AOTEAROA NEW ZEALAND RESEARCH

Women's knowledge, attitudes and access to vaccines in pregnancy: A South Auckland study

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ABSTRACT

Background: In Aotearoa New Zealand pertussis and influenza vaccinations are available free-of-charge during pregnancy, although uptake varies between District Health Board areas.

Aims: This study was designed to assess the knowledge of, attitudes towards, and infrastructural access to, these vaccines for birthing people in an area of Auckland (Counties Manukau) where uptake has been low.

Methods: A mixed methods research design was used involving interviews (n = 7), two focus groups (n = 9) and a paper-based survey (n = 121). Interviews and focus groups were semi-structured and analysed using thematic analysis. The survey comprised of a 20-item Likert scale.

Findings: Participants displayed support for maternal vaccinations. Concerns remain regarding potential adverse effects. Awareness of the existence of vaccines in pregnancy is not universal, and 36% of survey participants were unaware that the vaccines are free-of-charge. Appreciation was expressed for trusted healthcare relationships within which people feel supported to make decisions about maternal vaccination, and for immunisation services that are easily accessible.

Conclusion: The research contributes to growing evidence on the significance of health professionals providing information about immunisation in pregnancy. Also highlighted is the importance of: culturally safe knowledge sharing; information being tailored to meet individual needs; and continuity of health and maternity care to facilitate that.

Keywords: Vaccinations, pregnancy, pertussis and influenza, health literacy, Aotearoa New Zealand

BACKGROUND

Over the winter of 2022 there was a surge in influenza cases in Aotearoa New Zealand (Aotearoa NZ). At the end of June 2022 there were reported to be around three times more people being admitted to Middlemore Hospital in South Auckland with influenza than with COVID-19 (Quinn, 2022). There was a specific increase in cases amongst children under the age of five (G. Jackson, personal communication, December 8, 2022). Since 2010, pregnant people have been eligible for fully funded vaccination against influenza. When administered in early pregnancy the vaccination confers immunity to the pregnant person, as well as to the newborn baby. Yet there is considerable variation in antenatal vaccine uptake rates across geographical areas and demographic groups (Howe et al., 2020). Within the Auckland metropolis (and prior to the disestablishment of the District Health Boards [DHBs]), antenatal influenza vaccination rates were lowest in the Counties Manukau Health (CMH) area in South Auckland (Waitematā DHB, 2022a). Maternal pertussis immunisation is also available during pregnancy and is administered with tetanus and diphtheria coverage in the form of the Boostrix (Tdap – GSK) vaccine. Across the Auckland DHBs, antenatal pertussis vaccine rates have again been lowest within the CMH area (Pillay, 2019; Waitematā DHB, 2022a). This research study was designed to identify factors which support, and those which impede, uptake of these antenatal vaccinations in the CMH area, with a view to improving access to the vaccines.

In 2013, 11.2% of the pregnant population in Aotearoa NZ received the flu vaccine and by 2018 this figure had risen to 30.8% (Howe et al., 2020). Uptake of the pertussis vaccine amongst pregnant people rose from 10.2% to 43.6% in the same time period (Howe et al., 2020). Coverage is highest amongst socio-economically advantaged groups and those of older childbearing age (Howe et al., 2020). Associations between social deprivation and vaccine uptake are likely to impact particularly widely upon the South Auckland population, as over 35% of people in the area live in localities of high deprivation in socio-economic terms:

deciles 9 and 10 of the NZDep2018 Index (Jackson, 2021). The area is culturally rich and diverse. Sixteen percent of the population are Māori, 22% Pasifika, 29% Asian and 33% European/other (Jackson, 2021). Research indicates that Māori and Pasifika encounter more barriers to vaccination in pregnancy – including not being informed of the immunisations by their Lead Maternity Carer – than do Pākehā (New Zealand European; Duckworth, 2015). Given intersections of inequity, there is a strong social justice argument for the development of strategies which seek to actively facilitate equitable access to antenatal vaccines in South Auckland.

