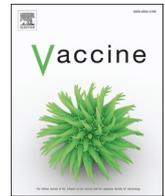


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Exploring factors that influence vaccination uptake for children with refugee backgrounds: An interpretive description study of primary healthcare providers' perspectives

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ABSTRACT

Background: Children with refugee backgrounds are at high risk of acquiring vaccine preventable diseases (VPDs) due to a complex set of factors, one being under-immunisation. In Aotearoa New Zealand (NZ), reported age-appropriate vaccination rates are suboptimal among children with refugee backgrounds.

Methods: A qualitative interpretive description study was undertaken to explore factors associated with access and uptake of immunisations and develop strategies to improve age-appropriate vaccinations among refugee children post-resettlement in NZ. Semi-structured interviews were conducted with healthcare providers (nurses and doctors) (N = 14) across seven resettlement locations in NZ. Collected data was transcribed verbatim and thematically analysed.

Results: Five themes were derived from the data that demonstrate the interrelated factors that influence vaccination uptake across the refugee caregiver, health provider and system levels. Providers discussed how caregivers' competing resettlement priorities and challenges early in the resettlement phase influenced their knowledge and access of vaccines and health services in NZ. Providers' knowledge of refugee caregivers' concerns was seen as a driver for positive change in forming therapeutic relationships with, and delivering health services to, former refugees. They discussed system level factors that influence access to and provision of immunisation services, such as resourcing, resettlement policies, system inefficiencies and missed opportunities. Emphasis was placed on communication between patients and providers to facilitate positive immunisation experiences. Overwhelming, providers displayed high motivation to improve immunisation services. Strategies were suggested to overcome identified barriers and included the provision of culturally and linguistically appropriate resources, education campaigns, reducing access barriers (e.g., after-hours clinics), and improving system efficiencies.

Conclusions: These findings highlight root factors that impact immunisation uptake and experiences among children with refugee backgrounds. To reduce the burden of VPDs, broad system level changes are required to address the barriers to vaccine uptake faced by both families of refugee backgrounds and health providers.

1. Background

Vaccines have saved millions of lives and have contributed to reducing global incidence and mortality from vaccine preventable diseases (VPDs) [1]. However, the benefits of immunisation continue to be shared unequally. According to the World Health Organisation, the

poorest and most marginalised populations across fragile and conflict-torn settings continue to have the poorest access [1].

There are currently an estimated 108.4 million people globally who have been forced to flee their home due to war, persecution, or disasters [2]. This figure includes 35.3 million refugees and 5.4 million asylum seekers as defined by the United Nations High Commissioner for

Abbreviations: HCP, Healthcare provider; ID, Interpretive description; IMAC, Immunisation Advisory Centre; MRRC, Te Āhuru Mōwai o Aotearoa - Mangere Refugee Resettlement Center; NIR, National immunisation register; PHO, Primary Health Organisation; PMS, Practice management system; RRS, Refugee Resettlement Strategy; NZ, Aotearoa New Zealand; VPD, Vaccine preventable disease.

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Refugees (UNHCR) [2]. This is the highest number ever recorded and the unfortunate reality is that these numbers continue to rise in the face of ongoing war and conflict. Children, in particular, are affected by displacement crises and are over-represented in displaced and refugee populations, making up over half of the refugee population worldwide [2]. One of the by-products of war is the disruption of health-care systems, including immunisation services. This disintegration is evidenced by lower vaccination coverage rates, and suboptimal immunity to various VPDs, in children with refugee backgrounds in comparison with other populations residing in countries of resettlement [3–5].

Aotearoa New Zealand (NZ) accepts refugees through several different pathways: the UNHCR refugee resettlement programme, known as quota refugees; asylum seeker pathway, known as convention refugees if their claim is successful; family reunification category; and the new pilot Community Organisation Refugee Sponsorship (CORS) programme. Each refugee group experiences different and fluctuating access to supports on settlement; variations which are dependent on the context that overarches their entry to NZ [6]. In accordance with the NZ Public Health and Disability Act 2000, all refugees are eligible for funded healthcare services and all children regardless of immigration and citizenship status are eligible for Well Child/Tamariki Ora services, including funded vaccines administered in line with the National Immunisation Schedule (NIS) [7]. Despite being entitled to funded healthcare services, children with refugee backgrounds and their caregivers continue to face substantial resettlement challenges and barriers regarding access to preventative care services. In NZ, recorded vaccination rates have been shown to be lower in migrant and refugee children than non-migrant children [8].

Factors that impede access to immunisation services for children with refugee backgrounds are complex and multifaceted. They include sociocultural and linguistic challenges, lack of transportation, difficulty navigating new healthcare systems, knowledge gaps, competing resettlement priorities, and macrosocial factors such as government policies surrounding resettlement [4,9–11]. Aside from healthcare utilisation, healthcare providers face challenges in providing timely and culturally responsive immunisation services to refugees. These challenges include resources deficits, such as funding shortages, uneven access to interpreters, and a paucity of culturally and linguistically appropriate vaccination information. A lack of infrastructure to facilitate inter-service and inter-sectorial coordination of services has also been found to impact on the ability of health systems to provide timely access to care, including immunisations, to former refugees [12].

There has been limited research regarding access and engagement with immunisation services for refugee children post resettlement in NZ, particularly from the lens of the healthcare provider. Immunisations are administered almost exclusively by practice nurses within general practices in NZ [13]. Therefore, these healthcare providers are likely to have valuable insights into the challenges associated with immunising refugee children. This research aims to contribute knowledge by exploring the insights and challenges faced by health professionals delivering immunisation services to refugees. These first-hand provider experiences will inform suggestions for future immunisation service improvement at both local and national levels.

