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Infrastructural familiarity: How Russian-speaking migrants are expected to become active participants in navigating UK vaccination programmes

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ABSTRACT

International migrants remain an under-immunised group globally. Understanding expectations that national public health infrastructures pose upon newly arrived migrants is crucial for unpacking the challenges that migrants face when seeking vaccination. Building on the concept of infrastructural familiarity – the embedded knowledge required to navigate public health systems – and focusing on Russian-speaking migrants in the UK, in this article we aim to map how this group of migrants navigate UK vaccination programmes. Following convenience sampling, we conducted 25 semi-structured interviews with Russian-speaking migrants in the UK, including 15 asylum seekers. After transcribing the interviews verbatim, we applied a combination of deductive and inductive techniques for thematic data analysis. Seven asylum seekers were self-identified as men who have sex with men (MSM), which was an important distinction when analysing migrants' vaccination experiences in their home countries and in the UK. Having limited access to certain vaccines, such as HPV, in their home countries, MSM asylum seekers adopted a role of being proactive participants in the UK public health infrastructure. Non-MSM migrants, however, struggled to become active participants within the UK public health infrastructure, with them referring to logistical and financial challenges in accessing vaccination. Analysing these different experiences, we reflect on how UK public health infrastructures, and vaccination provision in particular, expect newly arrived migrants to become informed and active participants within these infrastructures, thus leaving those who cannot fulfil such expectations on the healthcare margins.

1. Introduction

While vaccination is a crucial public health tool for infection prevention, it is important to acknowledge that practices related to vaccination uptake, including vaccine hesitancy, are deeply social and rooted in cultural, political and material infrastructures that shape individuals' daily realities. Being part of healthcare practices, vaccines are embedded in socio-political and historical dynamics that have been negotiated between healthcare professionals, patients, and state institutions (Schloemer et al., 2024; Yang et al., 2019). Therefore, research on vaccination practices across different communities have drawn attention to topics of trust-building between vaccine recipients and authorities, including state and healthcare authorities (Deal et al., 2025; Jamison et al., 2019; Schneider-Kamp, 2022); socio-economic inequities in vaccination access within and across communities (Berardi et al., 2022); material infrastructures that shape vaccine access and delivery (Knights et al., 2024); as well as colonial histories that intertwine those socio-political and material infrastructures (Matos et al., 2022; Truong-Vu, 2024).

Adult international migrants have been reported by Deal et al.

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(2021) to be an under-immunised group putting them at risk of vaccine-preventable diseases. Research by Crawshaw et al. (2022) and Mipatrini et al. (2017) elaborate that diverse adolescent and adult migrant groups in Europe and the UK are at risk of under-immunisation for routine vaccinations due to missed vaccines as children, which may be related to lack of vaccine availability, military conflict, poorly functioning health systems, as well as personal, social and physical barriers to accessing vaccines. Despite this, adolescent and adult migrants, beyond school age, are often not routinely included in vaccination programmes on arrival to most European countries, including the UK (Carter et al., 2022; Hargreaves et al., 2018). For migrants arriving in the UK, guidelines are available from the UK Health Security Agency (UKHSA) on the 'vaccination of individuals with uncertain or incomplete immunisation status'. These include revaccinating with MMR (measles, mumps, rubella), Td-IPV (tetanus, diphtheria and polio), HPV and MenACWY (meningococcal bacteria) vaccines in certain age groups (UK Health Security Agency, 2023).

When reflecting on practices around access and acceptance of vaccinations in adult migrants in the UK, two studies by Deal et al. (2021, 2024) highlighted that limited available information, mistrust towards the vaccine or the host country's authorities, as well as language are key challenges in accessing healthcare services in general and vaccination in particular. Therefore, understanding a host country's contexts and its healthcare infrastructures is crucial for designing and delivering vaccination campaigns to migrant communities. However, such focus may overlook how vaccination practices have been shaped among diverse migrant communities through their socio-cultural and historically embedded experiences in countries where they were coming from. When migrating to a new country, adult migrants are bringing with them a plethora of experiences, norms and ideas, including those regarding vaccination, that may shape their expectations and interactions with vaccination programs in host countries.