For disparities regarding vaccination in pregnancy to be addressed, research demonstrates the need for interventions to take into account the specific needs of the community being served (Kiefer et al., 2022). In Aotearoa NZ, strategies to achieve health equity are also uniquely shaped by Te Tiriti o Waitangi, therefore involving affirmation of tino rangatiratanga (self-determination) and commitment to ōritetanga (equity; Came et al., 2019, 2020). One of the overarching recommendations of the 2019 Hauora (Health) report of the Waitangi Tribunal is that "The Crown commit itself and the health sector to achieve equitable health outcomes for Māori" (Waitangi Tribunal, 2019, p. xv).

Evidence continues to accumulate to support the overall safety, as well as efficacy and effectiveness, of pregnancy flu immunisation (Naleway et al., 2014; Regan & Munoz, 2021). This is important because maternal infection over the perinatal period can lead to severe neonatal illness (Alexander-Miller, 2020) and stillbirth (Wang et al., 2021). In 2009 women in Australia and Aotearoa NZ were seven times more likely to be admitted to Intensive Care with H1N1 influenza if they were pregnant or postpartum, than were other women of childbearing age (The ANZIC Influenza Investigators and Australasian Maternity Outcomes Surveillance System, 2010). Maternal antenatal pertussis vaccination is associated with lower rates of pertussis infection in infants under 8 weeks old (Dabrera et al., 2015). Of the notified cases of pertussis in infants under 20 weeks of age in Auckland between April 2015 and March 2016, over 83% did not have mothers who were vaccinated against the disease in pregnancy (Reynolds et al., 2017). The risk of serious infection from the disease is particularly high for children under the age of 12 months (The Immunisation Advisory Centre, 2020).

Beyond macro-level social determinants, various factors have been shown to impact upon people's decision-making around vaccines. A person's individual pre-pregnancy vaccination behaviour is known to influence whether they decide to be immunised in pregnancy (Kilich et al., 2020). Belief that a particular vaccine is effective and makes a positive difference to health, tends to encourage uptake (Kilich et al., 2020). Perceptions that healthy lifestyles render vaccination unnecessary and that vaccines are ineffective, are amongst the rationales that people give for declining immunisation (Andre et al., 2019; Kilich et al., 2020). Fear of the risk posed by a particular disease can contribute towards vaccine uptake, whilst not necessarily ensuring uptake (Kilich et al., 2020; Young et al., 2022). Fear of the effects of a disease coupled with fear of adverse reactions or side effects of vaccination, can contribute toward indecision. In such situations the default effect may be no vaccination (Kilich et al., 2020; Meharry et al., 2013). Healthcare providers are also known to play a pivotal role in facilitating access to vaccination in pregnancy. In an Aotearoa NZ survey, the most common reason people gave for not having the flu vaccine in pregnancy was that they had not received information on the vaccination (Andre et al., 2019). According to a recent systematic review and meta-analysis of research on factors influencing pregnant women's vaccine decisions, the likelihood of maternal influenza or pertussis vaccination in pregnancy is 10-12 times higher amongst pregnant women who were recommended the vaccination by a healthcare professional than amongst those who were not (Kilich et al., 2020). Organisational processes are also important. An audit of pregnancy immunisation practices in two areas of Aotearoa NZ demonstrated higher pertussis vaccination rates in the locality where the work of different healthcare providers was effectively integrated to bring "vaccination to the community", rather than requiring women to go "to the vaccine" (Deverall et al., 2018, p. 45). Recent research on access to early maternity care also acknowledges the convenience of people being able see multiple practitioners – such as a general practitioner (GP) and a midwife – at the same clinic visit (Priday et al., 2021).

METHODOLOGY

In this research a mixed methods approach was adopted, including individual interviews, focus groups and a paper-based survey. Research participants resided in the CMH catchment area and were either pregnant at the time of data collection or had given birth to a live baby within the previous 12 months. The research started with a paper survey deployment in November 2019 and concluded with individual interviews which ended in June 2020. All participants were conversant in English and over 18 years of age. Participation in the research was entirely voluntary and the study received ethical approval from Auckland University of Technology Ethics Committee (AUTEC: reference 19/334).