2. Methods

This study used a qualitative interpretive description (ID) design. ID was selected to inform this research due to the emphasis on generating meaningful knowledge that is capable of informing practice within a clinical context [14]. The presented study is part of a large multimethods study comprising of a programme of quantitative and qualitative studies to explore and improve vaccine access and acceptance among children with refugee backgrounds. Ethical approval was granted from the Auckland University of Technology Ethics Committee (19/4).

2.1. Study location and population

In the context of this research, “refugee children” and “children of refugee backgrounds” refers to children under 18 years old who have come to NZ as first-generation refugees, and to those born in NZ to first-generation refugee parents. This research is inclusive of quota and non-quota refugees (i.e., those that entered NZ through the asylum seeker or family reunification pathway).

At the time of completing this research, quota refugees were resettled into eight settlement locations in New Zealand: Auckland, Waikato/Hamilton, Manawatu/Palmerston North, Wellington, Nelson, Christchurch, Dunedin, and Invercargill. This research was conducted over all eight locations. Only seven locations, however, are represented in the results due to refugee resettlement being suspended in Christchurch following the 2010 earthquake.

Participants were recruited through general practices with a high proportion of enrolled patients being of refugee status. Purposive sampling was used to achieve maximum variation across a range of workplace and practitioner characteristics, such as, geographical location of the clinic, availability of additional wrap-around health services, age of practitioner and years of experience vaccinating refugee children. Demographic information was collected to guide further recruitment.

Participant inclusion criteria comprised of being 18 years or older, proficient in English, and having a lead role in administering childhood vaccinations and experience vaccinating children with refugee backgrounds. The Immunisation Advisory Centre’s (IMAC) networks were utilised to select the general practices and contact the practice managers to determine eligibility. A total of forty-six general practices were contacted across all eight resettlement locations.

2.2. Data collection

Semi-structured interviews were conducted by the lead author (LC) between June 2019 and July 2020. An interview schedule was developed based on a review of the current literature related to immunisations and migrant and refugee populations. To ensure the questions were appropriate, interview questions were reviewed by an advisory committee and tested by two pilot participants. Each interview lasted between 30 and 70 min. The interviews were conducted face-to-face at the participant’s preferred time or via Zoom depending on their geographical location. All participants were provided with a participant information sheet and completed a written consent form prior to being interviewed. Interviews were audio recorded and interview notes were taken. Participants were provided with a small koha (gift voucher) in appreciation of their time.

2.3. Data analysis

Consistent with ID methodology, an inductive approach was used in the data analysis. Braun and Clarke’s reflexive thematic analysis approach was employed drawing from an interpretivist paradigm and using an experiential orientation to construct themes or patterns from within data [15]. Reflexive thematic analysis was selected partly because of the theoretical flexibility it offers and prescribed process of analysis, but also because it suits questions related to people’s views and perceptions [15]. Data familiarisation was achieved through transcribing the audio recordings verbatim, and repeated listening of audio transcripts and reading written transcripts. The initial phase of coding was completed manually which included re-reading transcripts in the dataset and documenting thoughts for codes in the transcript margins to create an initial list of codes. After this initial step, QSR NVivo® version 11 Pro was used to manage and analyse the dataset. As recommended by Braun and Clarke [16], visual representation tools including mind maps were then used to explore linkages between codes and construct prototype themes.

The final two phases involved refining and defining the themes,

keeping the entire dataset in mind [16]. During these phases, all the coded data was reviewed to ensure the themes were appropriate, mind maps were refined, and themes were peer reviewed with the second author (NC). The integrity of each theme was tested through a review process which continued until the narrative of each theme was clearly identified in relation to the overall research question. Finally, each theme was defined and supported with a description and data extracts in the form of participant quotes.

To facilitate awareness of the influence of researcher bias on data collection and analysis, a reflexive journal was maintained and discussed during regular peer-debriefing. A social identify map was also used to determine the researcher's positionality within the research context [17]. The lead author (LC) has a background in occupational therapy, working within mental health and health settings in NZ and the United Kingdom. After leaving clinical practice, she moved into the patient experience space working to amplify patients' voices about improving health services. Thus, she shared a clinical background as a registered health professional with the interviewees and therefore, was able to create a space for sharing stories being attuned to the complexities of working within health settings. Given her focus on improving patient experiences, she was particularly interested in suggested recommendations from providers' perspectives that could be implemented. The second author (NC) also comes from a clinical background as a former registered respiratory therapist who is now undertaking applied public health research focused on reducing health inequities faced by refugee background populations. Published recommendations were used to demonstrate quality in reflexive thematic analysis, such as the inclusion of reflections on authors' positioning in relation to the study context [18].

3. Results

Fourteen participants were successfully recruited for this study (Table 1). Most participants had ten or more years of experience vaccinating children with refugee backgrounds.

Five themes were derived from the data. The first three themes describe factors that influence vaccination uptake for former refugee children across three different levels: the refugee caregiver level, provider level, and the system level. The third theme, working within the system, describes contextual conditions that impacts access to and provision of immunisation services for children with refugee backgrounds. The fourth theme, to understand and to be understood, describes challenges in communication and understanding that are influenced by, and exist, across all levels. The fifth theme, the service needs to change, describes participants' thoughts and experiences of the current service and ideas for improvement. Participant quotes were used to support themes and participant identifiers were used to protect participants' identity.

