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## Challenges in the Vaccination of Migrants in Norway: Healthcare Provider Perspectives

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# Challenges in the Vaccination of Migrants in Norway: Healthcare Provider Perspectives

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## Abstract

*Objective:* The aim of this qualitative research study was to explore the challenges faced by healthcare providers in delivering vaccinations to migrants and migrants in accessing vaccinations in Norway.

*Methods:* In June 2019, the authors interviewed 7 healthcare providers in South-Eastern and Western Norway who work in infectious diseases or migrant health, using a semi-structured interview guide.

*Results:* An inductive, exploratory analysis identified key themes that were reviewed and analyzed in light of existing literature. According to the informants, the Childhood Immunization Programme is effective in including migrant children within the national vaccination schedule. However, gaps in vaccination appear to exist with regards to adult migrants as well as working migrants. There is currently no structured approach to vaccinating adult migrants in Norway, including no guidelines from governing bodies on how to organize vaccination to adult migrants in municipalities. Further, there are many reasons why adult vaccination is not prioritized, such as tuberculosis screening and treatment taking precedence and the common assumption among healthcare providers that vaccinations are an issue of childhood.

*Conclusion:* The development of equitable immunization programs requires an understanding of the multifactorial barriers to immunization, such as those posed by policies, structures, and governance bodies. This qualitative research study demonstrated that challenges exist in the vaccination of migrants in Norway and that they are coherent with those experienced throughout the EU, namely gaps in vaccinating adult migrants, working migrants, and internal EU migrants. This research provides direction for future investigations and highlights the need for the inclusion of migrant status in the Norwegian Immunization Registry.

### Strengths and limitations of this study

- *What is already known on this subject?*  
Cultural factors, knowledge barriers, insufficient access to healthcare, and vaccine hesitancy have been identified as common barriers to immunization faced by migrants.
- *What this study adds?*  
This study illuminates some of the challenges with delivering vaccinations to migrant populations in Norway from a healthcare provider perspective.
- *Limitations*  
Insufficient sample size for statistical measurement
- *Policy implications*  
Close gaps in policies and care for working migrants, especially for those from within the EU and short-stay migrants.

## Introduction

Migrant populations in the European Union (EU) suffer a disproportionate burden of infectious diseases.<sup>1</sup> Some subgroups of migrants may be particularly vulnerable to infectious diseases because of poor conditions in countries of origin where civil unrest or war have caused vaccination programs to be interrupted, or in transit to the host country where access to healthcare is limited and migrants may be exposed to malnutrition, overcrowding, and unsanitary conditions.<sup>2,3</sup> Additionally, migrants within the EU may be under-immunized for vaccine-preventable diseases (VPDs).<sup>4</sup> The European Centre for Disease Prevention and Control (ECDC) released targeted guidance for effective screening and vaccination of newly arrived migrants, which states that there is a clear benefit to enrolling migrants in vaccination programmes and ensuring catch-up vaccination.<sup>2</sup> Further, as part of the European Vaccine Action Plan 2015-2020, all EU countries committed to meeting regional vaccination coverage targets, eliminating endemic measles and rubella, controlling hepatitis B infection, and sustaining polio-free status in an effort towards creating a Region free of VPDs.<sup>5</sup> However, progress towards equitably extending the benefits of vaccination to all and meeting regional vaccination coverage targets has been slow, and there still exists significant gaps in understanding how to deliver effective vaccination services to diverse and mobile migrant populations in the EU.<sup>3,6,7,8</sup>

In recent years, immigration to Norway has greatly increased.<sup>9,10</sup> At the end of 2019, there were approximately 765 000 first generation migrants in Norway, which amounts to about 14.4 percent of the total population in Norway.<sup>11,12</sup> According to the Norwegian Institute of Public Health (NIPH), most new cases of tuberculosis and hepatitis B and half of new HIV cases occur among migrants in Norway.<sup>13</sup> Although research studies on migrant health and migrant experiences with health services in Norway has grown in recent years, the NIPH claims that research on migrant health is still lacking.<sup>13</sup> To date and to the best of the authors' knowledge, there has been no targeted research on the vaccination of migrant populations in Norway.

Cultural factors, knowledge barriers, insufficient access to healthcare, and vaccine hesitancy have been identified as common barriers to immunization faced by migrants.<sup>14</sup> In the Norwegian context, obstacles for migrant populations in accessing and navigating the primary healthcare system have been studied and are in parallel with challenges documented in the literature, such as conflicting ideas about the role of the doctor, language barriers, and cultural differences.<sup>15</sup> However, systems-, provider-, and patient-related challenges with delivering vaccination programs to migrants in Norway have not been studied. The development of equitable immunization programs requires an understanding of the multifactorial barriers to immunization, such as those posed by policies, structures, and governance bodies and faced by both healthcare providers (HCPs) and migrants.<sup>7</sup> As such, this qualitative research study aims to elucidate the challenges faced by HCPs in delivering vaccinations to migrants and migrants in accessing vaccinations in Norway.

## Methods

Throughout June 2019, interviews with seven HCPs with a specialization in infectious diseases or migrant health were conducted in predominantly South-Eastern Norway, with one interview taking place in Western Norway. Purposive sampling was used to select interview participants. Specifically, HCPs working in the field of infectious diseases or migrant health were contacted via email and asked about their willingness to be interviewed for the study. The interviews were approximately one hour in length and conducted in a semi-structured format using an interview guide. The interviews included discussions on the process of how migrants obtained vaccinations in their respective municipalities and challenges faced by migrants and HCPs in this process. Interviews were audio-taped and transcribed verbatim, which was followed by an inductive, exploratory analysis that identified key themes that emerged from the perspectives of the HCPs.

At the beginning of interviews, key terms were defined and clarified for interview participants. The following definitions were applied:

- Immigrant: a person who makes a conscious choice to leave their country to seek a better life elsewhere.
- Refugee: a person who has been forced to leave their country in order to escape war, persecution, or natural disaster, and is seeking protection in another country.
- Asylum seeker: A person who awaits a decision on the application for refugee status.
- Working migrant: A type of legal immigrant that is entering Norway to pursue work.

In this research study, the term “migrant” refers to anyone who has moved from their home country to another, which encapsulates all the aforementioned subtypes.

The definition for VPDs was also clarified at the beginning of interviews; specifically, the ECDC definition was used.<sup>2</sup>

Identifiable or personal data were not audio-recorded nor transcribed to ensure anonymity of participants and therefore ethics approval was not required. All participants were fully informed about the study and verbal consent was obtained.

### **Patient and Public Involvement**

No patient involved

## Results

### ***Childhood Immunization Programme***

All HCPs agreed that the Childhood Immunization Programme (CIP) in Norway functions well and captures all children, including migrant children, within the national vaccination schedule. Participants described how the CIP in Norway is well established and enforced by NIPH and the Norwegian law. The NIPH provides national recommendations for which vaccines to include in

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2  
3 the program, where to deliver vaccinations, and who is responsible for providing the  
4 vaccinations.  
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### 6 7 ***Vaccine Coverage & Uptake Among Migrants***

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9 All participants acknowledged that Norway has been fortunate to have high vaccine coverage to  
10 date. All HCPs were in agreement that non-Western migrants, especially refugees, are very  
11 accepting of vaccination and should not be considered a public health concern. Although it was  
12 stated to be very rare, a few HCPs mentioned that those that refuse vaccines are more likely to  
13 be Norwegians or migrants from Europe. The responses of the participants demonstrated that  
14 vaccine hesitancy does not appear to be a large problem at present.  
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### 16 17 18 ***Lack of Data on Migrant Vaccination Coverage***

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20 Most HCPs expressed that data on the vaccine coverage of migrants is needed to know  
21 whether there are gaps in vaccine coverage among migrants. Currently, the Norwegian  
22 Immunization Registry, SYSVAK, does not stratify by migrant status. As such, HCPs were  
23 hesitant when discussing challenges faced by migrants in accessing vaccinations.  
24

### 25 26 27 ***Organization and Coordination of Vaccination for Adult Migrants***

28  
29 The Norwegian Directorate of Health provides national guidelines on vaccination for migrants,  
30 which includes what vaccines should be provided and to whom. However, municipalities are  
31 responsible for organizing *how* to deliver vaccination to adult migrant populations, including  
32 where and by whom. Many HCPs felt that the guidelines for vaccinating adult migrants were  
33 sufficient and that they experienced no major challenges; however, a few respondents  
34 experienced a number of challenges in their work. A few interviewees felt that the system for  
35 vaccinating adult migrants within municipalities was “ad hoc”, involved “detective work”, and not  
36 prioritized. Without clear protocol or guidelines on how to deliver vaccines to adult migrants  
37 within municipalities and with no clear division of responsibilities among HCPs, a few  
38 respondents suggested that vaccination may not always be offered to adult migrants nor a  
39 thorough vaccine history completed. However, some HCPs did have organized systems for  
40 ensuring adult migrants were vaccinated in their municipalities. Regardless of their different  
41 experiences, many respondents stated that migrants who are lacking vaccinations are likely to  
42 be identified at some point when accessing healthcare services, but that it may be delayed and  
43 not done in the most efficient and effective manner. These responses suggested that although  
44 municipalities are responsible for organizing a system for vaccinating adult migrants, the roles  
45 and responsibilities of HCPs may not be clearly outlined nor vaccination of adults prioritized  
46 within their municipalities.  
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### 51 52 53 ***Priorities in Infectious Disease Control***



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3 All participants described that HCPs balance numerous tasks of which the vaccination of adults  
4 within municipalities is not a large priority. A few respondents explained that it is likely that  
5 Norwegian HCPs often assume that adults are vaccinated since most vaccinations are  
6 scheduled for childhood. Participants mentioned that HCPs that do not work directly in migrant  
7 health may not remember to offer vaccinations to adult migrants attending their clinics.  
8  
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10 Further, a few respondents highlighted that screening, vaccination, and treatment for  
11 tuberculosis (TB) is prioritized over adult vaccination. TB screening and follow-up is mandated  
12 by law wherein HCPs in refugee reception centres and in municipalities must follow specific  
13 protocol for documenting, screening, and treating TB. On the contrary, clear and enforced  
14 protocol for documenting and providing adult vaccinations does not exist; respondents  
15 described how this can lead vaccinations to not be offered to some adult migrants nor rigorously  
16 documented in refugee reception centres and municipalities.  
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### 21 ***Working Migrants Vaccination Challenges***

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23 There are no requirements to obtain vaccinations for working migrants; however, if they come  
24 from a country with a high prevalence of TB and intend on staying more than 3 months, then  
25 they must undergo screening for TB. Some participants described how this may be a potential  
26 gap in the system wherein many working migrants are not offered vaccination. It was noted by  
27 many HCPs interviewed that there are some working migrants that are permitted to continuously  
28 re-apply for short work permits and can therefore live in Norway for long periods of time without  
29 having to complete a health examination, including an assessment of vaccine history.  
30 Many HCPs described that working migrants are being identified when contacting healthcare  
31 services and then being referred to full health screening. In other cases, some employers may  
32 require working migrants to complete a health examination. However, even if offered  
33 vaccinations, participants claimed that it is likely that working migrants would refuse since  
34 vaccinations are not free of charge for working immigrants and can be quite costly.  
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### 40 ***Financial Challenges for Migrants***

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42 All vaccines are free for infants, children, and adolescents; however, there may be fees for adult  
43 vaccinations. Top priority vaccinations, such as MMR and the polio vaccine, are free for  
44 refugees and asylum seekers and are provided upon arrival. Hepatitis B and the BCG vaccine  
45 are also free for some migrants, depending on which country they come from. However, aside  
46 from these vaccinations, vaccines are not free of charge. It was mentioned by a HCP that  
47 additional vaccinations may not be accepted by refugees since they only receive some financial  
48 support from the state and vaccines are expensive. As mentioned above, working migrants  
49 need to pay for vaccines and that would likely be a burden given the high price for vaccines.  
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### 53 ***Education for Healthcare Providers on Migrant Health***

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3 It was stressed by some of the HCPs that there should be more education for HCPs on issues  
4 related to migrant health, such as how to use a translator effectively, cultural humility, and how  
5 to discuss challenging topics, such as psychological trauma. Currently, there are no mandatory  
6 courses on migrant health within HCP education for both nurses and doctors.  
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### 9 ***Translators & Navigating Language Barriers***

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11 Participant responses were divided on the use of translators in their clinical services. Some  
12 respondents described no challenges with obtaining and using a translator, stating that they  
13 always use one when needed and believe that their colleagues did the same. Alternatively,  
14 some HCPs had the impression that a number of HCPs do not use translators as frequently as  
15 they should. One participant believed that this was largely due to the lack of HCP knowledge  
16 around how to arrange a translator as well as how to navigate using a translator. A few  
17 participants also expressed that arranging a translator can be a “complicated” process - it takes  
18 more time and would be easier to just not offer the service or even not see migrant patients to  
19 avoid this additional task. One participant stated many HCPs see using a translator as a burden,  
20 as opposed to a necessity. On the migrant end, a few HCPs felt that patients are not aware of  
21 their right to having a translator and that they are not charged for this service. One HCP felt that  
22 HCPs are not educating their patients on their right to having a translator.  
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## 30 **Discussion**