Recruitment for the individual interviews and focus groups was supported by local midwives and GP practices who circulated and/or displayed information about the research project. The focus groups enabled a larger number of women to participate in the research than would have otherwise been the case and provided an environment in which participants could talk together about their experiences and viewpoints in a more collective manner. Including these group-based discussions within the research design provided space for childbearing people who might not feel comfortable participating in one-to-one interviews or completing a survey, to have their voices heard. The focus groups were organised and convened by Māori research team members who know and/or work in the CMH area. Both the focus groups and the individual interviews were conducted on a semi-structured basis and covered the same broad subject areas: participants' knowledge of, perspectives on, and access to, pregnancy vaccinations. Seven individual interviews and two focus groups (one with four participants and the other five) were carried out. Participation was voluntary, and this was emphasised in both the participant information sheet and the participation consent form. The privacy and confidentiality of participants were protected through a range of mechanisms, including exclusion from the write-up of participants' names and other identifying features. Qualitative data were analysed using thematic analysis as inspired by the work of Braun and Clarke (2006). Transcripts were read by two research team members and emergent codes assigned and themes identified. Another member of the team read the transcripts to assess the accuracy of the codes assigned. A fourth researcher was involved in analysing patterns within and across the data, and in identifying broader themes. Throughout the process there was ongoing discussion between team members, and at different stages transcripts were revisited to assess the accuracy of the emergent analysis.

The survey design was inspired by that of the SHOTS survey, which is a research tool developed in the United States by Niederhauser (2010), aimed at measuring the barriers parents experience with respect to the vaccination of their children. SHOTS has been

shown to have good reliability and validity (Baker et al., 2010; Niederhauser, 2010; Niederhauser & Ferris, 2016), yet could not be used in this study due to its focus upon childhood vaccination and its dependence upon US terminology. The survey developed for this study was specifically designed for the Aotearoa NZ maternity care context and was exclusively concerned with vaccination in pregnancy. It took the form of a self-completion questionnaire comprising a 20-item, 4-point Likert scale. Respondents were presented with a list of statements describing potential barriers to vaccination – e.g., "I did not know where to get my pregnancy immunisations done" – and were asked to indicate the extent to which they agreed or disagreed with these statements on a scale of 1 *(disagree strongly)* to 4 *(agree strongly)*. The lower the score a participant gave for a specific item, the less operative that barrier was deemed to be for them.

The survey was distributed at childbirth education classes along with information about the questionnaire, including a clear statement that participation in the survey was voluntary. Information which might enable participants to be identified – such as name or demographic details – was not collected. In total 122 pregnant people completed the survey. Survey results were entered from paper form into IBM SPSS Statistics 28 (Version 1.0) software and cleaned to ensure data were characteristic, correct and sensical. This process removed one participant's survey results, yielding 121 surveys for analysis. Where there were missing or neutral data (2 numbers answered across agree and disagree choices) the missing data were replaced with the item mean as per Niederhauser (2010).

FINDINGS

Interviews and focus groups

Research participants identified with a range of ethnic groups. In terms of "prioritised ethnicity" classification, participants' ethnic groups included Māori, Samoan, Tongan, Pasifika and Indian. Not all participants offered information on their ethnic identity.

Given the controversial nature of vaccination decisions, interview and focus group questions were focused on the feelings and knowledge that participants had around pregnancy vaccinations, rather than upon whether they had actually been vaccinated whilst pregnant. Over the course of the discussions many participants nonetheless shared information of that kind. The majority spoke of having had at least one vaccine whilst pregnant. Some indicated that they had not been immunised in pregnancy for both flu and pertussis. One spoke of actively declining vaccines in pregnancy.

Attitudes and perspectives on vaccination in pregnancy

Participants in both the individual interviews and the focus groups expressed a range of views and perspectives on vaccination in pregnancy, and many were supportive of vaccination. A prevailing theme, not least in the accounts of those who had been immunised in pregnancy, was that of protection. Vaccination was frequently described as a mechanism of protection for their babies (both before and after birth) and themselves. Statements such as *That's to protect you and the baby* or *It's kind of protection for both you and your baby* were typical. In addition to using the language of protection, research participants spoke of maternal vaccines in terms of risk and the minimisation of disease. Such emphasis overlapped with, but was also subtly different from, that of protection as the focus was upon illness and the potential negative effects of illness rather than upon protection per se. This was exemplified in the words of a participant who spoke of being aware of people who had *made their babies sick with whooping cough and of being terrified* of doing the same (I6).