Therefore, in this article we aim to explore vaccination practices among adult international migrants in the UK through the conceptual lens of infrastructural familiarity. This means that we aim to explore how vaccination practices in host countries may be shaped by experiences in both countries of origin, as well as expectations and demands of the new country's public health infrastructure. Previous research on migrants' navigations of host countries healthcare infrastructures tended to focus on the concept of health literacy as a key factor determining migrants' access and utilisation of healthcare services (Nutbeam, 2008; Medina et al., 2022; Ward et al., 2019), as well as a broader concept of cultural health capital to reflect on the immigrants' processes of integration into new health cultures (Madden, 2015; Næss, 2019; Shim, 2010). While those studies provide important insights on the challenges of healthcare navigation and health inequities by focusing on how migrants articulate and command their cultural capital to ensure integration into host country's healthcare culture, in this article we examine how healthcare infrastructure as an actor itself shapes practices of its end-users.

We build on the concept of infrastructure developed by Bowker and Star (2000) that refers to something that organizes and provides grounds for different practices and routines to take place. Infrastructure as elaborated by Bowker and Star (2000, 2002) is discussed as being embedded, invisible, and even "boring" as it serves as a background where actions are taking place. Infrastructure is built on various classification systems that determine different norms, routines, and beliefs. For example, focusing on the International Classification of Diseases, Bowker and Star (2000) show how healthcare infrastructure and the practices within it become organised and informed by such classification – the separation of wards for infectious and non-infectious diseases, as well as the separation of different teams working on different health conditions. The moment patients enter a hospital, depending on the classification of their health condition, they have to follow specific corridors, are treated by a particular specialist and follow a prescribed regiment that has been pre-determined by a treatment guideline. Therefore, classification systems shape not only healthcare knowledge but are embedded in the healthcare architecture. This inevitability and the power of built infrastructure have been unpacked by Brown et al. (2021) in their research on antimicrobial resistance in care practices of a cystic fibrosis clinic in the UK. The focus on the built architecture of a cystic fibrosis clinic, allowed the authors to shift the discussion on antimicrobial resistance from its dominant focus on behaviour, such as antibiotic use and prescriptions, to understanding how socio-material infrastructure, including healthcare guidelines and building architecture, shapes practices around antimicrobial resistance containment (Brown et al., 2021).

Infrastructures that surround one's daily reality, including hospital and public health infrastructures, often remain unnoticed as something mundane, unless they are broken or malfunctioning. Scholarship in Science and Technology Studies (STS) that have been engaging with infrastructural thinking highlighted that these mundane, often invisible infrastructures, play a crucial role in shaping individuals' understanding of norms and practices, including the routine practices of visiting a healthcare professional, administering a medication and receiving or rejecting a vaccine (Bowker et al., 1996; Bowker & Star, 2000; Brown et al., 2021). These routines are rarely questioned unless something is not working. For instance, if an electronic patient registrations system is malfunctioning, then the invisible infrastructure becomes visible as mundane practices have to be adapted. Building on these insights, in this article we use the concept of infrastructural familiarity to explore both migrants' expectations towards how public health infrastructures, and vaccination programmes in particular, should function, and public health infrastructures' expectations towards how its users should interact with those infrastructures.

Therefore, below, we are focusing on adults who migrated to the UK in the last 10 years from the post-soviet states, which currently constitute 15 sovereign countries. Although diverse in their socio-cultural contexts, these states often share comparable public health infrastructures the basis for which have been established during the soviet era and rooted in prevention, including vaccination. Further, as language is frequently reported to be a key challenge in accessing healthcare services in general and vaccination in particular (Crawshaw et al., 2021) we decided to narrow our focus to Russian-speaking migrants who despite being a growing migrant group in the UK have been poorly represented in research.

