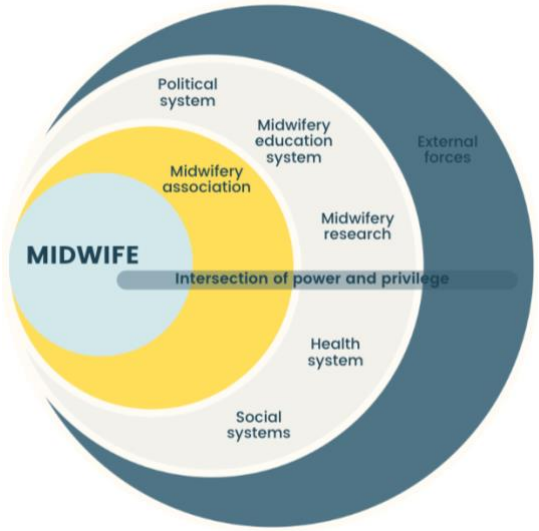
Figure 4. Publicly available examples of midwives providing COVID-19 vaccines

Midwifery association

While the peer-reviewed literature did not include findings on the role of midwifery associations in vaccinations, evidence from both the key informants and jurisdictional scan yielded several insights. We found many examples of midwifery associations in Canada playing an important education function during the pandemic by consolidating information and providing support to their membership.

Strategic advocacy is a key function of midwifery associations, which includes strong leadership from associations to engage in policy dialogue and decision-making in health systems.[25] We found many examples of midwifery associations in Canada advocating during the pandemic for the provision of a safe and enabling work environment for midwives. Examples of strategic advocacy by associations included:

- provision of essential PPE;
- promotion of home births as a safer option for midwifery clients; and
- recognition of midwives as essential front-line workers, including eligibility for essential health worker government incentives.

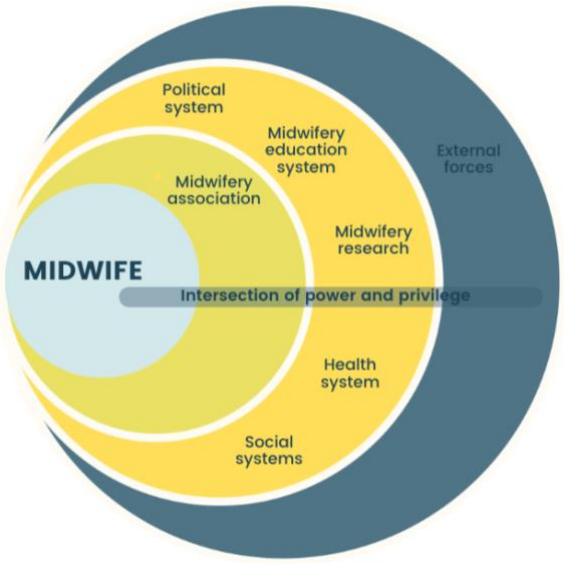


Addressing burnout and chronic illness in the midwifery workforce was identified as a priority by midwifery associations. These challenges are not new to the profession but were magnified during the pandemic.[26, 27] Understanding and addressing the impacts of racism and colonialism on burnout and chronic illness emerged is an urgent priority for associations.

In terms of barriers to the role of midwifery associations in vaccinations, we found that in jurisdictions where midwives were not obligated to be members of the association, midwifery associations were limited in their advocacy efforts due to lack of cohesion and information from its membership. Another barrier that some midwifery associations had to negotiate was vaccine hesitancy within their membership. Associations had to address issues around unvaccinated midwives and hospital vaccine mandates, including leave and termination policies.

Outer system

Political system



While we did not identify any themes within the peer-reviewed literature related to political systems, it is of relevance to understand who holds the power to make decisions related to the COVID-19 response, as well as the impacts of historical and current health polices related to midwives' roles as vaccine providers. The political system intersects with power and privilege as policy legacies have reinforced systemic racism, and current experiences of medical mistreatment in healthcare has led to mistrust of health professionals and health system decisions more broadly. Mistrust in political parties in power and their decisions during the pandemic was linked with vaccine misinformation movements and impacted vaccination uptake and following of public health recommendations.[13, 14, 15] A recent report released by the Council of Canadian Academies estimates that COVID-19 misinformation in Canada was associated with 2,800 deaths and cost $300 million in hospital expenses over a nine months period of the pandemic.[28]

In the key informant interviews we heard that midwives across Canada were most often not recognized by health system decision makers at provincial, territorial and local levels as an essential frontline health workers. This barrier is likely associated with policy legacies at the federal level, where midwives are not recognized as primary healthcare professionals in occupational classifications as defined by the Treasury Board of Canada. The omission of midwives as essential frontline health workers meant that midwives lacked critical resources (i.e., PPE), government payment incentives, and interim sick leave policies. The lack of oversight left midwives without basic supports to manage the provision of essential primary healthcare services. We found that as a result, COVID-19 magnified the precarity of the midwifery profession across all jurisdictions in Canada, serving to magnify challenges with burnout and workforce sustainability.

Midwifery education system

International Confederation of Midwives' Essential Competencies for Midwifery practice outlines the following immunization-related minimum sets of knowledge, skills, and professional behaviours for midwives:

- during pre-pregnancy and antenatal - assess status of immunization and provide counselling and update immunizations as needed; and
- ongoing care for women and newborns – possess knowledge related to protocols and guidelines for immunizations in infancy, and possess the skills and behaviours to administer immunizations and carry out screening tests as indicated.[29]

As mentioned in the introduction to the evidence synthesis, in a previously funded project PHAC's Immunization Partnership Fund, an open-access, bilingual one-hour online course was created to

support midwives practicing in Canada with science-based education regarding the vaccines and immunizations through pregnancy and post-partum. The Midwifery Immunization Communication e-course provides midwives the tools to have informed choice discussions around immunizations and vaccines.