Desire to protect a baby and to prevent disease did not entirely guard against fear of vaccination. Participants' concerns regarding vaccination included fear of needles and of serious adverse reactions. Some considered vaccination *a have to, a must* or *a priority*, yet even amongst those for whom vaccination was highly normalised, perspectives were not entirely linear and straight forward. There were examples of scepticism towards a particular vaccine (rather than vaccination in general) and of anxiety specifically around vaccination whilst gestating. Occasional references were made to cultural, spiritual and/or family beliefs that pregnancy is not an appropriate time for vaccination. People who self-identified with the same ethnic group did not necessarily share the same views on vaccinations.

Knowledge of vaccination in pregnancy

Various interviewees spoke of being unaware, until they themselves were pregnant, that vaccinations are available in pregnancy. Some thought that only one vaccination (pertussis or influenza) was offered, and not all were aware that the pertussis vaccine also provides coverage for diphtheria and tetanus. It was through health professionals (especially midwives, GPs and practice nurses) that many had first learned about pregnancy vaccines. They spoke of such information being given to them verbally as well as through official pamphlets and documentation. Views regarding the quality of that information varied. At one end of the spectrum health professionals were described as providing effective explanations of what pregnancy vaccines are and how they work. At the other end of the spectrum they were depicting as simply saying: *you have to get your flu vaccination, you have to get your whooping cough vaccination* (FG2). Although research participants were conversant in English, the word "vaccination" was not necessarily familiar to them. At least one interviewee understood the word "immunisation" in lieu of "vaccination" and indicated that they did not necessarily understand when midwives used scientific terminology. Learning how vaccines work was a relevant step in supporting some people in their uptake of vaccinations. In this regard, the specific ways in which health workers shared information were important. On the basis of their own experience, one participant – who felt that information delivery by health workers could be improved – surmised that: *If you're not really health literate or confident to look up this information yourself, then, I guess that's where the gaps are* (FG2).

A number of research participants spoke of embarking upon their own research to learn about maternal vaccinations, not least when they felt they had received insufficient information from a health professional. The process of doing such research tended to involve seeking information and stories from a range of sources, including TV, documentaries, books, friends and family. The internet was commonly referred to, although participants often expressed concern and caution about online sources. Some spoke of encountering views on the internet that made them feel anxious, angry and/or contributed confusion to their decision-making. They spoke of turning to health and maternity carers for clarification on particular points. Those health professionals with whom participants already had a trusting relationship were considered especially important in supporting their decision-making and in helping them work through associated anxieties:

> *I think it did help a lot with me really knowing my midwife and having a lot of trust in her to go get it, yes, and being comfortable with the doctors and my doctors because we've been there for years… so they know me, and I'm guessing, I guess I trusted that if it was bad for them they wouldn't give it to me. Yes.* (I7)

> *Anything she* [the midwife] *recommended, especially um with the, you know with the benefits of ah health wise, to keep baby safe, I just went, went for it. As long as I trusted her …. Even with this pregnancy my midwife has been really good and whatever she's recommended I've just gone with it. Because I trust that she, she's looking after me.* (FG1)

> *… my family doctor has been my family doctor for… how old am I? 32. Seventeen years so. I trust his opinion greatly. And yeah I guess I base my decisions on a lot of things but definitely what I'm told by my medical people that I deal with … I would trust that they will give me correct information.* (I6)

Suggestions for improvement, with regards to the sharing of information, included the development of day-long workshops or education days where parents could gather together, talk and learn collectively: *for me I like that personal kind of way of learning* (FG2). It was also suggested that information could sometimes be shared *in a more culturally appropriate or in a cultural way* (FG2), and that the organisation of wānanga (seminars) would be one way to achieve that. In the words of a wahine (woman) Māori participant, getting…*Māori together to do a wānanga on the same day at the same time … that would be something that I know a lot of Māori would be open to. Being in an environment where they could ask questions …* (FG2). The same participant added: *Maybe that would be a little better across the board for all different cultural groups.* Another member of the focus group developed the discussion further, indicating the benefit of collective environments where people would not feel judged for their contributions and questions:

> *Like and even if there is that option of putting, not putting, wrong word* [sic], *and where people from specific cultures could gather to discuss the issues: it would allow mums to be more comfortable yeah that common ground, cultural wise and "Oh yeah she's going through what I'm going through …"* (FG2).

The idea of making a video or audio-visual aid depicting mothers' and parents' experiences of, and rationale for, up-taking pregnancy immunisation was also put forward. So too was the possibility of having attractive information posters in waiting rooms.