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33 This study illuminates some of the challenges with delivering vaccinations to migrant  
34 populations in Norway from a healthcare provider perspective.  
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37 The inclusion of migrant children and adolescents in national vaccination schedules is a key  
38 feature of the ECDC guidelines (Hargreaves, 2018).<sup>2,16,17</sup> Children are considered to be at  
39 greatest risk of contracting VPDs and represent approximately 25% of the total migrant  
40 population in the EU Region.<sup>18</sup> This research study has demonstrated that Norway’s national  
41 immunization program for children is comprehensive and inclusive of migrant infants, children,  
42 and adolescents in Norway.  
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45 HCPs overwhelmingly agreed that it was difficult to identify inequities in immunization given the  
46 lack of data on immunization coverage in migrants. In fact, there is a lack of systematic data  
47 collection throughout European countries on immunization coverage and determinants of non-  
48 immunization among migrants.<sup>1,19</sup> To increase equity in immunization provision, Boyce et al.  
49 (2019) suggest that countries should disaggregate immunization uptake data by key  
50 determinants of inequalities including ethnicity and migration status.<sup>7</sup> Connecting data on the  
51 social determinants of health with vaccination coverage has immense potential for improving  
52 services and increasing vaccination coverage as has been demonstrated within a number of  
53 countries in the EU.<sup>7,20</sup> Our research highlights the limitation of the current national  
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3 immunization registry in Norway and the value of integrating migrant status in immunization  
4 uptake data to direct future research and initiatives on migrant health.  
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7 Furthermore, it is evident that gaps exist in the vaccination for adult migrants. As described in  
8 the results, some municipalities have not designed a clear and coordinated system for ensuring  
9 that adult migrants are vaccinated. This can lead to a lack of clarity around the division of  
10 responsibilities among HCPs and vaccinations not being offered to adult migrants. This is  
11 coherent with findings from the ECDC that found a lack of clarity among HCPs regarding  
12 approaches to catch-up vaccinations in adult migrants.<sup>17</sup> A quote by an Estonian HCP captures  
13 the issue perfectly: “The completeness of adult migrant vaccination depends on the health care  
14 provider - if they consider vaccination as a priority”.<sup>17</sup> This sentiment was echoed among  
15 Norwegian HCPs as many HCPs felt that vaccination was not always prioritized and offered to  
16 adult migrants. It is our suggestion to conduct further research on how to ensure that adult  
17 migrants are provided vaccinations. Further, developing guidelines on where and by whom  
18 should vaccinations be delivered for adult migrants may be worth consideration.  
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23 Our research highlights the gap in providing vaccinations to working migrants in Norway.  
24 Europe-wide research completed by the ECDC has highlighted important yet frequently  
25 neglected dimensions of migration in the EU such as labour migration and internal EU  
26 migration, which have been linked to measles outbreaks.<sup>17</sup> In the ECDC dataset, internal EU  
27 migrants contributed relatively high numbers of hepatitis B and hepatitis C, demonstrating the  
28 importance of including internal and labour migrants within vaccination.<sup>21</sup> In this research,  
29 numerous HCPs expressed that there were gaps in policies and care for working migrants,  
30 especially for those from within the EU and short-stay migrants. Further investigations and  
31 initiatives for screening and vaccinating working migrants should be considered by Norwegian  
32 decision makers.  
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37 Our research demonstrates that vaccine hesitancy is likely uncommon among non-Western  
38 migrants in Norway, namely refugees and asylum seekers, but it may be a larger concern  
39 among migrants from within the EU. Many refugees and migrants arriving in Europe come from  
40 Middle Eastern countries where vaccines are widely accepted and coverage has traditionally  
41 been high.<sup>22</sup> This finding is important considering previous cases where infectious disease  
42 outbreaks were blamed on refugees and asylum seekers, such as during the rise of measles  
43 throughout the EU in 2018.<sup>23</sup> There is no evidence that justifies viewing refugees or asylum  
44 seekers as a public health threat and this fear is irrational and harmful.<sup>24</sup>  
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47  
48 Challenges appear to exist with some HCPs’ motivation to use translators and their knowledge  
49 of how to arrange and effectively use translators in their clinical services. Given that translators  
50 are important for effective implementation of national vaccine policies<sup>18</sup>, potential barriers to  
51 using translators described should be further explored to ensure providing appropriate and  
52 accessible healthcare.  
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### 55 **Limitations**

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4 Due to time constraints, this study did not interview migrants and therefore, the study focuses  
5 on the challenges faced by HCPs as opposed to challenges faced by migrants. However, the  
6 voices of migrants are key in understanding their challenges and should be prioritized in future  
7 studies. There were a limited number of interviewees given that data collection was conducted  
8 during the Norwegian summer months where many are on holidays. This limits the ability to  
9 make generalizations. Nevertheless, the authors believe the research is representative, but not  
10 entirely comprehensive, of the challenges in vaccinating migrants in Norway as consistent  
11 themes emerged across the interviews. Moreover, the interviews were in depth providing quality  
12 content, and interviewees were from all different municipalities and working in different types of  
13 clinics throughout Norway, providing a wide range of perspectives. Future research should  
14 extend deeper into the topics described and gather information from a larger sample.  
15 Interviews were conducted in English, but all participants spoke English well and no major  
16 language barriers were experienced during the interviews. The interview transcripts were coded  
17 by one researcher increasing the potential for bias into the research study; however, interviews  
18 were audio recorded, transcribed verbatim, and systematically coded to main integrity and  
19 quality of the data. Lastly, there are types of migrants that were not discussed in this research  
20 study, such as family reunification immigrants, asylum seekers, and undocumented or  
21 “paperless” migrants, whose experiences with vaccination require further research.  
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## 29 **Conclusion**

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31 This research provides new information on both the strengths and weaknesses of the practice of  
32 vaccinating migrants in Norway. The results are similar to challenges experienced throughout  
33 the EU, such as gaps in vaccinating adult migrants, working migrants, and internal EU migrants.  
34 Given the rising level of migration into Europe, the vaccination of migrant populations has  
35 become a key priority in Europe.<sup>2</sup> Findings from this study can be used to direct further research  
36 throughout Norway and countries with similar contexts. During this time of growing anti-  
37 immigrant sentiments and political agendas, there is an urgent need for the public health  
38 community to ensure that the needs of migrants are met and that HCPs are providing equitable,  
39 accessible, and effective services.  
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## 43 **Statements**

### 44 **Contributorship statement**

45 Anna Socha collected and analyzed the data and drafted the manuscript. Jörn Klein developed  
46 the idea, contributed in the questionnaire and helped drafting the manuscript.

### 47 **Competing interests**

48 none

### 49 **Funding**

50 none

### 51 **Data sharing statement**

52 Anonymized data are available upon reasonable request  
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# Challenges in the Vaccination of Migrants in Norway: Healthcare Provider Perspectives

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## 24 Abstract

25 *Background:* Migrant populations in the European Union suffer a disproportionate burden of  
26 infectious diseases and may be particularly vulnerable due to poor conditions in countries of origin  
27 or throughout transit to the host country. Given the rising level of migration into Europe, the  
28 vaccination of migrant populations has become a key priority, with European countries committing  
29 to equitably extending the benefits of vaccination to all. However, in Norway, little is known about  
30 the vaccination of migrant populations.

31  
32 *Objective:* The aim of this qualitative research study was to explore the process of vaccinating  
33 migrant populations in Norway and elucidate any challenges as perceived by healthcare  
34 providers. This involved exploring the challenges faced by healthcare providers in delivering  
35 vaccinations to migrants as well as potential barriers faced by migrants in accessing vaccinations  
36 in Norway, from the perspectives of healthcare providers.

37  
38 *Methods:* In June 2019, the authors conducted semi-structured interviews with 7 healthcare  
39 providers who are involved in vaccinating migrants in South-Eastern and Western Norway. This  
40 included health care providers working in general practice, public health and infectious disease  
41 clinics, migrant health clinics, and public health institutes.

42  
43 *Results:* An inductive, exploratory analysis identified key themes that were reviewed and analyzed  
44 in light of existing literature. According to the informants, the Childhood Immunization Programme  
45 is effective in including migrant children within the national vaccination schedule. However, gaps  
46 in vaccination appear to exist with regards to adult migrants as well as working migrants. There  
47 is currently no consistent or structured approach to vaccinating adult migrants in Norway,  
48 including no guidelines from governing bodies on how to organize vaccination to adult migrants  
49 in municipalities. Further, reasons why adult vaccination is not prioritized were provided, such as  
50 tuberculosis screening and treatment taking precedence and the common assumption among  
51 healthcare providers that vaccinations are dealt with in childhood.

52  
53 *Conclusion:* The development of equitable immunization programs requires an understanding of  
54 the multifactorial barriers to immunization, such as those posed by policies, structures, and  
55 governance bodies, or lack thereof. It also entails understanding the administration of such  
56 policies and the perspectives of those who are responsible for the delivery of vaccination, namely

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3 57 healthcare providers. This qualitative research study demonstrated that challenges exist in the  
4 58 vaccination of migrants in Norway and that they are coherent with those experienced throughout  
5 59 the EU, principally the presence of gaps in vaccinating adult migrants, working migrants, and  
6 60 internal EU migrants. This research provides direction for future investigations and highlights the  
7 61 need for the inclusion of migrant status in the Norwegian Immunization Registry.  
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## 13 62 Strengths and limitations of this study

- 16 63 • This study illuminates some of the challenges with delivering vaccinations to migrant  
17 64 populations in Norway from a healthcare provider perspective.
- 19 65 • Challenges exist in the vaccination of migrants in Norway.
- 21 66 • There is currently no consistent or structured approach to vaccinating adult migrants in  
22 67 Norway.
- 24 68 • The voices of migrants are key in understanding their challenges and should be prioritized  
25 69 in future studies.

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## 71 Introduction

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73 Migrant populations in the European Union (EU) suffer a disproportionate burden of infectious  
74 diseases.<sup>1</sup> Some subgroups of migrants may be particularly vulnerable to infectious diseases  
75 because of poor conditions in countries of origin where civil unrest or war have caused vaccination  
76 programs to be interrupted, or in transit to the host country where access to healthcare is limited  
77 and migrants may be exposed to malnutrition, overcrowding, and unsanitary conditions.<sup>2,3</sup>  
78 Additionally, migrants within the EU may be under-immunized for vaccine-preventable diseases  
79 (VPDs).<sup>4</sup> The European Centre for Disease Prevention and Control (ECDC) released targeted  
80 guidance for effective screening and vaccination of newly arrived migrants, which states that there  
81 is a clear benefit to enrolling migrants in vaccination programmes and ensuring catch-up  
82 vaccination.<sup>2</sup> Further, as part of the European Vaccine Action Plan 2015-2020, all EU countries  
83 committed to meeting regional vaccination coverage targets, eliminating endemic measles and  
84 rubella, controlling hepatitis B infection, and sustaining polio-free status in an effort towards  
85 creating a Region free of VPDs.<sup>5</sup> However, progress towards equitably extending the benefits of  
86 vaccination to all and meeting regional vaccination coverage targets has been slow, and there  
87 still exists significant gaps in understanding how to deliver effective vaccination services to diverse  
88 and mobile migrant populations in the EU.<sup>3,6,7,8</sup>

89  
90 In recent years, immigration to Norway has greatly increased.<sup>9,10</sup> At the end of 2019, there were  
91 approximately 765 000 first generation migrants in Norway, which amounts to about 14.4 percent  
92 of the total population in Norway.<sup>11,12</sup> According to the Norwegian Institute of Public Health (NIPH),  
93 most new cases of tuberculosis and hepatitis B and half of new HIV cases occur among migrants  
94 in Norway.<sup>13</sup> Although research studies on migrant health and migrant experiences with health  
95 services in Norway has grown in recent years, the NIPH claims that research on migrant health  
96 is still lacking.<sup>13</sup> To date and to the best of the authors' knowledge, there has been no targeted  
97 research on the vaccination of migrant populations in Norway. In general, vaccination rates  
98 among the Norwegian population are high<sup>14</sup>, but not all migrants are included in such figures,  
99 which may have led to the negligence of migrant-specific challenges.