3.1. Resettlement priorities and challenges

This theme is related to perceived caregiver-related barriers and facilitators to receiving vaccinations. Participants perceived that a lack of knowledge and awareness of the NZ health system, immunisation schedule, and VPDs was a key barrier to immunisation uptake among refugee caregivers. Participants considered this low awareness to be contextual within a Western medical system and many viewed it as the by-product of three constraints including: former refugees' precarious health care experiences in their countries of origin, lack of underlying knowledge of VPDs, and being unfamiliar with preventive health measures and systems.

"I think it's not a common thing in some countries where people have come from to have kind of that proactive health care, it's more a reactive thing that people go to the doctor when they're sick." (HCP2)

Despite this limited awareness, participants noted that former

Table 1
Demographic characteristics of participants (N = 14).

Provider characteristics	n (%)
Participant's age	
18–29 years	1 (7)
30–39 years	1 (7)
40–49 years	4 (29)
50–59 years	4 (29)
60 years and over	4 (29)
Gender	
Female	13 (93)
Male	1 (7)
Ethnicity	
Māori	0 (0)
New Zealand European	9 (64)
Pacific Islander	2 (14)
Asian	1 (7)
Middle Eastern, Latin American, African	1 (7)
Other	1 (7)
Role	
Registered Nurse	13 (93)
Doctor	1 (7)
Location	
Auckland	4 (29)
Christchurch	0 (0)
Dunedin	1 (7)
Hamilton	2 (14)
Invercargill	1 (7)
Nelson	1 (7)
Palmerston North	2 (14)
Wellington	3 (21)
Authorised vaccinator	
Yes	14 (100)
No	0 (0)
Years of immunisation delivery experience	
Less than one year	0 (0)
1–4 years	1 (7)
5–9 years	1 (7)
10 years and over	12 (86)

refugee caregivers exhibited a strong sense of trust and willingness to have their children vaccinated. This was considered a key facilitator to access and immunisation uptake. Those interviewed perceived that these positive immunisation views were often the result of witnessing the impact of disease and illness in their countries of origin:

"You could say that they have very poor knowledge of the diseases, but that doesn't get in the way because they have knowledge of disease and they want their children protected against anything that's available, so that's why buy-in and uptake is good." (HCP1)

Participants therefore concurred that if former refugee families were not arriving for their scheduled immunisation appointment, it likely indicated other access barriers (e.g., transportation and administrative challenges). During the early resettlement period, former refugees face competing priorities such as: learning English, adjusting to a new country and culture, attending school, finding employment, and managing other complex mental and physical health needs. These access barriers were often cited as the primary reason behind low uptake of vaccinations in refugee populations:

"What we noticed was that they were really open and welcoming of that given the opportunity that there was, there was never any decline on their part or any resistance, with our experience anyway. If there was reluctance to come or they hadn't arrived it was about something else altogether, it wasn't fear of vaccines or what might happen as a result of the vaccines it was always about something else that was inconsequential to that." (HCP7)

Participants perceived that access to preventative healthcare services

became easier as former refugees became more acquainted and engaged with NZ society. For this reason, many participants stated that they actively encouraged community engagement and interacting with others in the wider population. Providers noted that access was generally easier for children who were born in NZ to refugee parents (second generation) as their parents had often been in NZ longer and were therefore more established and connected with society.

“I would say probably the second generation is easier to do in some respect because I think their parents have an understanding, because they’re connected with other groups that other New Zealanders are in, they may have been followed up through Plunket and that sort of thing as well, so people are kind of aware. They connect with other Kiwis as well and kind of know that it’s normal at five months that you have to come and see the doctor for your immunisations.” (HCP2)

3.2. Knowledge as a driver for change

Providers described how possessing, or lacking, knowledge about refugee concerns has corresponding positive or negative impacts on forming therapeutic relationships with, and delivering health services to, former refugees. Participants highlighted knowledge in these following areas as important factors in supporting immunisation delivery: knowledge and understanding of refugee healthcare needs and entitlements; knowledge of culture, language, and refugee experiences; knowledge and awareness of services that support former refugees, and practical knowledge around creating immunisation catch-up schedules for former refugee children.

Participants were encouraged to reflect on how they acquired knowledge and what informed their practice when working with children and caregivers with refugee backgrounds. Most participants stated that they have not received any formal training for working with former refugees.

“So, we haven’t had any training ... like the nurse’s training of what we are specifically looking, what we specifically need to know, we haven’t had anything, in fact some of nurses have probably had nothing at all.” (HCP13)

Instead, many participants described acquiring knowledge through their prior experiences (e.g., their own migrant background and journey, volunteering, previous experiences working with culturally diverse populations, and overseas experiences). Participants also described drawing on documented information sources, such as local and government resources (e.g., issued by the Red Cross and overseas resources they had sought on the internet). Those that had participated in training specific to culturally and linguistically diverse (CALD) groups described how this positively impacted their relationships with refugee patients through having as increased understanding of the refugee experience. One participant who highlighted the need to focus on refugee-specific training for healthcare providers, emphasised that cultural awareness was crucial in patient-centred care and building effective relationships with their former refugee patients:

“If we are not on the same page, I’m not familiar with you, I cannot deal with you, I’m not trained to deal with you, I’m not familiar with your culture, and there is no common background to stand on so we can’t have a productive relationship.” (HCP5)

Many participants stated they lacked the necessary training and confidence required to create and deliver catch-up schedules for children with refugee backgrounds. As a consequence, this process tended to be time consuming and would often require input from multiple different sources, including other members of the healthcare team, local service providers such as Red Cross, public health nurses, pharmacists, leaders in the refugee community, and immunisation coordinators.