One peer-reviewed study conducted in Australia found midwives had varying levels of confidence in providing vaccinations.[19] Two types of confidence were identified: vaccine confidence, confidence in vaccines themselves, and counselling confidence, confidence in vaccine knowledge and counseling skills.[23] Many midwives in this research study, reported a lack of counselling confidence,[19] and felt unprepared to address clients' questions and concerns.[23]

We identified three studies that explored where midwives looked for vaccine information and education. [13, 17, 19] Midwives reported looking to brochures produced by ministries of health and available at the hospitals where they worked, vaccine manufacturer leaflets, orientation manuals for new staff or recent graduates, smartphone apps, online sources, government bulletins, and work newsletters.[13, 17, 19]

In our key informant interviews, we heard positive examples of how midwifery students responded to the pandemic by providing COVID-19 vaccinations and staffing hospitals. In terms of barriers to education and training related to COVID-19 administration, many jurisdictions required completion of the Education Program for Immunization Competencies (EPIC) in order to be able to deliver COVID-19 vaccines. Midwives reported both financial and time investment barriers to completing the necessary training.

It is important to note the closure of Laurentian University's Midwifery Education Program during the pandemic, which was the sole bilingual midwifery education program in Ontario. The loss of the program had both immediate impacts to the provision of culturally safe midwifery services and has left long-term gaps in midwifery care in northern and remote communities in Ontario.

Midwifery research

Seven of the 23 relevant peer-reviewed articles (30%) included Canadian midwives on the research team, and all but one of those articles focused specifically on the Canadian context.

- Pringle W, Greyson D, Graham JE, Dube E, Mitchell H, Trottier ME, et al. Suitable but requiring support: How the midwifery model of care offers opportunities to counsel the vaccine hesitant pregnant population. Vaccine. 2022;40(38):5594-600.
- Bettinger JA, Rubincam C, Greyson D, Weissinger S, Naus M. Exploring vaccination practices of midwives in British Columbia. Birth. 2021;48(3):428-37.
- Memmott C, Smith J, Korzuchowski A, Tan H-L, Oveisi N, Hawkins K, et al. 'Forgotten as first line providers': The experiences of midwives during the COVID-19 pandemic in British Columbia, Canada. Midwifery. 2022;113:103437.
- Pringle W, Greyson D, Graham JE, Berman R, Dube E, Bettinger JA. "Ultimately, the choice is theirs": Informed choice vaccine conversations and Canadian midwives. Birth. 2022.
- Mattison C, Bourret K, Hebert E, Leshabari S, Kabeya A, Achiga P, et al. Health systems factors impacting the integration of midwifery: an evidence-informed framework on strengthening midwifery associations. BMJ Global Health. 2021;6(6):e004850.

- Stoll K, Gallagher J. A survey of burnout and intentions to leave the profession among Western Canadian midwives. Women and Birth. 2019;32(4):e441-e9.
- Gilbert NL, Guay M, Kokaua J, Levesque I, Castillo E, Poliquin V. Pertussis Vaccination in Canadian Pregnant Women, 2018-2019. J Obstet Gynaecol Can. 2022;44(7):762-8.

Health system

Governance

Health system governance encompasses the range of components from rules and regulations to operational governance to on the ground governing bodies, such as midwifery associations. Our review of publicly available sources found that all jurisdictions in Canada have legislation supporting midwives as vaccine providers, including the administration of COIVD-19 vaccines (Table 1). Legislation comprised of either existing legislation regarding the standards of care of midwifery in that community, whereas the legislation was not specific and therefore permits midwives to administer any given vaccine, self-governed Indigenous communities where the standard of midwifery includes all vaccines, or more specific temporary legislation by the territorial or provincial authorities authorizing midwives to administer COVID-19 vaccines. Examples of temporary orders include the provincial health order in British Columbia or the order under the regulated health professions act of Manitoba.

There was variation and different extents that the legislation facilitated the integration of midwives as COVID-19 vaccine providers. For example, in some jurisdictions, legislation allowed midwives to administer COVID 19 vaccines if delegated (Alberta and Ontario and certain Ontario Indigenous Midwifery practices). Midwives working in other contexts could administer COVID-19 vaccinations to their clients (Nova Scotia), or people within their scope of work (British Columbia). The majority of contexts allowed midwives to administer COVID-19 vaccines to all people requiring the vaccine (Manitoba, New Brunswick, Nunavik, Quebec, Nunavut, Northwest Territories, Saskatchewan, Eeyou Istchee communities, Newfoundland Labrador, and British Columbia)

While there was no legislation preventing midwives from providing vaccines, we found that the main barrier was the lack of understanding and application of relevant legislation. While the authority to administer a vaccine is widely permitted and supported by legislation, the midwifery pharmacopeia varies from one jurisdiction to another.[3] Midwife key informants cited numerous challenges related to the static nature of midwifery pharmacopeia, which prohibits midwives from responding to epidemics, pandemics, and individual client needs. Examples of the restrictive nature of the midwifery pharmacopeia specific to the Ontario health system included barriers to ordering hemoglobin electrophoresis or Zika testing among others.