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101 Cultural factors, knowledge barriers, insufficient access to healthcare, and vaccine hesitancy have  
102 been identified as common barriers to immunization faced by migrants.<sup>15</sup> In the Norwegian  
103 context, obstacles for migrant populations in accessing and navigating the primary healthcare

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3 104 system have been studied and are in parallel with challenges documented in the literature, such  
4 as conflicting ideas about the role of the doctor, language barriers, and cultural differences.<sup>16</sup>  
5 105  
6 106 However, systems-, provider-, and patient-related challenges with delivering vaccination  
7 programs to migrants in Norway have not been studied. The development of equitable  
8 107 immunization programs requires an understanding of the multifactorial barriers to immunization,  
9 108 such as those posed by policies, structures, and governance bodies and faced by both healthcare  
10 109 providers (HCPs) and migrants.<sup>7</sup> As such, this qualitative research study aims to elucidate the  
11 110 challenges faced by HCPs in delivering vaccinations to migrants and migrants in accessing  
12 111 vaccinations in Norway.  
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## 19 113 Methods

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22 114 This qualitative, phenomenological study was conducted to explore the experiences of 7  
23 115 healthcare providers involved in the vaccination of migrants in Norway. The objective was to  
24 116 develop an understanding of the participants' perceptions of vaccination of migrants in Norway,  
25 including challenges faced by HCPs in delivering vaccinations and potentials barriers faced by  
26 117 migrants in accessing vaccinations.  
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32 120 Purposive sampling was used to select interview participants. Throughout June 2019, the  
33 121 researchers invited 23 HCPs working at different health stations (“helsestasjon” in Norwegian) or  
34 122 clinics, to be interviewed. In Norway, vaccination is primarily provided in these so called “health  
35 123 stations”. Health stations are under municipal jurisdiction and are responsible for preventative  
36 124 health services, including national vaccination programs. However, the organization of the  
37 125 municipal health system varies based on community needs wherein some municipalities have  
38 126 health stations specialized for certain populations or issues, such migrants and Norwegians who  
39 127 return to the country from travel. Therefore, the researchers reached out to clinics and a policy  
40 128 and research institute in the region that were involved in vaccination work, which included general  
41 129 practitioner clinics, public health/infectious disease/travel clinics, a public health institute, and  
42 130 migrant health stations. HCPs were contacted via email and asked about their willingness to be  
43 131 interviewed for the study. All HCPs who agreed to participate were interviewed. As such, seven  
44 132 HCPs working at different health stations were interviewed; this included nurses and physicians  
45 133 from public health/infectious diseases/travel clinics, a public health and infectious disease  
46 134 institute, a migrant health clinic, and a general practitioner clinic.  
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3 136 All interviews were conducted in South-Eastern Norway, except with one interview taking place  
4 137 in Western Norway. Interviews took place within the health station clinics. The interviews were  
5 138 approximately one hour in length and conducted in a semi-structured format using an interview  
6 139 guide (supplementary file). The interviews included discussions on the process of how migrants  
7 140 obtained vaccinations in their respective municipalities and challenges faced by migrants and  
8 141 HCPs in this process. Interviews were audio-taped and transcribed verbatim, which was followed  
9 142 by an inductive, exploratory analysis that identified key themes from the perspectives of the  
10 143 HCPs. Data was transcribed and coded by hand. Themes were compared against the existing  
11 144 literature of vaccination in Norway and of vaccination challenges in Europe to ensure reliability  
12 145 and trustworthiness of the data.  
13 146

14 147 At the beginning of interviews, key terms were defined and clarified for interview participants. The  
15 148 following definitions were applied:

- 16 149 ● Immigrant: a person who makes a conscious choice to leave their country to seek a better  
17 150 life elsewhere.
- 18 151 ● Refugee: a person who has been forced to leave their country in order to escape war,  
19 152 persecution, or natural disaster, and is seeking protection in another country.
- 20 153 ● Asylum seeker: A person who awaits a decision on the application for refugee status.
- 21 154 ● Working migrant: A type of legal immigrant that is entering Norway to pursue work.

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23 156 In this research study, the term “migrant” refers to anyone who has moved from their home country  
24 157 to another, which encapsulates all the aforementioned subtypes.  
25 158

26 159 The definition for VPDs was also clarified at the beginning of interviews; specifically, the ECDC  
27 160 definition was used.<sup>2</sup>  
28 161

29 162 Identifiable or personal data were not audio-recorded nor transcribed to ensure anonymity of  
30 163 participants and therefore ethics approval was not required. All participants were fully informed  
31 164 about the study and verbal consent was obtained.  
32 165

33 166 *Author Reflexivity Statement:*

34 167 The lead author of this work is a White, middle-class, native English-speaking female of European  
35 168 Canadian ancestry. Her limitations in this work is that she is not a migrant or Norwegian. She is  
36 169 aware that she views the challenges of migrants and those of Norwegian healthcare providers

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3 170 from an inherently outsider's perspective and that by not being Norwegian, she does not have an  
4 171 in-depth, first-hand knowledge of the Norwegian healthcare system. However, she has worked  
5 172 with migrant populations and has dedicated her studies and work to causes of social justice and  
6 173 health equity. She views health as a human right and migration in a positive light, owing to her  
7 174 personal experiences as a daughter of immigrant parents and as a global health researcher  
8 175 undertaking critical discussions in the area of migration and health. Furthermore, throughout this  
9 176 research project, she had the support of a Norwegian and immigrant supervisor to support her in  
10 177 understanding the local Norwegian context and healthcare system.

11 178 *Patient and public involvement:*

12 179 No patient involved.

## 13 180 Results

### 14 181 15 182 Childhood Immunization Programme

16 183  
17 184 All HCPs agreed that the Childhood Immunization Programme (CIP) in Norway functions well and  
18 185 captures all children, including migrant children, within the national vaccination schedule.  
19 186 Participants described how the CIP in Norway is well established and enforced by NIPH and the  
20 187 Norwegian law. The NIPH provides national recommendations for which vaccines to include in  
21 188 the program, where to deliver vaccinations, and who is responsible for providing the vaccinations.

### 22 189 23 190 Vaccine Coverage & Uptake Among Migrants

24 191  
25 192 All participants acknowledged that Norway has been fortunate to have high vaccine coverage to  
26 193 date. All HCPs were in agreeance that non-Western migrants, especially refugees, are very  
27 194 accepting of vaccination and should not be considered a public health concern. Although it was  
28 195 stated to be very rare, a few HCPs mentioned that those that refuse vaccines are more likely to  
29 196 be Norwegians or migrants from Europe. The responses of the participants demonstrated that  
30 197 vaccine hesitancy does not appear to be a large problem at present.

### 31 198 32 199 Lack of Data on Migrant Vaccination Coverage

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3 201 Most HCPs expressed that data on the vaccine coverage of migrants is needed to know whether  
4 202 there are gaps in vaccine coverage among migrants. Currently, the Norwegian Immunization  
5 203 Registry, SYSVAK, does not stratify by migrant status. As such, HCPs were hesitant when  
6 204 discussing challenges faced by migrants in accessing vaccinations as perceived by health  
7 205 workers.  
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## 12 207 Organization and Coordination of Vaccination for Adult Migrants

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15 209 The Norwegian Directorate of Health provides national guidelines on vaccination for migrants,  
16 210 which includes what vaccines should be provided and to whom. However, municipalities are  
17 211 responsible for organizing *how* to deliver vaccination to adult migrant populations, including where  
18 212 and by whom. Many HCPs felt that the guidelines for vaccinating adult migrants were sufficient  
19 213 and that they experienced no major challenges; however, a couple respondents experienced a  
20 214 number of challenges in their work. A couple interviewees felt that the system for vaccinating adult  
21 215 migrants within municipalities was “ad hoc”, involved “detective work”, and was not prioritized.  
22 216 Without clear a protocol or guidelines on how to deliver vaccines to adult migrants within  
23 217 municipalities and with no clear division of responsibilities among HCPs, a few respondents  
24 218 suggested that vaccination may not always be offered to adult migrants nor a thorough vaccine  
25 219 history completed. However, some HCPs did have organized systems for ensuring adult migrants  
26 220 were vaccinated in their municipalities. Regardless of their different experiences, many  
27 221 respondents stated that migrants who are lacking vaccinations are likely to be identified at some  
28 222 point when accessing healthcare services, but that it may be delayed and not done in the most  
29 223 efficient and effective manner. These responses suggested that although municipalities are  
30 224 responsible for organizing a system for vaccinating adult migrants, the roles and responsibilities  
31 225 of HCPs may not be clearly outlined nor vaccination of adults prioritized within their municipalities.  
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## 45 227 Priorities in Infectious Disease Control

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47 229 All participants described that HCPs balance numerous tasks of which the vaccination of adults  
48 230 within municipalities is not a large priority. A few respondents explained that it is likely that  
49 231 Norwegian HCPs often assume that adults are vaccinated since most vaccinations are scheduled  
50 232 for childhood. Participants mentioned that HCPs that do not work directly in migrant health, such  
51 233 as general practitioners, may not remember to offer vaccinations to adult migrants attending their  
52 234 clinics.  
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5 236 Further, a few respondents highlighted that screening, vaccination, and treatment for tuberculosis  
6 237 (TB) is prioritized over adult vaccination. TB screening and follow-up is mandated by law wherein  
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8 238 HCPs in refugee reception centres and in municipalities must follow specific protocol for  
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10 239 documenting, screening, and treating TB. On the contrary, clear and enforced protocol for  
11 240 documenting and providing adult vaccinations does not exist; respondents described how this can  
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13 241 lead vaccinations to not be offered to some adult migrants nor rigorously documented in refugee  
14 242 reception centres and municipalities.

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17 244 A gap in hepatitis screening of pregnant women was not mentioned by informants.

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20 246 Working Migrants Vaccination Challenges

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23 248 There are no requirements to obtain vaccinations for working migrants; however, if they come  
24 249 from a country with a high prevalence of TB and intend on staying more than 3 months, then they  
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26 250 must undergo screening for TB. Some participants described how this may be a potential gap in  
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28 251 the system wherein many working migrants are not offered vaccination. It was noted by many  
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30 252 HCPs interviewed that there are some working migrants that are permitted to continuously re-  
31 253 apply for short work permits and can therefore live in Norway for long periods of time without  
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33 254 having to complete a health examination, including an assessment of vaccine history.  
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35 255 Many HCPs described that working migrants are being identified when contacting healthcare  
36 256 services and then being referred to full health screening. In other cases, some employers may  
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38 257 require working migrants to complete a health examination. However, even if offered vaccinations,  
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40 258 participants claimed that it is likely that working migrants would refuse since vaccinations are not  
41 259 free of charge for working immigrants and can be quite costly.

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44 261 Financial Challenges for Migrants

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47 263 All vaccines are free for infants, children, and adolescents; however, there may be fees for adult  
48 264 vaccinations. Top priority vaccinations, such as MMR and the polio vaccine, are free for refugees  
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50 265 and asylum seekers and are provided upon arrival. Hepatitis B and the BCG vaccine are also free  
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52 266 for some migrants, depending on which country they come from. However, aside from these  
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54 267 vaccinations, vaccines are not free of charge. It was mentioned by a HCP that additional  
55 268 vaccinations may not be accepted by refugees since they only receive some financial support

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3 269 from the state and vaccines are expensive. As mentioned above, working migrants need to pay  
4 270 for vaccines and that would likely be a burden given the high price for vaccines.

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8 272 Education for Healthcare Providers on Migrant Health  
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11 274 It was stressed by some of the HCPs that there should be more education for HCPs on issues  
12 275 related to migrant health, such as how to use a translator effectively, cultural humility, and how to  
13 276 discuss challenging topics, such as psychological trauma. Currently, there are no mandatory  
14 277 courses on migrant health within HCP education for both nurses and doctors.

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19 279 Translators & Navigating Language Barriers

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22 281 Participant responses were divided on the use of translators in their clinical services. Some  
23 282 respondents described no challenges with obtaining and using a translator, stating that they  
24 283 always use one when needed and believe that their colleagues did the same. Alternatively, some  
25 284 HCPs had the impression that a number of HCPs do not use translators as frequently as they  
26 285 should. One participant believed that this was largely due to the lack of HCP knowledge around  
27 286 how to arrange a translator as well as how to navigate using a translator. A few participants also  
28 287 expressed that arranging a translator can be a “complicated” process - it takes more time and  
29 288 would be easier to just not offer the service or even not see migrant patients to avoid this additional  
30 289 task. One participant stated many HCPs see using a translator as a burden, as opposed to a  
31 290 necessity. A few HCPs felt that patients are not aware of their right to having a translator and that  
32 291 they are not charged for this service. One HCP felt that HCPs are not educating their patients on  
33 292 their right to having a translator.