Infrastructural access to pregnancy vaccinations

Few participants mentioned having difficulties, once they were aware of the immunisation schedule, in physically accessing the vaccines. The primary exception was when Aotearoa NZ was experiencing a national shortage of flu vaccines. Pregnancy vaccines were described as being administered in a range of localities and by various practitioners, including GPs, practice nurses, pharmacists and at antenatal clinics. Participants appreciated the convenience and familiarity of being vaccinated in localities and centres with which they were familiar and that they frequented for other reasons. As one explained: *That was helpful. Just having everything in the same building yes my midwife, my GP there, everything was, just the chemist there, everything was right* (I1).

There were examples of people being able to combine vaccination with a midwifery antenatal appointment and of enjoying the convenience of having both vaccines administered on the same day, as these participants explain:

> *I was actually with* [name of midwife]*, and I just went over to the nurse's room and she gave me the injection … I just went back to see the midwife afterwards… so I just went over and got it done. Right, right, with one stone yes.* (I7)

> *I didn't have any problem, I got all the information from both my GP and my midwife and I was fortunate enough to get both the vaccines done on the same day …* (FG2)

Concern was expressed that people continue to be unaware that pregnancy vaccines are free-of-charge, and that not all have good infrastructural access to the vaccines. Suggestions for improvements in this regard included the development of a mobile vaccination team focusing upon pregnant women and whānau (family). More widespread advertising of the fact that the flu and pertussis vaccines are free-of-charge during pregnancy was recommended.

Survey analysis and results

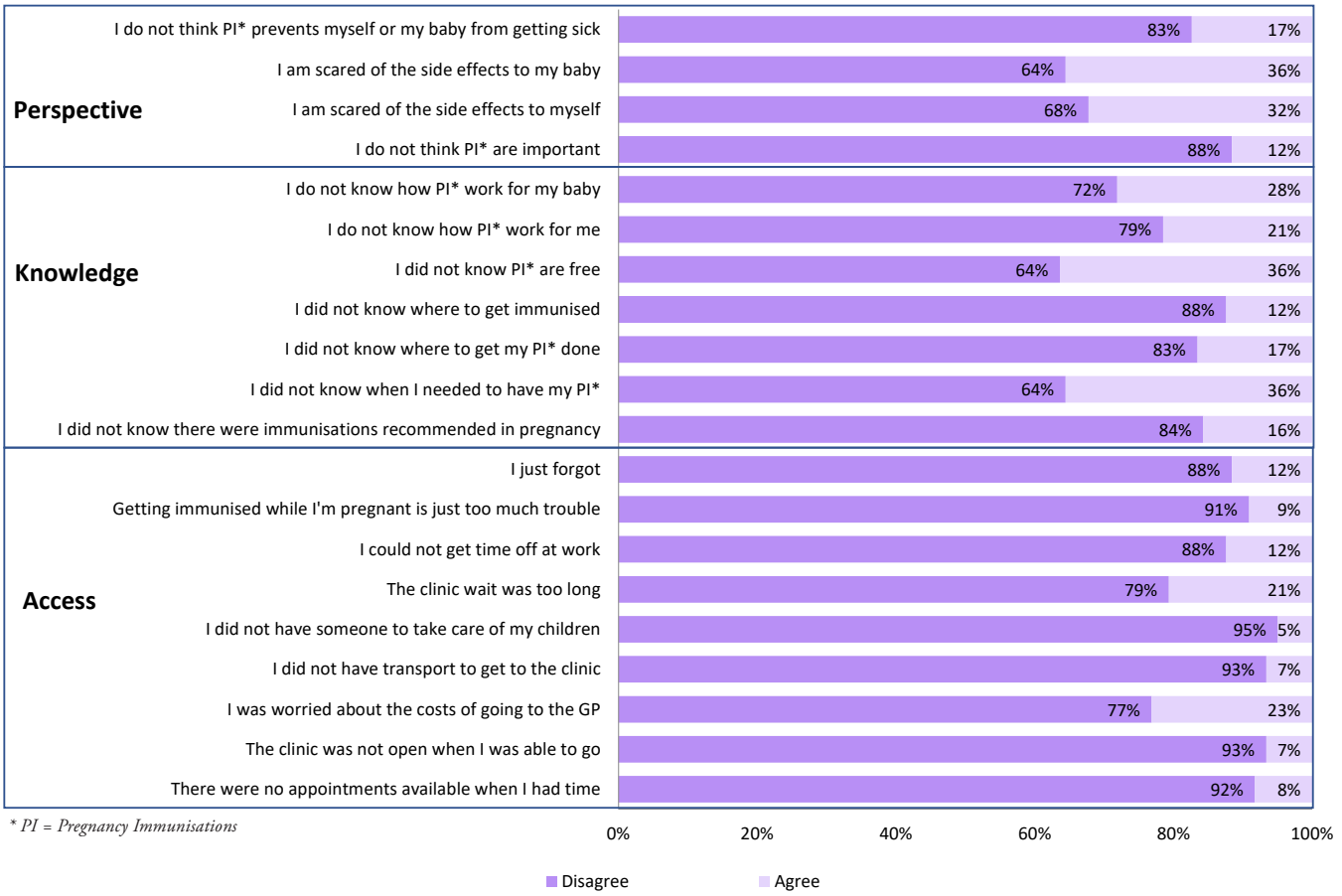
The survey was designed to complement qualitative data obtained through the interviews and focus groups. The reliability index for the survey was high (Cronbach alpha = 0.934). To simplify reporting findings, data were dichotomised (Figure 1) from the 4-point Likert scale. *Strongly disagree* was collapsed into *disagree* and *strongly agree* was collapsed into *agree*. Each of the survey questions was a statement which described the operation of a particular barrier; consequently, the survey items were collapsed into one of these three barriers: perspectives, knowledge and (physical/infrastructural) access. The grouped survey questions had high reliability with a Cronbach alpha of 0.873, 0.910, and 0.871 for Perspectives, Knowledge, and Access, respectively.