Indigenous governed midwifery facilitated quick responses to healthcare crises, and most importantly addressed immediate community needs during the COVID-19 pandemic. We gathered examples in our key informant interviews of how Indigenous communities governed midwifery. Funding for midwifery is received directly from federal, and provincial and territorial governments to support care in communities. One example from our interviews was from the nine communities of the Cree Nation of Eeyou Istchee, which is serviced by the Cree Board of Health and Social Services of James Bay. Midwives were involved in the delivery of COVID-19 vaccinations, and uptake in the territory was very high at around 95%. A lot of intention and thought went into the roll out of vaccinations and making them accessible in communities (e.g., vaccination stations outside of grocery stores). The value and respect for elders was emphasized as a motivating factor for community members to receive the COVID-19 vaccines.

Table 1. Summary of midwives as vaccine providers by jurisdiction

													Indigenous health systems					
		AB	BC	MA	NB	NL	NS	NWT	ON	PEI	SK	YK*	QC	ON Ind mw	Six Nations	Eeyou Istchee	NU	Nunavik	Innu Land*
Governance of vaccinations	Vaccination to supports or clients not in standard care				✓											✓			
	Vaccines to clients	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	COVID-19 vaccine	✓	✓	✓	✓	✓	✓		✓		✓		✓	✓		✓			
	Medical directives or orders	✓		✓					✓					✓					
Midwives' provision of vaccinations	Vaccination to supports or clients not in standard care				✓														
	Vaccines to clients	✓	✓	✓	✓				✓	UN	✓		✓	✓	UN	✓	✓		
	COVID-19 vaccine clients		✓						✓	UN				✓		✓			
	COVID-19 vaccine to support people and family members		✓						✓					✓		✓			
	COVID-19 vaccine - mass clinics		✓	✓					✓	UN			✓	✓		✓	✓*		
	Arrangements with Public Health	✓		✓	✓	✓		✓	✓		✓					✓	✓	✓	
Remuneration for vaccinations	Employment funding model	✓		✓	✓	✓	✓	✓			✓						✓		
	Independent contractor		✓						✓				✓						
	Alternative or Indigenous-led funding arrangements								✓					✓	✓	✓		✓	✓
	Vaccination to support people or clients not in standard care				✓														
	Vaccines to clients	✓		✓	✓			✓			✓					✓	✓		
	COVID-19 vaccine clients															✓			
	COVID-19 vaccine to support people and family members															✓			
	COVID-19 vaccine - mass clinics		✓	✓					✓				✓						
Continuing education required for provision of COVID-19 vaccinations or other vaccines			✓	✓				✓									✓		

UN – unknown

* Currently no midwifery services in Innu Land and Yukon

Financial

Midwifery funding arrangements vary by jurisdiction in Canada and the majority of provinces and territories regulate and fund midwifery care through the publicly funded health insurance system but structure and scope of practices vary.[3, 4, 14, 16, 20, 23] With respect to administration of COVID-19 vaccinations, midwifery employment models (private, independent contractor, or salaried) are a key consideration as they impact whether there are financial arrangements in place for vaccination administration.

Childhood immunization is a cost-effective intervention to protect children and the wider community from vaccine-preventable illnesses[22] and is the responsibility of provincial and territorial health systems.[4] Uptake of vaccinations was somewhat dependent on whether a particular vaccine was free, which varied by province/territory, and by vaccine.[4, 22, 30] For example, in provinces which offered the pertussis vaccine free of charge there were higher rates of vaccination compared to provinces that charged fees.[30]

In the key informant interviews, we found that midwives that participated in mass vaccination campaigns were very well remunerated. In the numerous examples we heard, midwives participated as vaccinators during their off hours. Working in mass vaccination campaigns was described as a gratifying experience to help in serving their community, and financially rewarding because of the monetary incentives. Barriers to midwives participating in mass vaccination campaigns were issues with contract wording. We heard of wording challenges that a few jurisdictions had with contracting midwives trying to use contracts created specifically for nurses or physicians, instead of creating a version specific to midwives as health workers. Another barrier we heard was specific to the Quebec health system where midwives were able to move exclusively to COVID-19 vaccination administration, which created gaps in delivery of care with midwifery practices trying to cover the loss of workers.

Delivery of midwifery services

According to the literature, in jurisdictions where midwifery was more formalized and integrated into the health system, midwives had greater support for providing vaccination.[20] In order to support the role of midwives as vaccine providers in health systems in Canada it is critical that midwives are brought to the decision-making table to ensure appropriate integration.[3] Historically, midwives have been left out of policy decisions regarding primary healthcare, and more specifically midwives have been absent in vaccine research, delivery, or promotion in Canada.[23]

The demand for midwives already outpaces the availability without adding further pressure on midwives with extra duties or time commitments, such as administration of COVID-19 vaccinations.[14] Midwives and healthcare facilities have reported a lack of time[3, 31] and staff to provide vaccines.[17] There is a perception from midwives that 'more and more' things continue to be added to midwifery care without additional compensation or time.[3, 19] Time referring acquiring, storing and managing vaccine inventory coupled with longer appointment times, and additional time to complete immunisation records and provincially/territorially mandated reporting.[3]

In the key informant interviews, we found that during COVID-19 midwives were able to pivot more towards community-based services offered in midwifery practices, birthing centres, or clients' homes, which minimized exposure to hospital and other high-risk settings. The midwives we interviewed described administering COVID-19 vaccinations in a range of settings: mass campaigns, hospitals, home visits, fly-in communities, community (unhoused), birth centres, and in their clinic spaces.