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## 46 295 Discussion

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51 297 This study illuminates some of the challenges with delivering vaccinations to migrant populations  
52 298 in Norway from a healthcare provider perspective.  
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3 300 The inclusion of migrant children and adolescents in national vaccination schedules is a key  
4 301 feature of the ECDC guidelines (Hargreaves, 2018).<sup>2,17,18</sup> Children are considered to be at  
5 302 greatest risk of contracting VPDs and represent approximately 25% of the total migrant population  
6 303 in the EU Region.<sup>19</sup> This research study has demonstrated that Norway's national immunization  
7 304 program for children is comprehensive and inclusive of migrant infants, children, and adolescents  
8 305 in Norway.  
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13 306  
14 307 HCPs overwhelmingly agreed that it was difficult to identify inequities in immunization given the  
15 308 lack of data on immunization coverage in migrants. In fact, there is a lack of systematic data  
16 309 collection throughout European countries on immunization coverage and determinants of non-  
17 310 immunization among migrants.<sup>1,20</sup> To increase equity in immunization provision, Boyce et al.  
18 311 (2019) suggest that countries should disaggregate immunization uptake data by key determinants  
19 312 of inequalities including ethnicity and migration status.<sup>7</sup> Connecting data on the social  
20 313 determinants of health with vaccination coverage has immense potential for improving services  
21 314 and increasing vaccination coverage as has been demonstrated within a number of countries in  
22 315 the EU.<sup>7,21</sup> Our research highlights the limitation of the current national immunization registry in  
23 316 Norway and the value of integrating migrant status in immunization uptake data to direct future  
24 317 research and initiatives on migrant health.  
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33 319 Furthermore, it is evident that gaps exist in the vaccination for adult migrants. As described in the  
34 320 results, some municipalities have not designed a clear and coordinated system for ensuring that  
35 321 adult migrants are vaccinated. This can lead to a lack of clarity around the division of  
36 322 responsibilities among HCPs and vaccinations not being offered to adult migrants. This is  
37 323 coherent with findings from the ECDC that found a lack of clarity among HCPs regarding  
38 324 approaches to catch-up vaccinations in adult migrants.<sup>17</sup> A quote by an Estonian HCP captures  
39 325 the issue perfectly: "The completeness of adult migrant vaccination depends on the health care  
40 326 provider - if they consider vaccination as a priority".<sup>17</sup> This sentiment was echoed among  
41 327 Norwegian HCPs as many HCPs felt that vaccination was not always prioritized and offered to  
42 328 adult migrants. It is our suggestion to conduct further research on how to ensure that adult  
43 329 migrants are provided vaccinations. Further, developing guidelines on where and by whom should  
44 330 vaccinations be delivered for adult migrants may be worth consideration.  
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54 332 Our research highlights the gap in providing vaccinations to working migrants in Norway. Europe-  
55 333 wide research completed by the ECDC has highlighted important yet frequently neglected  
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3 334 dimensions of migration in the EU such as labour migration and internal EU migration, which have  
4 335 been linked to measles outbreaks.<sup>18</sup> In the ECDC dataset, internal EU migrants contributed  
5 336 relatively high numbers of hepatitis B and hepatitis C, demonstrating the importance of including  
6 337 internal and labour migrants within vaccination.<sup>22</sup> In this research, numerous HCPs expressed  
7 338 that there were gaps in policies and care for working migrants, especially for those from within  
8 339 the EU and short-stay migrants. Further investigations and initiatives for screening and  
9 340 vaccinating working migrants should be considered by Norwegian decision makers.

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16 342 Our research demonstrates that vaccine hesitancy is likely uncommon among non-Western  
17 343 migrants in Norway, namely refugees and asylum seekers, but it may be a larger concern among  
18 344 migrants from within the EU. Many refugees and migrants arriving in Europe come from Middle  
19 345 Eastern countries where vaccines are widely accepted and coverage has traditionally been high.<sup>23</sup>  
20 346 This finding is important considering previous cases where infectious disease outbreaks were  
21 347 blamed on refugees and asylum seekers, such as during the rise of measles throughout the EU  
22 348 in 2018.<sup>24</sup> There is no evidence that justifies viewing refugees or asylum seekers as a public health  
23 349 threat and this fear is irrational and harmful.<sup>25</sup>

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30 351 Challenges appear to exist with some HCPs' motivation to use translators and their knowledge of  
31 352 how to arrange and effectively use translators in their clinical services. Given that translators are  
32 353 important for effective implementation of national vaccine policies<sup>19</sup>, potential barriers to using  
33 354 translators described should be further explored to ensure providing appropriate and accessible  
34 355 healthcare.

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40 357 None of the informants mentioned gaps in hepatitis screening of pregnant women, despite it being  
41 358 a well-known migrant health issue. We believe that this may be due to a lack of awareness of the  
42 359 issue by HCPs. Until 2018, Norway was among the few countries in Europe that did not test all  
43 360 pregnant women for chronic hepatitis B infection.

46 361  
47 362 Limitations

49 363  
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51 364 Due to time constraints, this study did not interview migrants and therefore, the study focuses on  
52 365 the challenges faced by HCPs as opposed to challenges faced by migrants. However, the voices  
53 366 of migrants are key in understanding their challenges and should be prioritized in future studies.  
54 367 There were a limited number of interviewees given that data collection was conducted during the

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2  
3 368 Norwegian summer months where many are on holiday. This limits the ability to make  
4  
5 369 generalizations. Nevertheless, the authors believe the research is representative, but not entirely  
6  
7 370 comprehensive, of the challenges in vaccinating migrants in Norway as consistent themes  
8  
9 371 emerged across the interviews. Moreover, the interviews were in depth providing quality content,  
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11 372 and interviewees were from all different municipalities and working in different types of clinics  
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13 373 throughout Norway, providing a wide range of perspectives. Future research should extend  
14  
15 374 deeper into the topics described and gather information from a larger sample.  
16  
17 375 Interviews were conducted in English, but all participants spoke English well and no major  
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19 376 language barriers were experienced during the interviews. The interview transcripts were coded  
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21 377 by one researcher increasing the potential for bias into the research study; however, interviews  
22  
23 378 were audio recorded, transcribed verbatim, and systematically coded to maintain integrity and  
24  
25 379 quality of the data. Lastly, there are types of migrants that were not discussed in this research  
26  
27 380 study, such as family reunification immigrants, asylum seekers, and undocumented or “paperless”  
28  
29 381 migrants, whose experiences with vaccination require further research.  
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31 382

## 383 Conclusion

384  
385 This research provides new information on both the strengths and weaknesses of the practice of  
386  
387 vaccinating migrants in Norway. The results are similar to challenges experienced throughout the  
388  
389 EU, such as gaps in vaccinating adult migrants, working migrants, and internal EU migrants.  
390  
391 Given the rising level of migration into Europe, the vaccination of migrant populations has become  
392  
393 a key priority in Europe.<sup>2</sup> Findings from this study can be used to direct further research throughout  
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395 Norway and countries with similar contexts. During this time of growing anti-immigrant sentiments  
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397 and political agendas, there is an urgent need for the public health community to ensure that the  
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399 needs of migrants are met and that HCPs are providing equitable, accessible, and effective  
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401 services.  
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*What is already known on this subject?*

Migrant populations in the European Union (EU) suffer a disproportionate burden of infectious diseases. Cultural factors, knowledge barriers, insufficient access to healthcare, and vaccine hesitancy have been identified as common barriers to immunization faced by migrants.

*What this study adds?*

This study illuminates some of the challenges with delivering vaccinations to migrant populations in Norway from a healthcare provider perspective.

*Policy implications*

Developing guidelines on where and by whom vaccinations should be delivered for adult migrants may be worth consideration given the growing number of migrants in Norway and the challenges experienced by some healthcare providers in this study. This policy implication is in line with evidence from the ECDC demonstrating the importance of closing gaps in policies and care for adult working migrants and internal EU migrants.

395

396 **Contributorship statement:** AS was responsible for the interviews, data collection, did the initial  
397 analysis, and drafted the manuscript. AS contributed to the design of the study and analysed the  
398 data.

399 JK designed the study, participated in the implementation, data analysis, and critically reviewed  
400 the manuscript. JK also served as guarantor.

401 All authors had full access to the data and take responsibility for the integrity and accuracy of the  
402 analyses.

403

404 **Conflicts of interest:** None to declare

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406 topic was proposed to the funder, which after accepting the scholarship applicant, played no  
407 active role in the research activities.

408 **Data sharing statement:** Anonymized coded interview data are available, but only upon  
409 reasonable request.

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For peer review only

## Interview Guide

### *Introduction*

Thank you for agreeing to meet and participate in our research study. We are interviewing you to better understand the challenges faced by healthcare providers in delivering vaccinations to migrants and the potential barriers migrants face in accessing vaccinations in Norway, as perceived by healthcare providers. The hope is that this exploratory study can identify gaps and direct future research for the vaccination of migrant populations in Norway and Europe. There are no right or wrong answers to any of our questions, as we are interested in your own experiences.

Participation in this study is completely voluntary. All information that you share with me today will be anonymized and confidential. Furthermore, we will be focusing on getting an overview of the system and processes in place for the vaccination of migrants in Norway and its functioning, rather than any personal data related to patients, yourselves, or others.

Definitions we will be using in our study:

- Immigrant: a person who makes a conscious choice to leave their country to seek a better life elsewhere with the goal of living permanently in the foreign country.
- Refugee: a person who has been forced to leave their country in order to escape war, persecution, or natural disaster, seeking protection in another country.
- Asylum seeker: A person who awaits a decision on the application for refugee status.

For simplicity, these three groups will be grouped under the term 'migrant' in our study. Wherever you feel that you can specify if you are talking about refugees or immigrants, please do so.

We are looking at all age groups. We are considering a child to be between the ages of 0-10 years old, an adolescent: 10-19, and an adult: 20+ years old.

We'll also be referring to vaccine-preventable diseases (VPDs), which includes measles, mumps, rubella, diphtheria, tetanus, pertussis, polio, *Haemophilus influenzae* type B (HiB) and hepatitis B (ECDC, 2018).

*\*Opportunity for participant to ask questions and interviewer to provide clarification*

Today's interview will take about 1 hour.

Would it be okay with you if we audio-recorded the interview after you have provided a background of yourself and your role? We want to start the recording after a description of yourself to ensure no personal identifiers are audio recorded. I will tell you when I will turn on the recording. The purpose of the audio-recording will be to allow for a deeper analysis of what you tell me here today. Again, all responses will be kept confidential and are anonymized. This means that your de-identified interview responses will only be shared with research team members and we will ensure that any information we include in our report does not identify you as the respondent. You may decline to answer any question or stop the interview at any time and for any reason.

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5 The interview will first focus on your work here, then the process of vaccination of migrants in  
6 Norway, the possible challenges, and possible solutions if you see any.

7  
8 If anything I say is unclear, please let me know.

9  
10 Do you have any questions now before we begin?

11  
12  
13 Background questions:

- 14  
15 1. What is your role here and what do you do?

16  
17 *\*Ask to start recording*

- 18  
19 2. In what ways does this clinic interact with migrant populations?  
20 3. Could you describe the patient demographic that you work with?

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22  
23 Process of immunization of migrants in Norway and potential challenges/barriers

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25 1. What is the process in place to ensure that adult migrants obtain proper vaccinations  
26 upon arrival to Norway?  
27 2. Where can migrants obtain vaccination?  
28 3. Are there specific policies or guidelines for health care providers on how to provide  
29 vaccinations to adult migrants?  
30 4. How does this process of vaccination, if at all, differ between refugees and immigrants?  
31 5. What is the process in place to ensure that migrant children and adolescents obtain the  
32 proper vaccinations?  
33 6. As official data is not available on migrant vaccination coverage in Norway, do you  
34 consider that some migrant groups, if any, are less covered by immunization than the  
35 Norwegian population?  
36 7. Based on your experience, do you believe that migrants have a low uptake or  
37 acceptance of vaccination in Norway?  
38 8. Do you consider that there is a specific age group of migrants less covered by  
39 immunization than other age groups? If yes, which age group?  
40 9. In your opinion, what do you consider to be the main barriers, if there are any, to  
41 vaccination among migrants?  
42 10. Do migrants have to pay any medical fees associated with vaccination? Is there a  
43 difference for vaccination costs between children, adolescent, or adult migrants? Do you  
44 believe there are any barriers around this?  
45 11. In what ways do the barriers to vaccination differ for immigrants, refugees, asylum  
46 seekers, and undocumented migrants?  
47 12. In your opinion, do you believe that there are specific challenges for completing multi-  
48 dose vaccinations for migrants? If yes, what do you consider these challenges to be?  
49 13. Do you feel there are any gaps or challenges with the guidelines for vaccinations for  
50 migrant groups?  
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### Strategies employed

14. Are you aware of any initiatives developed with regards to increasing vaccination of migrants in Norway? If so, could you please describe them?
15. Does your clinic have any initiatives to improve the immunization coverage of migrants? If so, could you please describe them?

### Use of translators by HCPs with migrant patients

16. Are health care providers trained or educated on how to work with migrant patients? If so, what do these courses entail?
17. Could you describe any initiatives to improve the cultural competency of health care providers in Norway?
18. Are translators available when working with migrant patients?
19. Are translators used when working with migrant patients? What does this process of arranging and using a translator look like?
20. Is information about vaccinations available in various languages? Where can one obtain these?