2. Research background: migration from post-soviet states to the west

According to the 2021 UK government population statistics, approximately 402.000 residents in the UK were migrants from post-soviet states, with a majority of people coming from Lithuania (estimated 142.000), Russia (estimated 81.000), Latvia (estimated 80.000) and Ukraine (estimated 35.000) (Office of National Statistics, 2021). Further, following the 2022 Russian invasion of Ukraine, the UK has received an increasing number of asylum applications from both Ukraine and Russia (Kiseleva & Safronova, 2023; The Migration Observatory, 2023). With migration taking place during the COVID-19 pandemic, concerns regarding access to vaccination for newly arrived migrants have been raised by multiple scholars (Hill et al., 2022; Kamenshchikova et al., 2022). In addition, the UK National Health Service (NHS) published separate guidance for the screening and immunisation of people fleeing conflict in Ukraine drawing attention to the importance of offering COVID-19 and other vaccines to people with uncertain or unknown vaccination status (NHS England and NHS Improvement – South West, 2022).

Several studies from different European countries have focused on the vaccination needs and challenges for vaccination provision for people coming from Ukraine (Ganczak et al., 2021; Malchrzak et al., 2022; Troiano et al., 2022). In addition, recent research in the UK has analysed the overall challenges for catch-up vaccination provision for

different migrant groups in the UK, highlighting the amount of limited available information, as well as the mistrust surrounding vaccination as the main challenges (Deal et al., 2024). Furthermore, there is now renewed emphasis being placed on reaching out to adult migrant populations regarding vaccination and its benefits (Crawshaw et al., 2021). However, limited research engaged with Russian-speaking asylum seekers and other migrants residing in the UK, and the potential challenges they may experience with catch-up vaccinations. Therefore, by focusing on this growing migrant group, we aim to unpack Russian-speaking migrants' experiences and challenges of navigating UK healthcare infrastructure, with particular focus on their experiences and expectations in relation to adult catch-up vaccination programs.

Before turning to our methods and research results, it is important to highlight that although throughout the article we refer to a broader group of Russian-speaking migrants, this group is very heterogeneous. They differ in their migration experiences, their identities, cultural backgrounds, and countries of origin. To highlight some of the distinct experiences between our participants, we use the terms asylum seekers and migrants. Although the term migrant refers to anyone crossing international borders, we decided to distinguish people having the legal status of asylum seekers as a particularly vulnerable group that often have restricted access to healthcare services (Jachmann et el., 2022). Further, throughout our result section, we make a distinction between our participants who identified as men who have sex with men (MSM) and non-MSM participants. We acknowledge the binary nature of this distinction does not reflect the diversity of non-heteronormative people, however, in this article we adopted this binary to highlight the distinct vaccination-related experiences of our MSM and non-MSM participants.

These distinctions between research participants were instrumental for our analysis and are reflective of broader migration processes from post-Soviet states to Western European countries and the United States. While there is no exact statistical data, scholars in the field of LGBTQI + migration have highlighted that individuals' gender and sexual identity have become a key reason for claiming political asylum among migrants from post-Soviet states to countries in Western Europe and the United States (Novitskaya, 2021; Oren & Gorshkov, 2021). In particular, the "anti-gay propaganda" laws adopted in Russia in 2013 and its influence on worsening homophobic attitudes in neighbouring countries, such as Belarus and Kazakhstan, have stimulated emigration of LGBTQI + people (Kim, 2024; Novitskaya, 2021, 2023; Oren & Gorshkov, 2021). This background is important for our research as it positioned our participants within a distinctly gendered migratory and politico-historical context, and it shaped different experiences of our participants with the UK vaccination programmes.

3. Methods

3.1. Study design

The findings in this paper are based on data collected through semi-structured interviews with adult Russian-speaking migrants, including asylum seekers in the UK. Semi-structured interviews provided detailed information about participants' practices and experiences with catch-up vaccination in the UK. All interviews were conducted remotely (through audio or video calls using Zoom, Skype or Telegram software depending on participant preferences) between July and August 2022. The topic guide was developed based on the analysis of literature on catch up vaccinations among adult migrants, including research conducted by our group in the UK (see Deal et al., 2024, 2025). Through literature analysis, we identified three core topics that informed the interview guide, including migrants' experiences of registration and communication with a general practitioner (GP), perceptions and experiences with COVID-19 vaccination, and other adult vaccines in both their home countries and the UK.