Research has shown that offering more community based vaccination services can facilitate better vaccine uptake, as some clients sought midwifery care specifically to avoid hospital/clinical settings.[14] The research evidence also showed that clients were more likely to get an influenza vaccine if it was offered at their pregnancy care facility compared to elsewhere.[32] Midwives providing vaccines during routine appointments was found to be an effective strategy to increase vaccination uptake in pregnancy, by making the vaccine easily accessible and increasing convenience.[18] Providing vaccination in the antenatal setting was strongly associated increased uptake.[33] The continuity of care midwifery model was found in the literature to facilitate better immunisation conversations, due to the therapeutic relationship built, and the ability to continue conversations at subsequent appointments.[19]

Both the literature and key informant interviews identified several logistical and structural constraints to midwives providing vaccinations. COVID-19 saw a sudden and drastic increase in midwifery workload and higher demand for home births.[16] Time was consistently reported as being an issue,[4] with midwives not having enough time to conduct their regular appointments and engage clients in fulsome vaccination conversations and allowing time to answer client questions.[17, 19, 34] Lack of space and equipment, such as vaccine refrigerators were also a critical component.[17]

Key informants highlighted a number of barriers to the provision of COVID-19 vaccines. Reliable refrigeration was the main concern. Hurricane Fiona in 2022 was cited as an example where prolonged power outages impacted vaccination storage in Nova Scotia, raising the need for backup systems. Supply chain and vaccine acquisition was another commonly cited example raised by interviewees. Midwives spoke most frequently around challenges securing the Tdap vaccine (tetanus, diphtheria, and pertussis) for clients as opposed to COVID-19. We heard a range of logistical challenges that midwives experience from liaising with community pharmacies, ordering from hospital pharmacies, to physically driving to multiple locations to secure the vaccines, and then scheduling administration of the vaccine.

Misinformation was a significant barrier that emerged during the COVID-19 pandemic. Research has found that a quarter of study participants used web-based sources, and the spread of online misinformation and disinformation was an underlying determinant of COVID-19 vaccine hesitancy.[35] The internet is so widely used as a source of information for healthcare and is a continuing challenge for health professionals working to ensure they discuss how to find good quality information with their clients, and how to judge the quality of information and its sources.[19] The source of information can have a direct impact on peoples' perceptions of vaccines, as a study in Turkey found that a quarter of pregnant people using pregnancy forum websites had hesitant attitudes towards vaccinations.[21]

Social systems

Within social systems, midwife key informants discussed the ways in which there were times during lockdowns, which included health and social service shutdowns, that they were often the only health professionals providing supports to their clients. Prolonged periods of government mandated isolation during the pandemic meant that midwives were often left filling gaps in health supports, particularly mental health, for their clients.

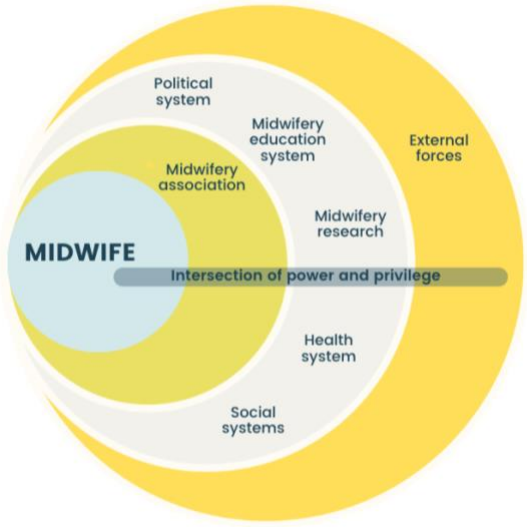
We also learned in key informant interviews of the ways that midwives are often the connection between health and social services for their clients. Midwives often act as a bridge between health and social systems acting as crucial navigators for clients. Examples collected from key informants included system navigation services for newcomers, uninsured people, arranging translation services for pregnancy-related information and education, and arranging housing supports. One example from a key

informant practicing is Toronto was with respect to the first COVID-19 positive case in a pregnant person, who had an additional consideration because they were unhoused. The midwife was instrumental in coordinating care for their client with the clinic, hospital, Toronto Public Health, and the City of Toronto's Shelter, Support and Housing Administration to arrange shelter and isolation protocols post-delivery.

Even during global crises, such as the COVID-19 pandemic, clients still have health and sociocultural needs. A report by the First Nations Health Authority and Perinatal Services British Columbia on cultural safety during COVID-19 identified specific resources for connecting Indigenous patients to culturally appropriate resources, such as online smudging ceremonies, ceremony during social distancing, and Indigenous doulas.[14] Engaging local community leaders to help with vaccine education, promotion, and clinics was found to increase the credibility of the vaccination programs. [15] Examples such as aunties, elders, teachers, religious leaders, community organizers, and other volunteers supports community members feel both culturally and physically safe with choosing to vaccinate.[15]

External forces

External forces are shocks outside the issue of focus that can have an unexpected impact and lead to significant disruptions. Economic recessions, severe weather events, or war can all impact health service delivery in systems. The COVID-19 pandemic is one example of an external force, and highlights that our learnings from this evidence synthesis can be applied to enable midwives to not only respond to this pandemic, but also be prepared for future health crises.