### The Norwegian health system

21. In your opinion, what are the strengths and/or weaknesses of the Norwegian healthcare system in providing vaccinations to migrants?

### Areas for improvement

22. What information would be helpful for healthcare providers with regards to improving access to vaccinations for migrants in Norway?

## Standards for Reporting Qualitative Research (SRQR)\*

<http://www.equator-network.org/reporting-guidelines/srqr/>

Page/line no(s).

### Title and abstract

<p><b>Title</b> - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended</p>	1-3
<p><b>Abstract</b> - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions</p>	19-56

### Introduction

<p><b>Problem formulation</b> - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement</p>	60-97
<p><b>Purpose or research question</b> - Purpose of the study and specific objectives or questions</p>	97-99

### Methods

<p><b>Qualitative approach and research paradigm</b> - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**</p>	101-105
<p><b>Researcher characteristics and reflexivity</b> - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability</p>	152-162
<p><b>Context</b> - Setting/site and salient contextual factors; rationale**</p>	109-114
<p><b>Sampling strategy</b> - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**</p>	107-121
<p><b>Ethical issues pertaining to human subjects</b> - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues</p>	148-150
<p><b>Data collection methods</b> - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**</p>	123-131

<b>Data collection instruments and technologies</b> - Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	125-128
<b>Units of study</b> - Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	118
<b>Data processing</b> - Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/de-identification of excerpts	129-130
<b>Data analysis</b> - Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale**	128-129
<b>Techniques to enhance trustworthiness</b> - Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale**	130-132

### Results/findings

<b>Synthesis and interpretation</b> - Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	166-276
<b>Links to empirical data</b> - Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	199 (and supplementary documents)

### Discussion

<b>Integration with prior work, implications, transferability, and contribution(s) to the field</b> - Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	281-344
<b>Limitations</b> - Trustworthiness and limitations of findings	346-365

### Other

<b>Conflicts of interest</b> - Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	382
<b>Funding</b> - Sources of funding and other support; role of funders in data collection, interpretation, and reporting	383-385

\*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.



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\*\*The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

**Reference:**

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. **Standards for reporting qualitative research: a synthesis of recommendations.** *Academic Medicine*, Vol. 89, No. 9 / Sept 2014  
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## What are the challenges in the Vaccination of Migrants in Norway from Healthcare Provider Perspectives? A qualitative, phenomenological study

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11 3 Healthcare Provider Perspectives? A  
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## 25 Abstract

26 *Background:* Migrant populations in the European Union suffer a disproportionate burden of  
27 infectious diseases and may be particularly vulnerable due to poor conditions in countries of origin  
28 or throughout transit to the host country. Given the rising level of migration into Europe, the  
29 vaccination of migrant populations has become a key priority, with European countries committing  
30 to equitably extending the benefits of vaccination to all. However, in Norway, little is known about  
31 the vaccination of migrant populations.

32  
33 *Objective:* The aim of this qualitative research study was to explore the process of vaccinating  
34 migrant populations in Norway and elucidate any challenges as perceived by healthcare  
35 providers. This involved exploring the challenges faced by healthcare providers in delivering  
36 vaccinations to migrants as well as potential barriers faced by migrants in accessing vaccinations  
37 in Norway, from the perspectives of healthcare providers.

38  
39 *Methods:* In June 2019, the authors conducted semi-structured interviews with 7 healthcare  
40 providers who are involved in vaccinating migrants in South-Eastern and Western Norway. This  
41 included health care providers working in general practice, public health and infectious disease  
42 clinics, migrant health clinics, and local public health institutes.

43  
44 *Results:* An inductive, exploratory analysis identified key themes that were reviewed and analyzed  
45 in light of existing literature. According to the informants, the Childhood Immunization Programme  
46 is effective in including migrant children within the national vaccination schedule. However, gaps  
47 in vaccination appear to exist with regards to adult migrants as well as working migrants. There  
48 is currently no consistent or structured approach to vaccinating adult migrants in Norway,  
49 including no guidelines from governing bodies on how to organize vaccination to adult migrants  
50 in municipalities. Further, reasons why adult vaccination is not prioritized were provided, such as  
51 tuberculosis screening and treatment taking precedence and the common assumption among  
52 healthcare providers that vaccinations are dealt with in childhood.

53  
54 *Conclusion:* The development of equitable immunization programs requires an understanding of  
55 the multifactorial barriers to immunization, such as those posed by policies, structures, and  
56 governance bodies, or lack thereof. It also entails understanding the administration of such  
57 policies and the perspectives of those who are responsible for the delivery of vaccination, namely

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3 58 healthcare providers. This qualitative research study demonstrated that challenges exist in the  
4 59 vaccination of migrants in Norway and that they are coherent with those experienced throughout  
5 60 the EU, principally the presence of gaps in vaccinating adult migrants, working migrants, and  
6 61 internal EU migrants. This research provides direction for future investigations and highlights the  
7 62 need for the inclusion of migrant status in the Norwegian Immunization Registry.

## 63 Strengths and limitations of this study

- 64 • This study illuminates some of the challenges with delivering vaccinations to migrant  
65 populations in Norway from a healthcare provider perspective.
- 66 • Challenges exist in the vaccination of migrants in Norway.
- 67 • There is currently no consistent or structured approach to vaccinating adult migrants in  
68 Norway.
- 69 • The voices of migrants are key in understanding their challenges and should be prioritized  
70 in future studies.

71

## 72 Introduction

73  
74 Migrant populations in the European Union (EU) suffer a disproportionate burden of infectious  
75 diseases.<sup>1</sup> Some subgroups of migrants may be particularly vulnerable to infectious diseases  
76 because of poor conditions in countries of origin where civil unrest or war have caused vaccination  
77 programs to be interrupted, or in transit to the host country where access to healthcare is limited  
78 and migrants may be exposed to malnutrition, overcrowding, and unsanitary conditions.<sup>2,3</sup>  
79 Additionally, migrants within the EU may be under-immunized for vaccine-preventable diseases  
80 (VPDs).<sup>4</sup> The European Centre for Disease Prevention and Control (ECDC) released targeted  
81 guidance for effective screening and vaccination of newly arrived migrants, which states that there  
82 is a clear benefit to enrolling migrants in vaccination programmes and ensuring catch-up  
83 vaccination.<sup>2</sup> Further, as part of the European Vaccine Action Plan 2015-2020, all EU countries  
84 committed to meeting regional vaccination coverage targets, eliminating endemic measles and  
85 rubella, controlling hepatitis B infection, and sustaining polio-free status in an effort towards  
86 creating a Region free of VPDs.<sup>5</sup> However, progress towards equitably extending the benefits of  
87 vaccination to all and meeting regional vaccination coverage targets has been slow, and there  
88 still exists significant gaps in understanding how to deliver effective vaccination services to diverse  
89 and mobile migrant populations in the EU.<sup>3,6,7,8</sup>

90  
91 In recent years, immigration to Norway has greatly increased.<sup>9,10</sup> At the end of 2019, there were  
92 approximately 765 000 first generation migrants in Norway, which amounts to about 14.4 percent  
93 of the total population in Norway.<sup>11,12</sup> According to the Norwegian Institute of Public Health (NIPH),  
94 most new cases of tuberculosis and hepatitis B and half of new HIV cases occur among migrants  
95 in Norway.<sup>13</sup> Although research studies on migrant health and migrant experiences with health  
96 services in Norway has grown in recent years, the NIPH claims that research on migrant health  
97 is still lacking.<sup>13</sup> To date and to the best of the authors' knowledge, there has been no targeted  
98 research on the vaccination of migrant populations in Norway. In general, vaccination rates  
99 among the Norwegian population are high<sup>14</sup>, but not all migrants are included in such figures,  
100 which may have led to the negligence of migrant-specific challenges.

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102 Cultural factors, knowledge barriers, insufficient access to healthcare, and vaccine hesitancy have  
103 been identified as common barriers to immunization faced by migrants.<sup>15</sup> In the Norwegian  
104 context, obstacles for migrant populations in accessing and navigating the primary healthcare

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3 105 system have been studied and are in parallel with challenges documented in the literature, such  
4 106 as conflicting ideas about the role of the doctor, language barriers, and cultural differences.<sup>16</sup>  
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6 107 However, systems-, provider-, and patient-related challenges with delivering vaccination  
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8 108 programs to migrants in Norway have not been studied. The development of equitable  
9  
10 109 immunization programs requires an understanding of the multifactorial barriers to immunization,  
11  
12 110 such as those posed by policies, structures, and governance bodies and faced by both healthcare  
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14 111 providers (HCPs) and migrants.<sup>7</sup> As such, this qualitative research study aims to elucidate the  
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16 112 challenges faced by HCPs in delivering vaccinations to migrants and migrants in accessing  
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18 113 vaccinations in Norway.

## 19 114 Methods

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22 115 This qualitative, phenomenological study was conducted to explore the experiences of 7  
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24 116 healthcare providers involved in the vaccination of migrants in Norway. The objective was to  
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26 117 develop an understanding of the participants' perceptions of vaccination of migrants in Norway,  
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28 118 including challenges faced by HCPs in delivering vaccinations and potentials barriers faced by  
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30 119 migrants in accessing vaccinations.

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33 121 Purposive sampling was used to select interview participants. Throughout June 2019, the  
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35 122 researchers invited 23 HCPs working at different health stations ("helsestasjon" in Norwegian) or  
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37 123 clinics, to be interviewed. In Norway, vaccination is primarily provided in these so called "health  
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39 124 stations". Health stations are under municipal jurisdiction and are responsible for preventative  
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41 125 health services, including national vaccination programs. However, the organization of the  
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43 126 municipal health system varies based on community needs wherein some municipalities have  
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45 127 health stations specialized for certain populations or issues, such migrants and Norwegians who  
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47 128 return to the country from travel. Therefore, the researchers reached out to clinics and a policy  
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49 129 and research institute in the region that were involved in vaccination work, which included general  
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51 130 practitioner clinics, public health/infectious disease/travel clinics, a public health institute, and  
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53 131 migrant health stations. HCPs were contacted via email and asked about their willingness to be  
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55 132 interviewed for the study. All HCPs who agreed to participate were interviewed. As such, seven  
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57 133 HCPs working at different health stations were interviewed; this included nurses and physicians  
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59 134 from public health/infectious diseases/travel clinics, a public health and infectious disease  
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135 institute, a migrant health clinic, and a general practitioner clinic.



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3 137 All interviews were conducted in South-Eastern Norway, except with one interview taking place  
4 138 in Western Norway. Interviews took place within the health station clinics. The interviews were  
5 139 approximately one hour in length and conducted in a semi-structured format using an interview  
6 140 guide (supplementary file 1). The interviews included discussions on the process of how migrants  
7 141 obtained vaccinations in their respective municipalities and challenges faced by migrants and  
8 142 HCPs in this process. Interviews were audio-taped and transcribed verbatim, which was followed  
9 143 by an inductive, exploratory analysis that identified key themes from the perspectives of the HCPs.  
10 144 Data was transcribed and coded by hand. Themes were compared against the existing literature  
11 145 of vaccination in Norway and of vaccination challenges in Europe to ensure reliability and  
12 146 trustworthiness of the data.  
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20 147  
21 148 At the beginning of interviews, key terms were defined and clarified for interview participants. The  
22 149 following definitions were applied:

- 23 150 ● Immigrant: a person who makes a conscious choice to leave their country to seek a better  
24 151 life elsewhere.
- 25 152 ● Refugee: a person who has been forced to leave their country in order to escape war,  
26 153 persecution, or natural disaster, and is seeking protection in another country.
- 27 154 ● Asylum seeker: A person who awaits a decision on the application for refugee status.
- 28 155 ● Working migrant: A type of legal immigrant that is entering Norway to pursue work.

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33 157 In this research study, the term “migrant” refers to anyone who has moved from their home country  
34 158 to another, which encapsulates all the aforementioned subtypes.  
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40 160 The definition for VPDs was also clarified at the beginning of interviews; specifically, the ECDC  
41 161 definition was used.<sup>2</sup>  
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45 163 Identifiable or personal data were not audio-recorded nor transcribed to ensure anonymity of  
46 164 participants and therefore ethics approval was not required. All participants were fully informed  
47 165 about the study and verbal consent was obtained.  
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50 166  
51 167 *Author Reflexivity Statement:*

52 168 The lead author of this work is a White, middle-class, native English-speaking female of European  
53 169 Canadian ancestry. Her limitations in this work is that she is not a migrant or Norwegian. She is  
54 170 aware that she views the challenges of migrants and those of Norwegian healthcare providers  
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3 171 from an inherently outsider's perspective and that by not being Norwegian, she does not have an  
4 172 in-depth, first-hand knowledge of the Norwegian healthcare system. However, she has worked  
5 173 with migrant populations and has dedicated her studies and work to causes of social justice and  
6 174 health equity. She views health as a human right and migration in a positive light, owing to her  
7 175 personal experiences as a daughter of immigrant parents and as a global health researcher  
8 176 undertaking critical discussions in the area of migration and health. Furthermore, throughout this  
9 177 research project, she had the support of a Norwegian and immigrant supervisor to support her in  
10 178 understanding the local Norwegian context and healthcare system.