Perspectives: As illustrated within Figure 1, respondents' perspectives on maternal immunisation were generally supportive of vaccination: 88% disagreed with the statement "I do not think pregnancy immunisations are important", and 83% disagreed with the statement "I do not think pregnancy immunisation prevents myself or my baby from getting sick". Notwithstanding this, over a third of respondents (36%) agreed that "I am scared of the side-effects to my baby" and 32% that "I am scared of the side-effects to myself".

Knowledge: Within the Knowledge questions, well over a third agreed "I did not know pregnancy immunisations are free" (36%) and "I did not know when I needed to have my pregnancy immunisations" (36%). Slightly less agreed with statements regarding knowledge of how vaccines work in the body. This is illustrated by the fact that 28% expressed agreement with the statement "I do not know how pregnancy immunisations work for my baby" and 21% with the statement "I do not know how pregnancy immunisations work for me".

Access: Overall, the statements with which the lowest proportion of respondents expressed agreement were within the Access questions. These included "I did not have someone to take care of my children" (5%) followed by "I did not have transport to get to the clinic" (7%) and "The clinic was not open when I was able to go" (7%). Yet, of note within this category, there was moderate agreement for the following statements: "The clinic wait was too long" (21%) and "I was worried about the costs of going to the GP" (23%).

The survey responses for these themed groups were expressed as means and standard error (SE). A low mean score (≤2) indicated less than 50% of participants disagreed that significant barriers existed for that theme. A group's higher mean score (>2) was interpreted as more than 50% of respondents expressed that significant barriers existed. All mean (± SE) scores revealed the three groups were generally low (1.86 ± 0.073, Perspective; 1.83 ± 0.069, Knowledge; 1.58 ± 0.048, Access). This can also be visualised in Figure 1, where the frequency of agreement or disagreement for individual questions is shown.



** PI = Pregnancy Immunisations*

DISCUSSION

Barriers to having maternal vaccinations were not strongly observed in the perspectives of research participants. This was demonstrated by the high levels of disagreement with survey statements which positioned pregnancy immunisation as unimportant (88%) or ineffective (83%). Support for vaccinations was especially apparent in participant descriptions of pregnancy vaccination as a form of protection: protection for the baby (both in utero and postnatally) and for the mother. Notwithstanding this, both the survey and interview data indicated the existence of fear amongst childbearing people of adverse reactions and/or of potential vaccine side-effects. Support for vaccination in pregnancy clearly operates in conjunction with concerns about the process.