We also recognize that there was a combination of many external forces during COVID-19 resulting in individual and collective trauma including but not limited to:

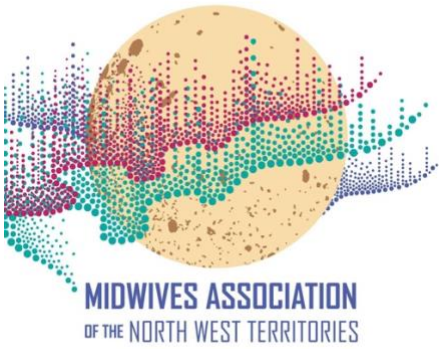
- discoveries of more than 2,000 unmarked graves at former residential schools;
- Black Lives Matter movement in response to historical and continued violence towards Black communities;
- anti-Asian acts of racism and violence;
- Tigray war and Russia's war in Ukraine; and
- geopolitical instability.

MOST SIGNIFICANT CHANGE

For the first time, CAM has delivered microgrants to midwifery practices, as well as midwifery associations across Canada. This is a new mechanism to CAM, which the project has enabled through objective 2 (supporting community-based COVID-19 education, promotion, and outreach); and objective 3 (building capacity for evidence-based vaccination communication by supporting midwifery associations in Canada).

As the final step in this project, we used the Most Significant Change approach to share stories specific to midwifery associations that were recipients of the microgrants (Objective 3) to better learn how they have supported association-led evidence-based vaccination communication strategies in their respective health systems. The Most Significant Change approach focuses on collecting and sharing stories of change and highlighting their significance.[36]

We focus on midwifery associations because our previous research has shown that they are key enablers to strengthening the profession of midwifery in health systems.[25] Building strong midwifery associations has been shown to be central to furthering the status of midwifery, improving gender equity, and improving maternal and newborn health outcomes.[25] Supporting midwifery associations to through microgrant investments towards evidence-based COVID-19 communications strategies helps associations to play a leadership role in the federal government's response to the pandemic. Below we highlight the main impacts of the microgrants as reported by the four midwifery association recipients.

	Microgrant impacts
	• Prior to the microgrant the association did not have a formal website and relied on social media (Facebook and Instagram) as their primary communications tool • The organizational website is directed at four main audiences: 1) association members; 2) public (including but not limited to new immigrants, IBPOC, 2SLGBTQI+ spectrum; differently abled, and francophone); 3) health professionals and 4) health system decisionmakers • The website supports sharing of evidence-based information and makes COVID-19 recommendations more accessible ○ To inform the building of the website, the association conducted a survey to gather specific feedback from the community to understand the reasons why individuals have no completed a four-dose series • The impacts of the new association's website extend beyond the territory itself and is a beneficial resource to other communities in the North including Nunavut and Yukon more broadly
Prince Edward Island Midwives Association	• Midwifery services are currently being developed and implemented in PEI • Registered Midwives in PEI can administer vaccines to their clients in the context of midwifery care • The microgrant has been used towards developing a website for the association, as well as organizational branding, which provides expanded communications capacities with midwifery clients, pregnant populations and new parents, general public, government agencies, and the midwifery profession • Anticipated impacts include enhanced knowledge of the role, responsibilities and scope of Registered Midwives in PEI including information on midwives as vaccine providers and promoters

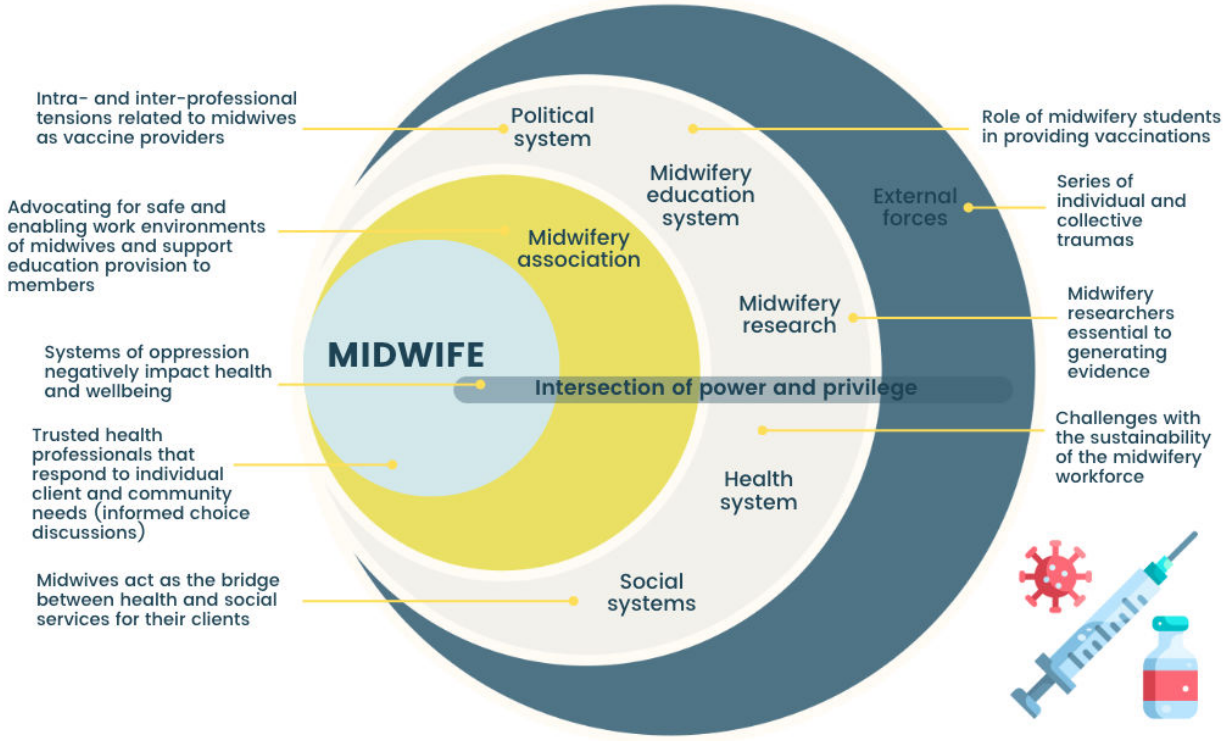
	**Microgrant impacts** • As part of the microgrant, the association has created a resource on their website specific to evidence, public health recommendations, and tools regarding informed choice on vaccination for pregnant people • This is in response to feedback to the Board from midwives during the association's annual general meeting in September 2022 ○ Midwives told the Board that they needed more supports to have evidence-based discussions with their clients, particularly around COVID-19 • The newly developed resources are targeted to the general public and midwife members of the association across Quebec to enable respectful evidence-based discussions regarding immunizations in pregnancy, supporting midwives in their role as frontline essential health professionals