11 179 *Patient and public involvement:*

12 180 No patient involved.

## 13 181 Results

14 182 Participant quotes are available in supplementary file 2.

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16 184 Childhood Immunization Programme

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18 186 All HCPs agreed that the Childhood Immunization Programme (CIP) in Norway functions well and  
19 187 captures all children, including migrant children, within the national vaccination schedule.  
20 188 Participants described how the CIP in Norway is well established and enforced by NIPH and the  
21 189 Norwegian law. The NIPH provides national recommendations for which vaccines to include in  
22 190 the program, where to deliver vaccinations, and who is responsible for providing the vaccinations.

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24 192 Vaccine Coverage & Uptake Among Migrants

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26 194 All participants acknowledged that Norway has been fortunate to have high vaccine coverage to  
27 195 date. All HCPs were in agreeance that non-Western migrants, especially refugees, are very  
28 196 accepting of vaccination and should not be considered a public health concern. Although it was  
29 197 stated to be very rare, a few HCPs mentioned that those that refuse vaccines are more likely to  
30 198 be Norwegians or migrants from Europe. The responses of the participants demonstrated that  
31 199 vaccine hesitancy does not appear to be a large problem at present.

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33 201 Lack of Data on Migrant Vaccination Coverage

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3 203 Most HCPs expressed that data on the vaccine coverage of migrants is needed to know whether  
4 204 there are gaps in vaccine coverage among migrants. Currently, the Norwegian Immunization  
5 205 Registry, SYSVAK, does not stratify by migrant status. As such, HCPs were hesitant when  
6 206 discussing challenges faced by migrants in accessing vaccinations as perceived by health  
7 207 workers.

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## 209 Organization and Coordination of Vaccination for Adult Migrants

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211 The Norwegian Directorate of Health provides national guidelines on vaccination for migrants,  
212 which includes what vaccines should be provided and to whom. However, municipalities are  
213 responsible for organizing *how* to deliver vaccination to adult migrant populations, including where  
214 and by whom. Many HCPs felt that the guidelines for vaccinating adult migrants were sufficient  
215 and that they experienced no major challenges; however, a couple respondents experienced a  
216 number of challenges in their work. A couple interviewees felt that the system for vaccinating adult  
217 migrants within municipalities was “ad hoc”, involved “detective work”, and was not prioritized.  
218 Without clear a protocol or guidelines on how to deliver vaccines to adult migrants within  
219 municipalities and with no clear division of responsibilities among HCPs, a few respondents  
220 suggested that vaccination may not always be offered to adult migrants nor a thorough vaccine  
221 history completed. However, some HCPs did have organized systems for ensuring adult migrants  
222 were vaccinated in their municipalities. Regardless of their different experiences, many  
223 respondents stated that migrants who are lacking vaccinations are likely to be identified at some  
224 point when accessing healthcare services, but that it may be delayed and not done in the most  
225 efficient and effective manner. These responses suggested that although municipalities are  
226 responsible for organizing a system for vaccinating adult migrants, the roles and responsibilities  
227 of HCPs may not be clearly outlined nor vaccination of adults prioritized within their municipalities.

228

## 229 Priorities in Infectious Disease Control

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231 All participants described that HCPs balance numerous tasks of which the vaccination of adults  
232 within municipalities is not a large priority. A few respondents explained that it is likely that  
233 Norwegian HCPs often assume that adults are vaccinated since most vaccinations are scheduled  
234 for childhood. Participants mentioned that HCPs that do not work directly in migrant health, such  
235 as general practitioners, may not remember to offer vaccinations to adult migrants attending their  
236 clinics.

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5 238 Further, a few respondents highlighted that screening, vaccination, and treatment for tuberculosis  
6 239 (TB) is prioritized over adult vaccination. TB screening and follow-up is mandated by law wherein  
7 240 HCPs in refugee reception centres and in municipalities must follow specific protocol for  
8 241 documenting, screening, and treating TB. On the contrary, clear and enforced protocol for  
9 242 documenting and providing adult vaccinations does not exist; respondents described how this can  
10 243 lead vaccinations to not be offered to some adult migrants nor rigorously documented in refugee  
11 244 reception centres and municipalities.

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14 246 A gap in hepatitis screening of pregnant women was not mentioned by informants.  
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19 248 Working Migrants Vaccination Challenges  
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22 250 There are no requirements to obtain vaccinations for working migrants; however, if they come  
23 251 from a country with a high prevalence of TB and intend on staying more than 3 months, then they  
24 252 must undergo screening for TB. Some participants described how this may be a potential gap in  
25 253 the system wherein many working migrants are not offered vaccination. It was noted by many  
26 254 HCPs interviewed that there are some working migrants that are permitted to continuously re-  
27 255 apply for short work permits and can therefore live in Norway for long periods of time without  
28 256 having to complete a health examination, including an assessment of vaccine history.  
29 257 Many HCPs described that working migrants are being identified when contacting healthcare  
30 258 services and then being referred to full health screening. In other cases, some employers may  
31 259 require working migrants to complete a health examination. However, even if offered vaccinations,  
32 260 participants claimed that it is likely that working migrants would refuse since vaccinations are not  
33 261 free of charge for working immigrants and can be quite costly.  
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38 263 Financial Challenges for Migrants  
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43 265 All vaccines are free for infants, children, and adolescents; however, there may be fees for adult  
44 266 vaccinations. Top priority vaccinations, such as MMR and the polio vaccine, are free for refugees  
45 267 and asylum seekers and are provided upon arrival. Hepatitis B and the BCG vaccine are also free  
46 268 for some migrants, depending on which country they come from. However, aside from these  
47 269 vaccinations, vaccines are not free of charge. It was mentioned by a HCP that additional  
48 270 vaccinations may not be accepted by refugees since they only receive some financial support  
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3 271 from the state and vaccines are expensive. As mentioned above, working migrants need to pay  
4 272 for vaccines and that would likely be a burden given the high price for vaccines.

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8 274 Education for Healthcare Providers on Migrant Health

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11 276 It was stressed by some of the HCPs that there should be more education for HCPs on issues  
12 277 related to migrant health, such as how to use a translator effectively, cultural humility, and how to  
13 278 discuss challenging topics, such as psychological trauma. Currently, there are no mandatory  
14 279 courses on migrant health within HCP education for both nurses and doctors.

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17 281 Translators & Navigating Language Barriers

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21 283 Participant responses were divided on the use of translators in their clinical services. Some  
22 284 respondents described no challenges with obtaining and using a translator, stating that they  
23 285 always use one when needed and believe that their colleagues did the same. Alternatively, some  
24 286 HCPs had the impression that a number of HCPs do not use translators as frequently as they  
25 287 should. One participant believed that this was largely due to the lack of HCP knowledge around  
26 288 how to arrange a translator as well as how to navigate using a translator. A few participants also  
27 289 expressed that arranging a translator can be a “complicated” process - it takes more time and  
28 290 would be easier to just not offer the service or even not see migrant patients to avoid this additional  
29 291 task. One participant stated many HCPs see using a translator as a burden, as opposed to a  
30 292 necessity. A few HCPs felt that patients are not aware of their right to having a translator and that  
31 293 they are not charged for this service. One HCP felt that HCPs are not educating their patients on  
32 294 their right to having a translator.

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## 41 42 43 44 296 Discussion

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49 298 This study illuminates some of the challenges with delivering vaccinations to migrant populations  
50 299 in Norway from a healthcare provider perspective.

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54 301 The inclusion of migrant children and adolescents in national vaccination schedules is a key  
55 302 feature of the ECDC guidelines (Hargreaves, 2018).<sup>2,17,18</sup> Children are considered to be at

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3 303 greatest risk of contracting VPDs and represent approximately 25% of the total migrant population  
4 304 in the EU Region.<sup>19</sup> This research study has demonstrated that Norway's national immunization  
5 305 program for children is comprehensive and inclusive of migrant infants, children, and adolescents  
6 306 in Norway.

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11 308 HCPs overwhelmingly agreed that it was difficult to identify inequities in immunization given the  
12 309 lack of data on immunization coverage in migrants. In fact, there is a lack of systematic data  
13 310 collection throughout European countries on immunization coverage and determinants of non-  
14 311 immunization among migrants.<sup>1,20</sup> To increase equity in immunization provision, Boyce et al.  
15 312 (2019) suggest that countries should disaggregate immunization uptake data by key determinants  
16 313 of inequalities including ethnicity and migration status.<sup>7</sup> Connecting data on the social  
17 314 determinants of health with vaccination coverage has immense potential for improving services  
18 315 and increasing vaccination coverage as has been demonstrated within a number of countries in  
19 316 the EU.<sup>7,21</sup> Our research highlights the limitation of the current national immunization registry in  
20 317 Norway and the value of integrating migrant status in immunization uptake data to direct future  
21 318 research and initiatives on migrant health.

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24 320 Furthermore, it is evident that gaps exist in the vaccination for adult migrants. As described in the  
25 321 results, some municipalities have not designed a clear and coordinated system for ensuring that  
26 322 adult migrants are vaccinated. This can lead to a lack of clarity around the division of  
27 323 responsibilities among HCPs and vaccinations not being offered to adult migrants. This is  
28 324 coherent with findings from the ECDC that found a lack of clarity among HCPs regarding  
29 325 approaches to catch-up vaccinations in adult migrants.<sup>17</sup> A quote by an Estonian HCP captures  
30 326 the issue perfectly: "The completeness of adult migrant vaccination depends on the health care  
31 327 provider - if they consider vaccination as a priority".<sup>17</sup> This sentiment was echoed among  
32 328 Norwegian HCPs as many HCPs felt that vaccination was not always prioritized and offered to  
33 329 adult migrants. It is our suggestion to conduct further research on how to ensure that adult  
34 330 migrants are provided vaccinations. Further, developing guidelines on where and by whom should  
35 331 vaccinations be delivered for adult migrants may be worth consideration.

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38 333 Our research highlights the gap in providing vaccinations to working migrants in Norway. Europe-  
39 334 wide research completed by the ECDC has highlighted important yet frequently neglected  
40 335 dimensions of migration in the EU such as labour migration and internal EU migration, which have  
41 336 been linked to measles outbreaks.<sup>18</sup> In the ECDC dataset, internal EU migrants contributed

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3 337 relatively high numbers of hepatitis B and hepatitis C, demonstrating the importance of including  
4 338 internal and labour migrants within vaccination.<sup>22</sup> In this research, numerous HCPs expressed  
5 339 that there were gaps in policies and care for working migrants, especially for those from within  
6 340 the EU and short-stay migrants. Further investigations and initiatives for screening and  
7 341 vaccinating working migrants should be considered by Norwegian decision makers.

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11 343 Our research demonstrates that vaccine hesitancy is likely uncommon among non-Western  
12 344 migrants in Norway, namely refugees and asylum seekers, but it may be a larger concern among  
13 345 migrants from within the EU. Many refugees and migrants arriving in Europe come from Middle  
14 346 Eastern countries where vaccines are widely accepted and coverage has traditionally been high.<sup>23</sup>  
15 347 This finding is important considering previous cases where infectious disease outbreaks were  
16 348 blamed on refugees and asylum seekers, such as during the rise of measles throughout the EU  
17 349 in 2018.<sup>24</sup> There is no evidence that justifies viewing refugees or asylum seekers as a public health  
18 350 threat and this fear is irrational and harmful.<sup>25</sup>

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21 352 Challenges appear to exist with some HCPs' motivation to use translators and their knowledge of  
22 353 how to arrange and effectively use translators in their clinical services. Given that translators are  
23 354 important for effective implementation of national vaccine policies<sup>19</sup>, potential barriers to using  
24 355 translators described should be further explored to ensure providing appropriate and accessible  
25 356 healthcare.

26 357  
27 358 None of the informants mentioned gaps in hepatitis screening of pregnant women, despite it being  
28 359 a well-known migrant health issue. We believe that this may be due to a lack of awareness of the  
29 360 issue by HCPs. Until 2018, Norway was among the few countries in Europe that did not test all  
30 361 pregnant women for chronic hepatitis B infection.