“I don’t know whether it’s our incompetence, I mean strictly speaking we should be able to work what they need given the information. I think and I’ll probably speak for the other nurses too, we kind of just need that, maybe support and confidence about what we actually need. I mean we are getting better at it, we do know the schedule, but when you’ve got somebody that needs their catch-up schedule, they’ve had some vaccines here and there, we kind of really appreciate the support from the immunisation coordinator that gives us the confidence to know that that is exactly what they need. Because it is quite confusing, it is quite complicated.” (HCP13)

Participants expressed a strong desire to increase their expertise and confidence in managing the immunisation process with former refugees. The perceived benefit was a reduction in time delays due to not having to refer to a “middleman” such as an immunisation coordinator. Participants presented different mechanisms by which they could upskill in this space. However, there were differing views about where the responsibility for training lies; for instance, some felt it was a system-level issue that should be managed entirely by the general practice and wider primary health organisation (PHO), while others supported a more self-directed approach in which providers themselves accessed additional training.

“I think you’ve got to be proactive and look for and attend the training. So, I’ve always kept up to date and have done a couple of other little papers [courses].” (HCP6)

Some participants also demonstrated a preference for developing knowledge through experience, as opposed to formal training. There was a notable desire for increased knowledge sharing between general practices, which participants considered to generally work in isolation of each other.

3.3. Working within the system

This third theme included contextual factors that are beyond the control of the individual health professional or refugee caregiver. These factors included structural barriers that impact refugees’ access to primary care services, government resettlement policies, internal and external systems, and process and availability of funding and resources. Many participants noted that systems and processes, such as opening hours, recall systems, and administrative processes (e.g., phone bookings) created barriers to healthcare utilisation for refugee families. For example, restricted weekday opening hours presented a barrier to accessing immunisations, particularly in the early resettlement stages when refugee families have other resettlement priorities to manage.

“I think it’s around, you’re looking at the complexity for the family because the parents might be doing English language classes, the children are going to school, and how do you get a time that works conveniently for them because there’s so many things that they have to be doing, so that’s quite complex.” (HCP8)

Funding availability had corresponding positive or negative impacts on supporting healthcare access and providing immunisations to former refugees. Targeted funding and resources were considered an enabler where practices were able to utilise it to minimise the impact of structural barriers faced by former refugees, such as supporting the provision of transport, financial aid, longer appointment times and interpreters. Targeted funding was available to practices for newly enrolled refugees; however, the timeframe of this funding varied between practice, ranging from 6 months to two years. There was recognition amongst participants that funding and resourcing were inadequate to support former refugees across their lifespan, considering their complex healthcare needs. One participant noted there was a relationship between the length of the funding period and the length of time refugees remained enrolled in the practice, thereby disrupting continuity of care:

“We noticed that as soon as they were ineligible for the six-month PHO funding that they’d move to another practice because we didn’t get the low-income funding here, so they moved to another practice and then we wouldn’t see [them] beyond that.” (HCP7)

Availability of providers’ time was another key constraint identified by participants.

“One of the main challenges for any practice nurse is time, time to oversee the whole process and make sure that it’s been done, because we’ve got other unvaccinated children that we’re also trying to get up to date, it just takes that dedicated time without the interruptions of the normal workday. It’s the biggest challenge for any practice nurse.” (HCP11)

The standard consultation time for an immunisation event with former refugee children was perceived to be too short due to the complex health needs, large family sizes, and need for an interpreter. This is particularly true during the first three months of enrolment with a practice. General practices that had the advantage of longer appointment times noted positive outcomes, such as building rapport to support long-term engagement between the refugee family and the general practice.

Additional time was particularly required for non-quota refugees. As these refugees did not go through the orientation programme and health screening offered by the Te Āhuru Mōwai o Aotearoa - Mangere Refugee Resettlement Centre (MRRC). Less than half of participants interviewed expressed knowledge of the different refugee visa categories and pathways. Those who were aware highlighted the inequities of support that was provided to quota compared to non-quota refugees. Quota refugees were considered to be higher users of preventive health services due to their initial orientation at MRRC and the resettlement support offered through the Red Cross, which included support to enrol with a local general practice. Conversely, non-quota refugees are not provided with this same level of support, nor do practices receive notification. Consequently, several participants reported times when there were delays in completing catch-up vaccinations with non-quota refugees.

“In Mangere [Refugee Resettlement Centre] at least we have some files on them so I can catch up with that and recall them, but for those youngsters that just came in reunited with family, it’s not until they come in here, and sometimes we just don’t know. So, I think there’s that gap there.” (HCP3)

Administering catch up and scheduled immunisations for children with refugee backgrounds often occurred opportunistically, such as when the child attends the clinic for a non-scheduled immunisation appointment. Missed immunisation opportunities were often considered to be the result of poor internal and external information sharing systems. These fragments systems often resulted in delays to administering catch-up and scheduled immunisations as well. Almost all participants described how their practices process had evolved overtime to better meet their patient needs and to reduce missed vaccination opportunities. These improvements included establishing a practice-based protocol, using electronic alerts, having a dedicated role to coordinate refugee care and/or a central role to coordinate immunisation scheduling, and recalls for children for refugee backgrounds.