	• The microgrant supported the production of social media collateral aimed at three main groups: 1) midwives; 2) midwifery clients; and 3) government through midwife, client, and stakeholder involvement
	• While the association has produced a wide range of evidence-based resources for midwives to support their understanding of COVID-19 public health measures, is has not had the capacity to create more engaging social media-based tools to engage midwives and clients in advocacy towards addressing regulatory barriers, or to develop a wider range of content to better reach specific communities that face lower than average rates of COVID-19 vaccine uptake
	• As part of the micro grant project activities, the association has:
	  ○ assessed existing literature and AOM resources addressing the benefits of COVID-19 vaccinations for midwifery clients with a gender-based analysis plus lens to create a social media strategy on how to direct communications to new immigrant, Indigenous, 2SLGBTQI+ spectrum, and racialized communities;
	  ○ developed key messages for government with strong health equity arguments to remove barriers to midwives to provide a wider range of vaccinations;
	  ○ developed social media shareables and purchased social media boosts to share tools to midwives and midwifery stakeholders; and
	  ○ evaluated results of both campaigns (education and advocacy) and make recommendations for future activities led by the Association of Ontario Midwives

CONCLUSIONS

Midwives are essential frontline health professionals. The midwifery profession is well suited to support vaccination practices among pregnant people, especially in populations who may be vaccine hesitant, as midwives provide informed choice discussions and have built trusting relationships with their clients and in the community more broadly. In order to support the role of midwives as vaccine providers in health systems in Canada, it is critical that midwives are brought to the decision-making table to ensure appropriate integration.[3] Historically, midwives have been left out of policy decisions regarding primary healthcare, and more specifically midwives have been absent in vaccine research, delivery, or promotion in Canada.[23] Key considerations for the integration of midwives as vaccine providers are outlined in our concluding figure below (Figure 5).

Figure 5. Considerations for the integration of midwives as vaccine providers in health systems in Canada