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33 363 Limitations

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36 365 Due to time constraints, this study did not interview migrants and therefore, the study focuses on  
37 366 the challenges faced by HCPs as opposed to challenges faced by migrants. However, the voices  
38 367 of migrants are key in understanding their challenges and should be prioritized in future studies.  
39 368 There were a limited number of interviewees given that data collection was conducted during the  
40 369 Norwegian summer months where many are on holiday. This limits the ability to make  
41 370 generalizations. Nevertheless, the authors believe the research is representative, but not entirely

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3 371 comprehensive, of the challenges in vaccinating migrants in Norway as consistent themes  
4 372 emerged across the interviews. Moreover, the interviews were in depth providing quality content,  
5 373 and interviewees were from all different municipalities and working in different types of clinics  
6 374 throughout Norway, providing a wide range of perspectives. Future research should extend  
7 375 deeper into the topics described and gather information from a larger sample.  
8 376 Interviews were conducted in English, but all participants spoke English well and no major  
9 377 language barriers were experienced during the interviews. The interview transcripts were coded  
10 378 by one researcher increasing the potential for bias into the research study; however, interviews  
11 379 were audio recorded, transcribed verbatim, and systematically coded to maintain integrity and  
12 380 quality of the data. Lastly, there are types of migrants that were not discussed in this research  
13 381 study, such as family reunification immigrants, asylum seekers, and undocumented or “paperless”  
14 382 migrants, whose experiences with vaccination require further research.  
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## 26 384 Conclusion

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30 386 This research provides new information on both the strengths and weaknesses of the practice of  
31 387 vaccinating migrants in Norway. The results are similar to challenges experienced throughout the  
32 388 EU, such as gaps in vaccinating adult migrants, working migrants, and internal EU migrants.  
33  
34 389 Given the rising level of migration into Europe, the vaccination of migrant populations has become  
35 390 a key priority in Europe.<sup>2</sup> Findings from this study can be used to direct further research throughout  
36 391 Norway and countries with similar contexts. During this time of growing anti-immigrant sentiments  
37 392 and political agendas, there is an urgent need for the public health community to ensure that the  
38 393 needs of migrants are met and that HCPs are providing equitable, accessible, and effective  
39 394 services.  
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48 397 **Contributorship statement:** AS was responsible for the interviews, data collection, did the initial  
49 398 analysis, and drafted the manuscript. AS contributed to the design of the study and analysed the  
50 399 data.

51  
52 400 JK designed the study, participated in the implementation, data analysis, and critically reviewed  
53 401 the manuscript. JK also served as guarantor.  
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3 402 All authors had full access to the data and take responsibility for the integrity and accuracy of the  
4 403 analyses.

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14 409 **Data sharing statement:** Anonymized coded interview data are available, but only upon  
15 410 reasonable request.

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## Interview Guide

### *Introduction*

Thank you for agreeing to meet and participate in our research study. We are interviewing you to better understand the challenges faced by healthcare providers in delivering vaccinations to migrants and the potential barriers migrants face in accessing vaccinations in Norway, as perceived by healthcare providers. The hope is that this exploratory study can identify gaps and direct future research for the vaccination of migrant populations in Norway and Europe. There are no right or wrong answers to any of our questions, as we are interested in your own experiences.

Participation in this study is completely voluntary. All information that you share with me today will be anonymized and confidential. Furthermore, we will be focusing on getting an overview of the system and processes in place for the vaccination of migrants in Norway and its functioning, rather than any personal data related to patients, yourselves, or others.

Definitions we will be using in our study:

- Immigrant: a person who makes a conscious choice to leave their country to seek a better life elsewhere with the goal of living permanently in the foreign country.
- Refugee: a person who has been forced to leave their country in order to escape war, persecution, or natural disaster, seeking protection in another country.
- Asylum seeker: A person who awaits a decision on the application for refugee status.

For simplicity, these three groups will be grouped under the term 'migrant' in our study. Wherever you feel that you can specify if you are talking about refugees or immigrants, please do so.

We are looking at all age groups. We are considering a child to be between the ages of 0-10 years old, an adolescent: 10-19, and an adult: 20+ years old.

We'll also be referring to vaccine-preventable diseases (VPDs), which includes measles, mumps, rubella, diphtheria, tetanus, pertussis, polio, *Haemophilus influenzae* type B (HiB) and hepatitis B (ECDC, 2018).

*\*Opportunity for participant to ask questions and interviewer to provide clarification*

Today's interview will take about 1 hour.

Would it be okay with you if we audio-recorded the interview after you have provided a background of yourself and your role? We want to start the recording after a description of yourself to ensure no personal identifiers are audio recorded. I will tell you when I will turn on the recording. The purpose of the audio-recording will be to allow for a deeper analysis of what you tell me here today. Again, all responses will be kept confidential and are anonymized. This means that your de-identified interview responses will only be shared with research team members and we will ensure that any information we include in our report does not identify you as the respondent. You may decline to answer any question or stop the interview at any time and for any reason.

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5 The interview will first focus on your work here, then the process of vaccination of migrants in  
6 Norway, the possible challenges, and possible solutions if you see any.

7  
8 If anything I say is unclear, please let me know.

9  
10 Do you have any questions now before we begin?

11  
12  
13 Background questions:

- 14  
15 1. What is your role here and what do you do?

16  
17 *\*Ask to start recording*

- 18  
19 2. In what ways does this clinic interact with migrant populations?  
20 3. Could you describe the patient demographic that you work with?

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22  
23 Process of immunization of migrants in Norway and potential challenges/barriers

- 24  
25 1. What is the process in place to ensure that adult migrants obtain proper vaccinations  
26 upon arrival to Norway?  
27 2. Where can migrants obtain vaccination?  
28 3. Are there specific policies or guidelines for health care providers on how to provide  
29 vaccinations to adult migrants?  
30 4. How does this process of vaccination, if at all, differ between refugees and immigrants?  
31 5. What is the process in place to ensure that migrant children and adolescents obtain the  
32 proper vaccinations?  
33 6. As official data is not available on migrant vaccination coverage in Norway, do you  
34 consider that some migrant groups, if any, are less covered by immunization than the  
35 Norwegian population?  
36 7. Based on your experience, do you believe that migrants have a low uptake or  
37 acceptance of vaccination in Norway?  
38 8. Do you consider that there is a specific age group of migrants less covered by  
39 immunization than other age groups? If yes, which age group?  
40 9. In your opinion, what do you consider to be the main barriers, if there are any, to  
41 vaccination among migrants?  
42 10. Do migrants have to pay any medical fees associated with vaccination? Is there a  
43 difference for vaccination costs between children, adolescent, or adult migrants? Do you  
44 believe there are any barriers around this?  
45 11. In what ways do the barriers to vaccination differ for immigrants, refugees, asylum  
46 seekers, and undocumented migrants?  
47 12. In your opinion, do you believe that there are specific challenges for completing multi-  
48 dose vaccinations for migrants? If yes, what do you consider these challenges to be?  
49 13. Do you feel there are any gaps or challenges with the guidelines for vaccinations for  
50 migrant groups?  
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3 Strategies employed  
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- 5 14. Are you aware of any initiatives developed with regards to increasing vaccination of  
6 migrants in Norway? If so, could you please describe them?  
7 15. Does your clinic have any initiatives to improve the immunization coverage of migrants?  
8 If so, could you please describe them?  
9

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11  
12 Use of translators by HCPs with migrant patients  
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- 14 16. Are health care providers trained or educated on how to work with migrant patients? If  
15 so, what do these courses entail?  
16 17. Could you describe any initiatives to improve the cultural competency of health care  
17 providers in Norway?  
18 18. Are translators available when working with migrant patients?  
19 19. Are translators used when working with migrant patients? What does this process of  
20 arranging and using a translator look like?  
21 20. Is information about vaccinations available in various languages? Where can one obtain  
22 these?  
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26 The Norwegian health system  
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- 28 21. In your opinion, what are the strengths and/or weaknesses of the Norwegian healthcare  
29 system in providing vaccinations to migrants?  
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33 Areas for improvement  
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- 35 22. What information would be helpful for healthcare providers with regards to improving  
36 access to vaccinations for migrants in Norway?  
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## Participant Quotes

This supplementary file contains quotes of participants interviewed in this research study to reflect and illustrate the main findings. The below quotes are categorized by the nine themes described in the Results section of the paper.

### Childhood Immunization Programme

“But children really have good program here - the health centres are good in providing vaccinations.”

“But in the childhood vaccination program, it is written in the law that there is only one solution and that is that the public health nurses in the helsestasjon... the place where you go with small children... that is a special system for small children and school children... and there in that program they do not have any choice in how to organize it, it should always be that.”

“But all children are really well covered within the school health system, or before school age within the ‘helsestasjon’ - our health stations. So the children, I am not really worried about.”

“Children don’t have problem [to access vaccinations]”

“For children, it is all free - up to 20 years old now.”

“The adults don’t always get it for free, but the children do.”

### Vaccine Coverage & Uptake Among Migrants

“Vaccine hesitancy: it is a very big issue in all countries- the WHO has said it is one of the biggest health threats globally. In Norway for the time being, we are quite lucky, there is high coverage.”

“But that is normally Norwegians, or maybe some from Europe [that reject getting vaccinations], but very rare. But migrant populations, they say yes to everything. They come from countries that don’t have so many vaccines, and they think it is very good... they want everything, vaccines, if we recommend it... but it’s not so many Norwegians either who don’t want the vaccine.”

“I think the refugees and others who come here they take all the vaccination. They say yes because it is free. You can say no, but everyone says yes. They want to have it.”

“Refugees are very eager to get anything. They think they are possibly not well covered by vaccines so unsure.”

“Children are supposed get vaccines except when parents say no, but that is very uncommon.”

### Lack of Data on Migrant Vaccination Coverage



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3 “I should be careful with assuming... maybe low uptake is not a problem, but we also have a big  
4 group of X [Internal EU] immigrants in Norway with some indications from other countries of low  
5 uptake. But it’s hard to say if it is an issue in Norway; we don’t know.”  
6

7 “No, we don’t have data on vaccine coverage of migrants... But maybe we will go closer on that.  
8 I do not have any facts right now to give you that show that those people from those countries  
9 don’t vaccinate as much as Norwegians.”  
10

11 “My impression is that they are well covered, but maybe not. Hard to know without information.”  
12  
13

## 14 **Organization and Coordination of Vaccination for Adult Migrants**

15 [Are there enough vaccine guidelines for health care providers?] “I think so, it makes sense... it  
16 is enough and good guidelines. It is a very big privilege to live in and be a migrant in Norway; they  
17 have a very good healthcare system, especially the children.”  
18  
19

20 “In Norway, we are almost all, except for the childhood vaccination program, the law says that the  
21 municipalities or those that are in charge locally, they can decide what is the best way to do it  
22 locally. So that means that there for vaccination in general in Norway, there are a lot of different  
23 places to get it.”  
24  
25

26 “There is no organized nor standardized guideline in terms of follow up for adult migrants, but the  
27 rule is that they should be offered. And it is really hard to document or transmit information on  
28 whether they were offered this already or not when it comes to refugees and asylum seekers.”  
29  
30

31 “But we risk having adults who do not have proper vaccination coverage... But I have come in  
32 contact with working immigrants that have lacked BCG for TB, and that was through the school  
33 health system that I came across a child that didn’t have it, parents don’t have it either, so referred  
34 them all to vaccine...so there are ways of catching it up somehow.”  
35

36 “But the organization of it is not always good enough. It’s always.. I get a feeling that its like you  
37 think it is someone else’s responsibility. Nurses and health workers are used to this being dealt  
38 with in childhood, they are not used to asking adults whether they need vaccination so its not  
39 something that is worked into their routines. So that why the migration health - if the municipality  
40 has someone working with migration health - this is obviously something on the top of our mind,  
41 but not anybody else’s. So we try to catch up the ones that are at risk, but I try to ask everyone  
42 children and adults whether they’ve gotten and offer MMR for vaccines when they come. But  
43 then I also am afraid that the vulnerable groups that should be offered often don't get an offer.  
44 Then again vaccines are not at the top of our heads so yeah, so those ones are sometimes  
45 lost.”  
46

47 “We need better routines and better documentation...it’s a lot of detective work to call and find  
48 out what it was, and when, and whether they need a follow up.”  
49  
50

51 “I really really would like to see an overall mandated common guidelines, common rules and  
52 regulations for the municipalities in terms of how they organize their migrant health. Right now it  
53 is all in the form of advice and suggestions, which they are obviously free to interpret in their own  
54 way. And I have talked to people at X who totally agree... It has made all kinds of organization  
55 and coordinating very difficult.”  
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3 “When you arrive in Norway, you go to the police station, ..., and then we get the message from  
4 police or the office you have been to. Then I will tell the patients to come here and we will check  
5 what vaccinations they have from home country. Not every community in Norway does this  
6 because they don't have the time to do this. Not every municipality has a migration health station.”  
7