In this regard the research adds to the body of existing literature which highlights the crucial role played by health professionals in facilitating uptake of immunisations (Andre et al., 2019; Kilich et al., 2020). Health workers, such as midwives, nurses and GPs, are uniquely situated to inform people that antenatal vaccines exist, how they work, and that they are free-of-charge. Given the amount of misinformation on vaccination, participants spoke of feeling particularly confident with information shared with them by health professionals whom they had known – and developed trust in – over months or even years. In this regard continuity-of-care arrangements provide an experiential basis upon which patients feel particularly able to trust in the knowledge of their caregivers. Also highlighted is the importance of knowledge around vaccination being shared and discussed within supportive, culturally safe forums, including wānanga. Culturally safe spaces for health provision and knowledge sharing can be created by those that deeply understand and engage with the culturally specific traditions and practices of those for whom they are providing the service (Fleming et al., 2020; Gott et al., 2022)

It is testimony to the work already carried out by CMH workers to improve the institutional infrastructure which brings immunisation to people, that relatively few survey respondents considered getting immunised in pregnancy to be "too much trouble", forgot to uptake the vaccines or saw clinic opening times/childcare/transport to be barriers. Participants were particularly appreciative when health workers actively facilitated the making of vaccine appointments; when two vaccines could be administered at one appointment; and when midwifery services were provided at GP clinics offering vaccination. This finding supports wider research demonstrating that integrated healthcare can considerably increase vaccination rates (Deverall et al., 2018). As not all pregnant people in South Auckland access antenatal care, the potential benefits of outreach maternal vaccination services should not be underestimated.

People in South Auckland are already talking about maternal vaccines as a way of protecting their babies. Educational narratives and initiatives which further build upon the language of protection are therefore likely to have particular resonance within the area. Such emphasis is congruent with the broader public health suggestion that centring notions of "protectiveness" – as well as information on vaccine safety – may be more beneficial than highlighting "disease threat alone" (Kilich et al., 2020). There is also resonance here with the research finding set out in a recent report around vaccination in childhood, in which Māori Māmā identify as "kaitiaki for our tamariki" – guardians/protectors for our children (Brown et al., 2021, p.1). Focus upon health and protection is congruent with approaches to healthcare

which emphasise building upon community strengths rather than assumptions of deficit and risk.

As changes around antenatal vaccination are introduced and consolidated, future research carried out in partnership with local communities will be well situated to consider how whānau and communities respond and adapt to new developments.

LIMITATIONS OF THE STUDY

The views and experiences of people who most face barriers to pregnancy services may be under-represented in this research, particularly as the survey component of the study was conducted with individuals already accessing childbirth education classes. The study did not explore the topic of COVID-19 vaccination. On the basis of current data, however, it is known that between 2019 and 2021 pertussis vaccination rates in pregnancy rose slightly on a year-by-year basis in Counties Manukau: 41.5% (2019), 42.2% (2020) and 42.6% in 2021 (Waitematā DHB, 2020, 2021, 2022a). The antenatal influenza vaccine rate in the area was 37.0% in 2019, 43.9% in 2020 and had dropped to 34.4% in 2021 (Waitematā DHB, 2021, 2022a, 2022b). One feasible explanation for the drop in 2021 is that, as concern over COVID-19 grew and COVID-19 vaccination became available, public concern about influenza fell (whilst vaccination against whooping cough nonetheless remained a consistent priority).

CONCLUSION

This research contributes to growing evidence that health and maternity care workers, including midwives, are crucial vectors of information about antenatal immunisation. Added is the insight that information and support around vaccine decision-making from health professionals whom people already know and trust, can be particularly effective. This finding highlights the importance of relationships within primary and maternity care, and is evidence in support of the Aotearoa NZ "continuity of care" model of midwifery, especially when well integrated with broader aspects of primary healthcare. The study further underscores the need for culturally safe information sharing which is optimally facilitated by trusted and known community members. Scope remains for ensuring that communities are aware of the fully funded status of vaccines in pregnancy within Aotearoa NZ.

Key points

- Health and maternity care workers, including midwives, are crucial vectors of information about antenatal immunisation.
- Information and support around vaccine decision-making from health professionals whom people know and trust, can increase immunisation uptake.
- A well integrated primary health and maternity care service is important in increasing access to, and knowledge of, vaccine provision.

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