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Appendix A

	Alberta	British Columbia	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia	Northwest Territories	Ontario	Prince Edward Island	Saskatchewan	Yukon	Quebec	Nunavut Inuit Tapiriit Kanatami	Ontario Indigenous midwifery programs	Nunavik (Quebec)	Nunavut	Nunavik	Labrador (Inuit)
Midwifery governance: vaccinations	Outside pregnancy: no Pregnancy, postpartum, neonatal: prescribe and administer MMR and Hep B	Outside pregnancy: no Pregnancy, postpartum, neonatal: prescribe and administer vaccinations	Pregnancy, postpartum, neonatal: Hep B, influenza, MMR, BCG	Prescribing vaccines outside of pregnancy, postpartum, or the neonatal period (up to one year only)* According to registrar includes support people or partners	Clients: Diphtheria, tetanus toxoids, and acellular pertussis vaccination: Tdap, influenza, MMR, Hep B, BCG, varicella, and acellular pertussis vaccination	Regulation: can provide vaccinations in pregnancy (clients)	Prescribing vaccines outside of pregnancy, postpartum, or the neonatal period (up to one year only)*	Prescribing and administering for clients only: MMR and Hep B	Administering a vaccine prescribed by the Chief Public Health Officer	Can administer vaccines but can't prescribe them, and as such need a standing order	Outside pregnancy: no Pregnancy, postpartum, neonatal: prescribe and administer vaccinations	Prescribe and administer any immunising agents in pregnancy	Exemption clause for aboriginal midwives or if registered see above Governed by community implementing midwifery services Current mandates exist by the Chiefs in Assembly, via Resolution 19/16: Support for First Nations Midwifery in Ontario, and through AFN Resolution 21-2019: Support for a Greater Investment into the Reclamation of Childbirth	Clients and non clients Cree Board of Health and Social Services of James Bay permits midwives to prescribe and administer any vaccine	Vaccines for women of reproductive age and infants	College of Quebec midwives: Prescribe and administer any immunising agents in pregnancy Nunavik community also governs what vaccines are appropriate for midwives to provide	Innu midwifery will be governed by Innu Round Table Secretariat, Innu Health Directors, the Regional Health Board with the Chief midwife of Newfoundland and Labrador
Governance: COVID-19 vaccinations	Can be delegated to provide	Order of the Public Health Officer: Midwives, retired midwives and midwifery students practicing or temporary emergency registration may administer the COVID-19 vaccine to any person who falls within their scope of practice (i.e., pregnant or postpartum) and outside of their regular scope of practice (i.e. non-pregnant) if they meet the conditions set out in the Provincial Health Order	June 2021 and 2023 Order under The Regulated Health Professions Act (vaccine administration): midwives can administer employed or engaged by a regional health authority, Shared Health Inc. or a pandemic response service provider AND successfully completed a COVID-19 vaccine administration training program approved by the Department of Health and Seniors Care	According to "Schedules for Ordering" Midwives can prescribing vaccines outside of pregnancy, postpartum, or the neonatal period (up to one year only)* This included COVID-19 and influenza	Could provide vaccine	Can provide vaccine	registrants were authorized to provide the COVID-19 vaccine to all people	Administer in designated facility (Controlled Acts Regulation (O. Reg. 107/96) In all other situations, a midwife may only administer the COVID-19 vaccine under delegation for a client that is not in the midwifery scope of practice, or on the order of a health care provider authorized to administer it (e.g., nurse or physician)	none found	Registrants were authorized under Minister of Health's order to provide the COVID-19 vaccine to anyone in their jurisdiction	none found	Ministère de la Santé et des Services sociaux (MSSS) order authorizing midwifery students and midwives to vaccinate against COVID-19 and influenza Midwives and students can be hired by an institution, outside of their internship, to participate in mass vaccination clinics	Up to community	Yes	Registrar did not permit COVID-19	Ministère de la Santé et des Services sociaux (MSSS) order authorizing midwifery students and midwives to vaccinate against COVID-19 and influenza Midwives and students can be hired by an institution, outside of their internship, to participate in mass vaccination clinics	n/a
Governance: COVID-19 -other	none found	none found	Standing orders or medical directives	none found	none found	none found	none found	Standing orders or medical directives	none found	Standing orders or medical directives	none found	none found	Standing orders or medical directives	none found	Yes	none found	n/a
COVID-19 Education requirements	none found	Must complete training listed by the Public Health Officer to provide COVID 19 outside of pregnancy	COVID-19 vaccine administration training program approved by the Department of Health and Seniors Care	none found	none found	Yes in order to provide COVID-19 vaccinations	Mandatory Immunization Competency Education Program	none found	none found	none found	none found	none found	none found	none found	Mandatory Immunization Competency Education Program	none found	none found
Integration of vaccines in midwifery services	Generally not integrated Vaccines provided by public health	Yes Dependent on clinic Or work closely with public health programs	Some clinics provide vaccines with infrastructure (fridges) Some clinics work in close proximation with public health (rural communities)	All vaccines recommended in pregnancy and postpartum provided in clinic including influenza Storage facilities for vaccines present	Organizes vaccination care with public health (in close proximity)	No integration due to lack of proper storage	No integration of vaccines due to barriers to paying continuing education and integrating the infrastructures needed	Integration varies between clinics. Common with clinics within community health center models of care	none found	Yes Dependent on clinic Or work closely with public health programs in rural communities	none found	Yes. Dependent on birth centre and if centre can 1. create a position for midwife to provide vaccines during working hours 2. if the centre can incorporate the infrastructure for storage.	none found	Yes: Midwives provide all vaccines if necessary to clients and supports	Yes: Midwives provide vaccines to clients and work closely with public health	Midwives will provide routine vaccines to clients	n/a
Integration of COVID-19 in midwifery services	not integrated	Yes midwives did participate in vaccine efforts	Participated in mass clinics of vaccine	Did not provide in clinic, due to added storage requirements of vaccine	Volunteered to provide vaccines, but were not needed in the end. Provided by public health nurses.	No integration	No integration	Participate in mass clinics Provided vaccines for their clients	none found	none found	none found	Yes. Midwives were hired by the government to provide vaccinations in designated clinics. This would be at the detriment to their midwifery practice.	Yes: Mass clinics with other Indigenous organizations Home visits to provide vaccines to clients and supports	Yes: Midwives provided vaccines to all in community	Midwives provided ancillary support to the mass clinics, yet did not administer vaccines	Did not provide	n/a
Funding model	Publicly funded as independent contractors	Publicly funded as independent contractors	Publicly funded employee model	Publicly funded employee model	Publicly funded employee model	Publicly funded employee model	Publicly funded employee model	Publicly funded as independent contractors	Publicly funded employee model	Publicly funded employee model	Publicly funded employee model	Publicly funded as independent contractors		Publicly funded: employed by Cree Board of Health and Social Services of James Bay	Publicly funded: employee model	Publicly funded: employees of health board	Publicly funded: employees of health board