3.4. To understand and to be understood

The capacity of refugee caregivers and providers to communicate with each other was perceived as a major factor in vaccination uptake and was also considered crucial to developing positive provider-patient relationships. Communication challenges were recognised as one of the most significant barriers to providing care for former refugee, affecting all aspects of engagement and immunisation delivery from booking appointments to the immunisation event and aftercare.

“I would think communicating with us, getting hold of us and making sure that they’re getting hold of the right person so that someone’s listening to them and understands. Negotiating phone systems and silly protocols

would just be I think it must be mind boggling for them sometimes, which is what we’re trying to navigate here.” (HCP7)

Due to a general lack of awareness of the need for immunisations among refugee caregivers, practices tended to rely on recalls and reminders to encourage refugee caregivers to bring their children in for vaccinations. However, it was noted that conventional methods of sending reminder letters and recalling children through phone calls were ineffective with refugee populations where English proficiency may be limited.

Complicating matters further, participants described the complexities of gaining informed consent from refugee caregivers, particularly in instances where resources, such as interpreters, were not readily available, thereby leading to delays in vaccination. Interpreters were viewed as a key resource to effectively communicate with former refugee caregiver and obtain informed consent. Beyond simply assisting with communication, interpreters also supported relationship building between the practice and the refugee family and helped healthcare staff with understanding cultural norms and behaviours.

“Because they come from a variety of backgrounds, I tend to ask the interpreter if there’s anything in particular that I should be aware of, and as far as culture goes with like you know don’t touch the head type of thing.” (HCP9)

Participant responses about interpreters’ skills and availability were divided. Despite the preference for using face-to-face interpreters, many practices had begun using a phone interpreting service for financial reasons. While there were some advantages in using phone interpreters, such as having access to a wider range of languages, there were also many challenges, with one participant describing it as a “make do” approach. Participants frequently commented that the quality of the phone call was often a challenge due to poor reception or background noise. Participants also noted the potential for miscommunication if an interpreter was not physically present to observe body language, leading them to wonder if “*what you want translated ...is translated well*”.

In recognising these challenges, participants perceived that some former refugees seek out healthcare professionals who were a “match” in terms of language and culture. There was evidence that refugees will choose to travel further to access more culturally appropriate practices where staff spoke similar languages or were of similar backgrounds.

Participants placed high valued on “two-way relationships” between the provider and the refugee family. Fostering communication and understanding was central to building rapport and ensuring long-term service engagement.

“I see that the most important thing for me is to have a rapport with these people, because if they know you and you know them then they will come back. Even if the interpreter is not, you know, if you don’t really get much from the interpreter, they actually understand you, your body language, your determination, your caring, you know they come back to see you.” (HCP3)

All participants described at least one strategy that they, or their practice, used to support communication and understanding. In the absence of an interpreter, many participants described using additional communication tools, such as translation apps, visual aids, and sign language. Some providers also mentioned resorting to using a family member or children themselves to translate information. Many practices also utilised technology, such as text messaging and emails to manage recalls and reminders, and sought various overseas resources from the internet.

3.5. The service needs to change

All participants expressed that the system and services within general practice setting are not fit for purpose with regards to meeting the immunisation needs of their refugee patients. Participants often

described going above and beyond their conventional medical role to support the refugee patients across various activities including supporting community engagement, securing employment and education support, accessing English lessons, assisting with financial challenges, and helping refugees navigate health services such as accessing the pharmacy. Under the current approach, there is potential for practices to become overwhelmed if refugee numbers increase.

Throughout the discussions, every participant was able to identify at least one challenge that impacted on their ability to deliver efficient and timely vaccination services to former refugee children. Completing catch-up immunisations within the recommended timeframe was one of the main challenges, as one participant noted:

“I think the biggest challenge is getting that whole vaccinating process done in a timely manner, it’s not usually very timely. There always seems to be a time-lag.” (HCP11)

There was acknowledgement that if these barriers were not addressed that future consequences could include VPD-associated outbreaks. This risk increases New Zealand is expected to take on an increasing amount of quota refugees.

“Now you’re getting these previously eradicated diseases like mumps and measles, you heard about the measles outbreak in New Zealand, so you know it’s coming back. So if you’re not spending time on addressing these concerns and educating patients and you know addressing these barriers, I think we will face problem in the future.” (HCP5)

Participants highlighted how their health practice had made service changes in response to unmet needs and employed creative measures, to enable access and support immunisation delivery for refugee children. Throughout the interviews, participants came up with many ideas to improve delivery of immunisation services to children with refugee backgrounds (Table 2).

Along with identifying gaps and challenges in delivering immunisations to former refugee children, there was a notable desire to do better. While many participants expressed that service provision to former refugees was generally “good”, they recognised there was still “room for improvement” and more could be achieved. Participants discussed both extrinsic and intrinsic factors that support their desire for service improvement and increasing uptake of immunisations. Extrinsic factors included meeting national immunisation targets and improved working conditions. From an intrinsic, values-driven perspective, participants expressed an altruistic desire to make a difference and described working with refugees as being personally very rewarding.

4. Discussion

The aim of this study was to explore providers’ perceptions about factors that influence complete and timely immunisations for refugee children upon resettlement in NZ and identify strategies to improve immunisation uptake. The findings of this study indicate that immunisation uptake among refugee children is influenced by factors that transverse across multiple levels that include the refugee family, the individual health provider, and the wider health and political system.