8 [The process in place to ensure that adult migrants obtain proper vaccination upon arrival to  
9 Norway]: “It is complicated. It is quite easy and orderly when it comes to refugees - or it should  
10 be, seeing as they have the reception centre - it is a big reception center where all asylum seekers  
11 and quota refugees should come through upon arrival in Norway. And they have set regulations  
12 – for example, supposed to give MMR to anyone under 15 years of age and offer MMR to those  
13 over 15 who haven't had the diseases before. They are also supposed to offer polio vaccine to  
14 adult refugees I believe. These guidelines are from NIPH. Hepatitis B vaccine is supposed to be  
15 initiated or offered to those in risk groups. So those three - MMR, polio, hepatitis B should be  
16 offered. Then it comes to where they are moved to after. So this is where we run into problems.  
17 For refugees, did they get that vaccine or not. Hep B is a three dose vaccine over a year so it is  
18 important information is transferred. Multiple times have had to call did they get the vaccine, not  
19 in documents, didn't receive documents. This depends on which municipality they come to - what  
20 the different processes and guidelines are.”  
21  
22

23 “So the children, I am not really worried about. It is the adults... that supposed to be offered  
24 vaccination... I have seen that it hasn't been offered due to time restraints or logistical issues -  
25 they go quickly through the system. And tuberculosis is the main priority, and vaccination is  
26 second and gets lost in process.”  
27

28 “No challenges [with policies]”.  
29

30 “It is the adults that are more complicated in terms of that. So they just give advice or suggestions  
31 - how it should be done; has what the suggestions are in terms of how to arrange healthcare for  
32 refugees and asylum seekers, newly arrived peoples in Norway. And there is says they should be  
33 offered MMR to those below 15 (years of age), and possibly polio, etc. So they really should be  
34 offered but how the municipalities set that up is not mandated anywhere.”  
35  
36

37 “They have a lot of guidelines, very specific, so that nurses can do them on their own.”  
38

39 “But to the clinicians in hospitals and public health doctors in municipalities, there are some  
40 guidelines about communicable diseases, but they are not obligated to follow them. I think it's  
41 expected that they are following the advice, even if they are not obligated.”  
42  
43

#### 44 **Priorities in Infectious Disease Control**

45

46 “Nurses and health workers are used to this being dealt with in childhood, they are not used to  
47 asking adults whether they need vaccination so its not something that is worked into their routines.  
48 So that is why the migration health - if the municipality has someone working with migration health  
49 - this is obviously something on the top of our mind, but not anybody else's.”  
50

51 “And tuberculosis is the main priority, and vaccination is second and gets lost in process.”  
52  
53

54 “For refugees and asylum seekers, those that come through reception centre, the guidelines are  
55 different depending on age and where they come from. And this is followed up by municipalities  
56 to which they are sent to. This is strong law controlled. This is an absolute necessity that places  
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3 need to follow up on, and this is in quite a good order now... So for refugees this is very set in  
4 stone. If they come to this municipality they get a follow-up on tuberculosis... including for  
5 vaccinations here.”

6  
7 “Migrant that has gotten allowance to stay... We get contact information that police has and we  
8 are supposed to see which country they come from and we are in charge of TB check. They also  
9 should be able to access a full health check and vaccine history, which is not always available  
10 due to financial and time constraints in the municipalities where we prioritize refugees that are  
11 coming from high risk countries needing TB check.”

12  
13  
14 “Public health nurses get info from the police, a letter, when there are newly arrived migrants,  
15 refugees. Then we have a list of countries that tells us whether we need to do screening for TB  
16 as it depends on age and from which country. The list and guidelines is from Norwegian Institute  
17 of Public Health. Mandatory TB screening for some.”

18  
19 “Adult immigrants - police sends public health nurses a letter, then public health nurses can send  
20 the immigrant a letter for TB control, but not vaccinations - if they want it they need to pay.”

21  
22 “I think it is very okay to have a system like this because we have time to check this vaccination.  
23 If you don't have this, this little [specialized] health station, then they go to normal health station  
24 and they come into a program, but they don't have time to take this vaccine interview, and then  
25 they will miss some vaccinations I think. I'm not 100% though.”

### 26 27 **Working Migrants Vaccination Challenges**

28  
29 “We think that after a while we will find them in the system. So you see the difference? The  
30 refugees we know about before they come, so we can plan and others we don't know about.”

31  
32 “Well... this would only be guess work by me. But I think that there is a risk for those who come  
33 for work might not have the proper vaccinations. These are usually adults, their children get picked  
34 up through the school health system, so not a big worry since these diseases are normally  
35 diseases of childhood, so I'm not really worried there. But we risk having adults who do not have  
36 proper vaccination coverage... But I have come in contact with working immigrants that have  
37 lacked BCG for example for TB, and that was through the school health system that I came across  
38 a child that didn't have it, parents don't have it either, so referred them all to vaccine...so there  
39 are ways of catching it up somehow.”

40  
41  
42 “You go to police then here, but this is only from countries with lots of tuberculosis and hepatitis  
43 B. But if you come as a working migrant, you don't have to go to the police. So they don't know  
44 about our system. They can live here half or one year before I know about them. A few weeks  
45 ago, a mother was pregnant, midwife asked her if she had been to health station with other  
46 child, and she had not. So we sent a letter to them. But refugees and family reunion migrants  
47 they need to go to the police office so we know about them and invite them here.”

48  
49  
50 “As a working migrant, yes you can, but they give 3 months then you have to renew it. I think  
51 they do go to the police, but police doesn't send us letter because they aren't allowed to tell us.  
52 That is a barrier and challenge because some people can live here for a long time before we  
53 know about them, but if a child, when they start school then we know.”

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3 “Some of the working migrants, they have health insurance through their company and are  
4 connected to a doctor through their company - normally big IT companies that are doing this  
5 work visa thing. So those we are not very worried about it.”  
6

7 “But mainly the groups that are prioritized are refugees, asylum seekers, and family reunification.”  
8

9 “Because it’s not that often we do vaccination on the immigrants. It’s more like refugees that are  
10 coming directly and are going to be settled, we have to give them a set of vaccines because they  
11 often don’t have their papers. And they have been exposed to a lot of diseases in the refugee  
12 camps, but immigrants from within the EU, it is not the case.”  
13

## 14 15 **Financial Challenges for Migrants**

16 “Under eighteen years, all vaccines are free. New program is that all persons up to age 25 can  
17 get vaccines for free.”  
18

19 “Everything is free for child except travel vaccines.”  
20

21 [Barriers to vaccination] “I think that they might not think they have the right to get it. And also it  
22 is quite expensive. For example, a tetanus shot costs 300 NOK. If you go to the doctor and they  
23 recommend the shot, then it will be more than 500. So I think many adult migrants don’t seek it  
24 because it is so expensive.”  
25

26 “We have the vaccinations here. We can give it to them for free because if you are in this  
27 community, you can get this for free up to 18 years old for all migrants. If you go to a doctor though  
28 [not this specialized clinic], it is not free.”  
29

30 “But sometimes it stops in the municipalities because they [asylum seekers] have to finance it  
31 themselves and they don’t get much money from the state, very little money. So many people  
32 will not prioritize to do vaccination.”  
33

34 “The situation today is that [immigrants] only get some of the vaccines for free. So it would  
35 maybe help the situation if we had a program, more systematic, and have financial support and  
36 systematic communication and material. Maybe that would lift the burden.”  
37

38 “If you are in this municipality, you can have this vaccination from 0 to 18 years for free.”  
39

40 “No financial barriers for refugees. These are supposed to be offered free of charge.”  
41

42 “Refugees get vaccines for free.”  
43

44 “Refugees - they have a good system. The government helps them as they don’t have the money  
45 yet, so the government pays for them.”  
46

47 “In Norway, you have to pay an amount of money when you go to your GP and then after a while,  
48 you don’t have to pay anything else. It may seem that the fee is low, but for asylum seeker, it is a  
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3 problem because they have little money, and have to choose between going to doctor or eating  
4 – it is a barrier.”  
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6

### 7 **Education for Healthcare Providers on Migrant Health**

8

9 “It is very necessary to build up capacity to deal with these immigrant patients at all levels,  
10 including primary care. To increase our knowledge and awareness, like cultural competence,  
11 cultural humility. Up to now, we have not had that in the curriculum, but in the society in which we  
12 live, it is not defensible anymore to continue this way.”  
13

14 “Very rarely I know nurses going to them.”  
15

16 “Yes, [we have optional courses]. But I think we should have more of this.”  
17

18 “You go if you want to, not mandatory.”  
19

20  
21 “Not my area of expertise, but from my education, there is not much of it. I think that persons  
22 working in regions with lots of migrants go do courses and extra... I don't think it's in HCP  
23 education, but not sure.”  
24

### 25 **Translators & Navigating Language Barriers**

26

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28  
29 “Knowledge about entitlement and rights [is a barrier for migrants to healthcare and  
30 vaccinations] because even though all migrants, at least documented ones, they have the right  
31 to interpreter. Not everyone knows that. Sometimes they come with one, but they need to pay  
32 for the bus fare for them and now also for the interpreter. Those barriers are the ones we don't  
33 think about and are bigger than we think... they are there.”  
34

35  
36 “But of course, I would assume that language barriers, and you know you have to learn a new  
37 system, which is different from what you are used to in your home country... itself would be a  
38 barrier. This is more my impression.”  
39

40 “There are many [barriers]... Of course, language, health literacy.”  
41

42 “I think some patients are not taken seriously because they express themselves quite vaguely.  
43 Maybe they don't have the language.”  
44

45 [Availability of Translators] “I'm not sure, but in many cases they are obligated to use translators.  
46 Because the professionals are responsible that the patient understood what they said. I think they  
47 use it, but not sure - not sure how much.”  
48

49 [Availability of Translators] “It is a bit complicated because you need to know in advance what  
50 language and then you have to book them by telephone... in a small town, you don't have all  
51 the languages there, certified translators. So we need to call a booking company. And quite  
52 often we need to do this, but not so often that we do. We are obliged by law to do. But if there  
53 are refugees, they bring interpreter... it is organized by someone else... integration service.”  
54

55 “We are obliged to use translators anywhere we believe that the capacity... obliged to give info  
56 in a way that is understandable to the patient. This is for anyone in healthcare system, so also  
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3 mandated within migration health system. It is more and more being used, I think previously we  
4 were really weak - using children or anyone else as translators, other staff members - this is no  
5 longer acceptable. A lot of municipalities do cry out about the cost of this but it is a responsibility  
6 we have and we need to use money to do this. Without hesitation I get a translator for all of my  
7 meetings and I think most do that. A lot of refugees when making appointments within the  
8 regular health care system aren't always aware of their right to a translator so sometimes they  
9 wouldn't go to the doctor or wouldn't tell the receptionist that they need a translator which leads  
10 to worse quality of care."  
11

12  
13 "There are several issues. One is that we lack enough translators with high enough quality, but  
14 that's the less of the problem. Very big one is that even though patients are entitled, patients do  
15 not know. Health care providers are not clear about this, and even if they know, they find it  
16 complicated to manage, especially those who do not have many immigrants as their patients.  
17 They are find it as a burden - taking time, don't know where to phone, don't feel comfortable  
18 using this interpreters either - third person in the room. They are not taught how to manage.  
19 This is something to address in the curriculum - how to address the situation when you have  
20 interpreter. Not very difficult, but you have to know how to do it."  
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## Standards for Reporting Qualitative Research (SRQR)\*

<http://www.equator-network.org/reporting-guidelines/srqr/>

Page/line no(s).

### Title and abstract

<p><b>Title</b> - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended</p>	1-3
<p><b>Abstract</b> - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions</p>	19-56

### Introduction

<p><b>Problem formulation</b> - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement</p>	60-97
<p><b>Purpose or research question</b> - Purpose of the study and specific objectives or questions</p>	97-99

### Methods

<p><b>Qualitative approach and research paradigm</b> - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**</p>	101-105
<p><b>Researcher characteristics and reflexivity</b> - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability</p>	152-162
<p><b>Context</b> - Setting/site and salient contextual factors; rationale**</p>	109-114
<p><b>Sampling strategy</b> - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**</p>	107-121
<p><b>Ethical issues pertaining to human subjects</b> - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues</p>	148-150
<p><b>Data collection methods</b> - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**</p>	123-131

1 2 3 4 5	<b>Data collection instruments and technologies</b> - Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	125-128
6 7 8	<b>Units of study</b> - Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	118
9 10 11 12	<b>Data processing</b> - Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/de-identification of excerpts	129-130
13 14 15 16	<b>Data analysis</b> - Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale**	128-129
17 18 19 20	<b>Techniques to enhance trustworthiness</b> - Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale**	130-132

### Results/findings

23 24 25 26	<b>Synthesis and interpretation</b> - Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	166-276
27 28 29 30	<b>Links to empirical data</b> - Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	199 (and supplementary documents)

### Discussion

33 34 35 36 37 38	<b>Integration with prior work, implications, transferability, and contribution(s) to the field</b> - Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	281-344
39 40	<b>Limitations</b> - Trustworthiness and limitations of findings	346-365

### Other

43 44 45	<b>Conflicts of interest</b> - Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	382
46 47	<b>Funding</b> - Sources of funding and other support; role of funders in data collection, interpretation, and reporting	383-385

\*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.



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\*\*The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

**Reference:**

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