Remuneration and vaccines	Within standard scope of care	Within standard scope of care	Part of hourly wages	Part of hourly wages	Part of hourly wages	n/a	n/a	Remuneration varied based on administrative procedures	n/a	Part of hourly wages	n/a	Not remunerated, unless midwive is hired with vaccines as part of their role.		Included in hourly wages	Included in hourly wages	Included in hourly wages	Included in hourly wages
Remuneration and COVID - 19 vaccines	n/a	Some health authorities that lacked proper contracting for midwives. Health authorities with contracting remunerated midwives	For mass clinics: needs confirmation	n/a	Part of hourly wages	n/a	n/a	Inconsistent and dependent on local arrangement. Some midwives were remunerated, others were not.	n/a	n/a	n/a	Yes. Paid by the Ministry the equivalent of their pay scale.		Included in hourly wages	n/a	n/a	n/a
Role of midwifery association	Navigated a strong anti-vaccination sentiment within the profession with some members and then in general population Became a ressource hub for midwives re. COVID-19 information Highlighted positive work midwifery students and midwives were undertaking during COVID-19 including how midwives supported other sectors in the health system	Created temporary membership categories for midwives: temporary limited scope *no intrapartum, and temporary emergency which could include non BC resident midwives Consolidated information re. COVID-19 for members Provided story/narratives of midwives' experiences during COVID Provided advocacy and representation for midwives to receive adequate compensation for non clinical work	Membership with association is not mandatory which makes it challenging for the association to advocate for the needs of all midwives versus members only Resource hub for members		Resource hub for members	Resource hub for members and public.		Resource hub for members and public Daily bulletins with updates Advocacy for visibility of midwives during the pandemic as essential frontline health workers Collected data to inform the public and membership of how midwifery practice adapted during pandemic including influxes in homebirth rate					Joint statement for reproductive justice approach during COVID-19 pandemic Advocacy for midwives as frontline health workers Support and advocacy for Indigenous midwives traditional approaches and medicine Resource hub for Indigenous midwives	Joint statement for reproductive justice approach during COVID-19 pandemic Advocacy for midwives as frontline health workers Support and advocacy for Indigenous midwives traditional approaches and medicine Ressources hub for Indigenous midwives	Joint statement for reproductive justice approach during COVID-19 pandemic Advocacy for midwives as frontline health workers Support and advocacy for Indigenous midwives traditional approaches and medicine Resource hub for Indigenous midwives	Joint statement for reproductive justice approach during COVID-19 pandemic Advocacy for midwives as frontline health workers Support and advocacy for Indigenous midwives traditional approaches and medicine Resource hub for Indigenous midwives	Joint statement for reproductive justice approach during COVID-19 pandemic Advocacy for midwives as frontline health workers Support and advocacy for Indigenous midwives traditional approaches and medicine Resource hub for Indigenous midwives
Barriers	Misinformation and strong anti-vaccinations sentiment difficult to navigate for midwives Midwifery is low priority on Ministry of Health agenda Intra-professional tensions: midwives who did not vaccinate still practiced in community Increased burden on midwives in hospital when care was transfered	For COVID-19: inconsistent or non-inclusive administrative procedures for midwives in health authorities and for system wide level planning Not recognized as essential workers Remuneration lacking due to model of care: increased workload Clients lacking consistent information /misinformation Generally: lack of storage and cold chain challenges for stand along clinics	No political will to open up this legislation and change the wording so that it is generalized to vaccines and not limited to just actual vaccines As vaccines change and get added over time - and this cannot be predicted Midwives could not provide COVID-19 vaccines to clients due to logistical barriers	Small number of midwives in province Legislation for pregnant people and clients limits how midwives can support the health system	Pilot project in Gander, which has provincial funding is the only midwifery practice currently in the province Increased access to vaccines are most needed in rural areas and indigenous - or uptake, and midwives are currently not located there The birth services are only urban at this point, and even for for physician led birth - women travel far to give birth	Homebirth restrictions during pandemic Lack of infrastructure to provide vaccinations to clients	Limited access to primary care and people dependent on emergency departments and hospitals to provide vaccines Drug addiction and syphilis outbreak is the biggest concern Continuing education program is expensive Racism: non-Indigenous people choose not to vaccinate and are accepted whereas Indigenous parents who don't are referred to social services and midwives advocated for their clients in this case	COVID and vaccines outside of scope requires medical directives Infrastructure for storing vaccines Remuneration lacking due to model of care: increased workload Adequate training Not able to provide vaccines to family and partners Current laboratory and pharmacological legislation is limited and racist (i.e., does not consider the standard test and screening for specific groups of people (i.e., hemoglobinopathies) and is limited in terms of who and what can be prescribed and				Midwives were divided between providing routine care, providing vaccines, and then those that could not work due to illness or for choosing not to be vaccinated Midwives providing routine care had a significantly increased case load and were dangerously overworked		High mistrust of health system due to continued racist treatment, policies and forced treatments Communications regarding vaccines should acknowlege this	Midwifery in Nunavut is now mostly conducted by southern or non-Inuit midwives The only two Inuit midwives were forced to leave their work after years of mistreatment, racism and a lack of support from their government Inuit midwives were asked to temporarily fill in leadership roles without compensation or recognition and then denied the opportunity to fill the leadership position officially This position was given to a southern/non Inuit midwife Women now do not have access to care in their language nor respecting the Inuit cultures of birthing, pregnancy and postpartum	Primary care system is burdened Mistrust in the health system, due to colonialism and forced sterilization Large numbers of midwife locums from the South, who are usually not Inuit, nor speak the language Inuit midwives are either busy or burnt out and no longer practicing	
Facilitators	Working closely with or within close distance to public health clinics allows for continuity of care re: vaccines			Flexibility with employee model and access to infrastructure to provide vaccines in clinics and to families and support people	Seamless relationship between public health and midwifery services							Midwives were recognized as essential health workers and included in Ministry policies which facilitated their role in vaccinations Increased interest in birthing at home or birthing centre, midwives also adapted their birthing centres to provide an increase in laboratory tests to accomodate clients		Organizers used 'for Indigenous by Indigenous' approach for the mass vaccination clinic to make people feel comfortable and to lower barriers to COVID-19 vaccines	Community governed services. Midwives are recognized as essentia to the wellness of the community Clinics funding structure permit midwives to provide other services in clinic such as GDM screening and vaccines. The scope of midwives is really led by the midwives in community to an extent High vaccine rates due to community beliefs of supporting and prioritizing Elders		The role of midwives and vaccines in Indigenous/Inuit communities can be dependent on elders and their views of the role of the Inuit midwife	Reintroduction of traditional midwifery to Sheshatshiu and Natuashish, drawing on Innu Elders' knowledge of Innu birthing practices