4.1. Healthcare encounters

The healthcare encounter is concerned with the environment, including interpersonal, cultural, and physical elements, wherein the health provider and the refugee family meet. This study identified six inter-related factors that influenced healthcare practice with refugee families within this encounter: provider-patient relationships, trust, cultural understanding, communication, access to resources, and provider characteristics.

This study highlighted provider-patient relationships as a key contributor to former refugees’ long-term engagement with the practice and increased likelihood of vaccination uptake. Provider

Table 2

Summary of strategies suggested by participants (N = 14) to improve service delivery for former refugees.

Area of improvement	Detail	Recommendations for improvement
Overcoming linguistic and cultural barriers	Potential strategies to support both health professionals and former refugee caregivers overcome linguistic and cultural barriers included: <ul style="list-style-type: none"> • Developing resources and communication strategies, • Opportunities to support social integration into New Zealand society, • Networking with refugee specific organisations and increasing cultural training for health professionals. 	<p>Access to interpreter</p> <ul style="list-style-type: none"> • Access to qualified interpreters for all immunisation appointments when required. • Use interpreters to support administrative tasks – phone bookings. <p>Resources</p> <ul style="list-style-type: none"> • Translated immunisation appointment letters • Tailored system for booking appointments, reminders, and recalls. • Visual resources including immunisation calendars <p>Refugee Liaison/Key worker</p> <ul style="list-style-type: none"> • Refugee liaison role • Increase workforce of clinical and non-clinical staff with refugee or migrant background • Dedicated community refugee nurse role that acts as a liaison between former refugees and the PHOs <p>Training</p> <ul style="list-style-type: none"> • Cultural training for health professionals • Mechanisms to support integration of refugee caregivers into NZ society <p>Mass media</p> <ul style="list-style-type: none"> • Mass media campaigns, including social media • National broadcasts of national and international rates of VPDs <p>Resources</p> <ul style="list-style-type: none"> • Digital and interactive resources on immunisations and VPDs • Culturally responsive educational resources on immunisations and diseases <p>Education events</p> <ul style="list-style-type: none"> • Community immunisation information event run in partnership with Red Cross and the PHO • Community immunisation events for former refugees • Increase clinic opening hours to include after-hours and weekend clinics • Separate maternal and child health clinics • Nurse led clinics • Drop-in clinics <p>Information sharing</p> <ul style="list-style-type: none"> • Information/communication systems to
Health promotion and education	Strategies aimed at increasing health education and awareness of the need to immunise for former refugee caregivers.	
Reducing access barriers	Related to physically accessing the practices, including distance of clinic, transport and reducing waiting times	
Time, cost, and information system efficiencies	Strategies aimed at improving health service delivery including streamlining health	

(continued on next page)

Table 2 (continued)

Area of improvement	Detail	Recommendations for improvement
	services, electronic interface, promoting continuity of care, and reducing time demands.	<p>provide timely and accurate collection and sharing of information</p> <ul style="list-style-type: none"> • Platforms to support regional information sharing on healthcare provision for refugees, including immunisation delivery <p>Streamlining processes</p> <ul style="list-style-type: none"> • Opportunistic immunisation delivery at locations beyond general practices (e.g. after-hours medical centres, hospitals) • Immunisation information is streamlined at source (i. e., from MRRC to the NIR) <p>Funding</p> <ul style="list-style-type: none"> • Increase funding to enable longer appointment times where required <p>Training</p> <ul style="list-style-type: none"> • Practical training, resources, and tools for health professionals around creating immunisation catch-up schedules for former refugees

recommendations are regarded as a key determinant in increasing vaccination uptake in both general [19] and refugee and migrant populations [20,21]. As described in previous literature, communication, trust and cultural understanding is central to provider-patient relationships and ensuring equitable, patient-centred care to refugees [12,22]. However, consistent with previous international research, participants identified multiple challenges to providing cultural competent care that have the potential to evoke misunderstandings and impede healthcare delivery. These include language discordance, providers' lack of cultural knowledge and skill, unacknowledged cultural needs and experiences, differing provider-patient expectations, and lack of culturally appropriate resources and time [12,23–27].

Refugees often present with complex needs that extend across the wider social determinants of health. Mirroring findings from a NZ study [12], participants described a sense of responsibility to address these needs within the healthcare encounter. This often meant needing to assume multidimensional roles to help them navigate complex and unfamiliar systems. This has previously lead to providers feeling overwhelmed and under resourced to cope with the demands [12]. Despite emphasising the need for providers to increase their refugee-specific knowledge and cultural understanding, less than half of participants had access to or had participated in refugee-specific training. Lack of adequate knowledge and skills to provide culturally competent care to refugees has been frequently cited in the literature [24,27,46]. These findings emphasise the need for a review on the barriers to accessing refugee-specific training in primary healthcare settings.

Communication is recognised in international research as a key factor in establishing trust and building relationships between refugees and providers [12,28,29]. Additionally, this study found that effective and reciprocal communication between health professionals and refugee caregivers was essential for all aspects of immunisation delivery. Interpreters were considered to play a dual role in enabling communication and supporting cultural awareness between the provider and the refugee family. However, as other studies have reported, challenges

with engaging interpreters at times impeded refugees' access and engagement with the general practice, including lack of accessibility to interpreters and differences in quality of in-person versus phone interpreting services [24,25,30].

These challenges, alongside a lack of multilingual information resources, led to practices developing their own communication strategies to convey immunisation information to refugee caregivers. This included the use of Google translate, interspersed with visual imagery and body language. Similar to another NZ based study [31], participants also reported utilising family members, including children, to interpret medical information. While the use of these strategies has been reported to have some measure of effectiveness, researchers [32] have advised caution due to the potential to compromise access, trust, and provider-patient relationships. This study revealed that some general practices were at times under-resourced to meet the ethical and legal obligations of obtaining informed consent. Congruent with findings from a Canadian study [28], this occasionally led to time delays and, in some cases, resulted in a missed immunisation event.

4.2. Access to and provision of immunisation services

At the individual refugee level, providers identified multiple factors that support or impede access to primary care services. These included: transportation, financial barriers, language proficiency, community engagement and knowledge of Western health systems and diseases. Many of these have been well researched in international literature and corroborated by existing research that reflects refugee voices [34–37]. The unique provider viewpoint of this study has provided further insight into the system-level challenges that health professionals encounter in delivering immunisation programmes. These included disjointed service delivery, lack of protected time and training to manage catch-up schedules, lack of linguistically appropriate resources to support communication and lack of appropriate health infrastructure and processes to facilitate internal and external information sharing.

This study highlighted the importance of maximising opportunities for vaccination. Echoing previous research, providers identified that missed vaccination opportunities and delays were often a result of administrative barriers, clinic's opening hours, and ineffective internal processes, which resulted in disjointed continuity of care, a shortfall in inter-service coordination and ineffective recall processes for families where English was limited [12,38,39]. This study's findings highlight continuity of care within the practice and across services as an important factor in the provision of primary health care services to former refugees. Following from this, providers highlighted the importances of having good internal and external processes in places to support continuity of care, including the effective use and transfer of electronic records between MRRC (if applicable), the practice's Practice Management System (PMS), and the National Immunisation Register (NIR), to minimise missed vaccination opportunities.

Resourcing and capacity was considered to positively or negatively influence long-term engagement of refugee families with the practice. Funding was considered an enabler where practices were able to target either the refugee population, or an individual family, to provide extra supports, such as transportation. However, this study's findings highlight a discrepancy in funding and resourcing across general practice setting. Lack of time was identified as one of the primary systemic challenges faced by providers in providing immunisation services for former refugee children. Corroborating previous research [12,40] providing primary care to refugees was considered to be time and resource intensive and often created high workloads for health providers. Alongside longer consultation times, participants also noted the need for staff protected time to manage the complexities around retrieving initial health information, creating catch-up schedules and managing recalls. Staff-protected time and a collaborative team approach have been highlighted as contributing factors to achieving high rates of childhood immunisation in NZ [13].

At the provider level, creating catch-up schedules for children with refugee backgrounds was identified by many participants as one of the most challenging components of immunisation delivery. Akin to previous research exploring the challenges of delivering immunisation services to refugee children [41], many participants reported lacking expertise and confidence in developing and implementing catch-up schedules for newly arrived refugees. There was a strong desire amongst providers to increase their knowledge and expertise with creating catch-up schedules, in addition to having resources and tools available.

4.3. Socio-political contexts of resettlement

A key finding from this research was the influence of the wider socio-political context on healthcare access and subsequently vaccination uptake. These influencers included NZ government resettlement policies concerned with access to, and provision of, immunisation services for refugee children. Complicating health provision for NZ refugees is confusion over health entitlements, which is confounded further by inequities in how resettlement resources are allocated to different refugee visa categories. Quota refugees have a dedicated resettlement programme that includes an initial orientation period and a coordinated resettlement approach. During this period, quota refugees are provided with: initial catch-up vaccinations, information on health services, and support with accessing a general practice [42]. There is no systematic state-sponsored settlement support, and only limited health screening, available for those arriving under other visa schemes, such as family reunification and asylum seekers [43]. This study found that extra responsibilities assumed by families supporting refugees through the family reunification programme, can lead to resettlement stress, and thus add to immunisation delays. These findings are supported by findings from a US study that reported that the first year of resettlement can be overwhelming and stressful for both the newly settled refugees, and the families supporting them [44].

General practices are less resourced to support non-quota refugees, particularly regarding immunisations. Quota refugees commence immunisation catch-up schedules, and have a catch-up plan, before leaving MRRC [42]. Participants also reported that Red Cross plays a pivotal role in supporting quota refugees' access to general practices as part of the resettlement support package. As there is no systematic health screening for non-quota refugees, the responsibility for implementing catch-up schedules for asylum seekers and family reunification refugees remains with the primary health care service. Moreover, study participants perceived that many non-quota refugees were unaware that they require catch-up vaccinations and therefore would not seek out health services unless they were unwell. This problematic delay was highlighted in a NZ post-settlement cohort study [43] that found that refugee-like migrants (including family reunification refugees) waited longer for their first immunisation consultation than quota refugees (95 days versus 39.4 days). The study also found quota refugees had, on average, one less immunisation consultation at the health service; most likely due to their catch-up immunisation programme commencing at MRRC [43]. While research into non-quota refugees' utilisation of NZ healthcare is very limited, these findings mirrored those from a Dutch study that noted significantly higher GP registration rates by undocumented migrants receiving voluntary agency support, than those without this support [45].

From a policy perspective, the myopic focus of NZ Refugee Resettlement Strategy (RRS) on quota refugees means non-quota refugees are unfairly disadvantaged as they do not have access to the same health care entitlements as quota refugees. Although the intention is to include all refugees under the RRS, this has yet to occur; thus, this study supports other NZ researchers who argue that all refugees should be acknowledged and supported [11].

4.4. Improving the system

Despite a willingness to have their children vaccinated and an entitlement to funded childhood vaccinations, there are significant barriers at play which impede timely immunisations for children with refugee backgrounds. Through the healthcare providers' lens, findings from this study provide a deeper understanding of the complex and interrelated factors that influence vaccination uptake among refugee children. Improving refugees' access to responsive quality health services will require strategies that address a broad spectrum of these identified needs. Improvements at the service level are needed to support healthcare providers with building relationships and delivering culturally competent care to refugees. This will require having access to multilingual and culturally appropriate immunisation resources for refugee caregivers, qualified interpreters ideally in-person, cultural training, streamlined health information systems, and adequate time for consultations.

Despite their best efforts, many practices in this study were under-resourced to provide effective and culturally competent immunisation services to refugee families. This study adds to the debate about whether the current general practice model can be responsive to the high needs of the refugee population [12]. Under the current model of care, there is potential for general practices to become overwhelmed, particularly if refugee family numbers increase, or there is sudden influx of newly arrived refugees all requiring catch-up immunisations. Previous NZ based research has noted that some general practices disengaged from voluntarily taking on refugee patients as a response to challenges experienced in providing care to refugees [12]. This disengagement occurred during the early implementation stages of the refugee resettlement programme in their region, which is noteworthy as this study identified the early resettlement period as the most challenging and resource demanding for healthcare providers. Thus, there is a critical need to address these challenges, particularly as there are new resettlement locations being established throughout NZ.

One key advantage of the general practice setting, is that it provides flexibility for healthcare providers to respond innovatively to the needs of their refugee patients [33]. Many participants emphasised this need for flexibility and all practices had adopted at least one new approach over the course of providing primary care to former refugees. This "bottom-up" approach demonstrates commitment at the local level to improve the responsiveness of immunisation services for children with refugee background and their caregivers [46]. However, these individualised approaches continue to add to the discrepancies of care provision and isolation between practices. To mitigate this, cross-practice coordination and a more cohesive national approach to refugee healthcare is required [33,47].

The current NZ health system reforms will bring about change, along with a planned review of the RRS and the upgrading of the NIR. Thus, it is essential that these changes are responsive to needs of both the refugee community and healthcare providers who work alongside them. From a health provider perspective, participants recognised that any new strategies must consider cost-effectiveness, achievability within time constraints and not fragment the system any further. While strategies should focus on reducing inconsistencies across general practices when providing services to refugees; flexibility is the keystone to enabling local-led innovation.

Strategies to improve immunisation uptake among children with refugee backgrounds must not disempower refugee communities further. Measures such as immunisation targets, surveillance data, infrastructure and recall systems remain important to improving service design. However, they do not empower refugee communities to make decisions about their own health care [48]. The current system of relying on recalls and opportunistic vaccinations creates a passive demand. Immunisation uptake strategies should aim to educate refugees on VPDs, immunisations, and NZ health services. Further research is recommended to uncover mechanisms for increasing public health awareness

of immunisations and VPDs as they relate to the refugee community, particularly for those non-quota refugees who do not go through MRRC.

Going forward, opportunities to co-design solutions with the refugee community, healthcare providers and other key stakeholders will ensure implemented strategies are responsive to stakeholders' needs. A NZ based integrative review [49] found that existing research on refugee health has primarily been informed by Western research paradigms and was biased towards the knowledge perception of healthcare providers. Knowledge acquired within this research paradigm is then translated into recommendations that may, or may not, resonate with the refugee population. These findings further strengthen recommendations for culturally informed research that explores the refugee perspectives of accessing and receiving immunisations and developing solutions in partnership.

4.5. Strengths and limitations

Recruitment was particularly challenging as it occurred during the 2019/20 measles outbreak and ongoing COVID-19 pandemic when there was increased demand on health services. The views shared by participants may have been influenced by these ongoing disease outbreaks. In particular, given the increased attention to immunisations, participants may have been increasingly aware of barriers to vaccine access and acceptance among marginalised populations. This study presented an interpretation of providers' experiences as constructed by their talk and summarised their insightful recommendations. As this is a qualitative study, the results are not generalisable on a statistical basis, but may be transferrable to other settings.

5. Conclusions

This study explored primary healthcare providers' perspectives of factors that influence immunisation uptake for children with refugee backgrounds. The study revealed that the success of health providers in achieving high vaccination coverage is determined by the system within which they work. There are multiple factors within the healthcare system and wider socio-political system that can amplify or alleviate the challenges faced by providers and the social determinants of health experienced by refugee families. Improving access and service provision will require multi-level strategies that address this broad spectrum of issues. These include having adequate resources to disseminate information to refugee caregivers, access to interpreters, funding and time allocation, inclusive resettlement policies, culturally competent staff, having adequate electronic data management systems and processes to support information sharing, and continuity of care. Building a more culturally responsive immunisation service will require input and collaboration from the refugee community, including non-quota refugees, as well as health providers and key stakeholders.

6. Ethics approval and consent to participate

Ethical approval was granted from the Auckland University of Technology Ethics Committee (19/4). Participants provided informed written consent prior to participating.

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CRedit authorship contribution statement

Larisa Caviti: Conceptualization, Formal analysis, Investigation,

Methodology, Writing – original draft. **Nadia A. Charania:** Conceptualization, Formal analysis, Funding acquisition, Methodology, Project administration, Resources, Supervision, Writing – review editing. All authors attest they meet the ICMJE criteria for authorship.

Declaration of Competing Interest

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

Data availability

The data that has been used is confidential.

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