3.2. Data collection

To ensure the inclusion of diverse migrant populations, we used a convenience sampling technique. The two inclusion requirements were 1) being a migrant in the UK for no more than 10 years to capture the most recent experiences, and 2) speaking Russian as a main language. Initial recruitment of the interview participants was organised through four Russian-speaking migrant groups on Facebook, such as "Russian speakers in UK". An advertisement was posted in each group inviting participants for an interview, which included a description of the study aims and contacts of the main investigator. Subsequent recruitment was organised through a snowballing method.

Potential participants were provided with a detailed information sheet about the research and were given an opportunity to ask any questions through online communication (email, Facebook messenger, Telegram) before providing an informed consent. Interviews were conducted after participants read the information sheet, clarified any questions, and signed (electronically) an informed consent form. For participation in an interview, participants received a voucher for 35 pounds (GBP). Interviews lasted between 20 and 57 min, an average interview lasted 35 min. Interviews were collected until reaching the point of data saturation, in total 25 interviews were conducted.

All communications, including a recruitment post, information sheet, informed consent and interviews were conducted in Russian by the first author (quotes in the result section were translated to English). The first author is herself a migrant who emigrated from Russia in 2015. This research was conducted during her post-doctoral fellowship in the UK in 2022 where she focused on cross-border healthcare continuity for migrant populations, including vaccination access. Being in the UK at the time of Russian invasion of Ukraine stimulated her to focus her research questions on the populations that were directly or indirectly impacted by those events. However, being a migrant and a Russian-native speaker does not ensure the intimate understanding of diverse migration experiences, including the experiences with a healthcare system. Therefore, the development, analysis and the write-up of this project was a collaborative effort of all co-authors who have diverse personal and professional experiences with migration, migrant health, and cross-border care continuity.

3.3. Data analysis

All interviews were audio-recorded and transcribed verbatim. Interview transcripts were analysed using thematic analysis (Green & Thorogood, 2018). The themes were developed through a combination of deductive and inductive approaches. Themes related to the experience of registering with the GP, receiving information about the UK healthcare system, COVID-19 and other adult vaccinations were predetermined at the stage of a research design and were based on the literature analysis of catch-up vaccinations among adult migrants. To formulate themes inductively, we followed techniques developed by Ryan and Bernard (2003), where we paid close attention to the repetition of topics across the interviews, as well as similarities in participants' expressions and experiences. The inductive method sensitised our analyses to participants' distinct expectations towards how vaccination programmes and the broader healthcare systems *should* function. Following this analysis, we formed our conceptual approach of infrastructural familiarity that allowed us to explore how participants' previous experiences with vaccination programmes in their home countries shaped their expectations towards such programmes in the UK.

As a quality assurance measure, during the data analysis stage, the interview content was discussed between the research team to ensure that identified themes were rooted in both existing literature and in our specific interview data. Specifically, we followed several steps to ensure the quality of the analysis: 1) Immediately after every interview, AK wrote short summaries of the main themes discussed in the interviews. 2) These summaries were shared and discussed with AD and SH. AK, AD,

and SH discussed the content of interviews based on AK's summaries to adjust the interview guide and to build an analytical framework. 3) At the end of data collection stage, AK created a coding tree for thematic analysis following didactive and inductive methods. The thematic analysis was discussed, and themes were agreed upon by AD and SH. 4) The final analysis of the interview data was written by AK and shared with the remaining authors for reviewing. No disagreements were recorded throughout the analysis process.

The study was approved by the City St. George's, University of London Research Ethics Committee (REC 2020.0058).

4. Results

We conducted 25 semi-structured interviews with Russian-speaking migrants, including people coming from Russia, Latvia, Ukraine, Belarus, and Kazakhstan (see Table 1). The majority of the participants have been in the UK for no more than 1 year, with others being in the UK between two and seven years. The age of the participants varied between 21 and 55 years old, with 12 female and 13 male participants. The majority of the participants were asylum seekers, with others being in the UK on a partner, settlement, work, or student visa. As explained above, when citing individual participants, we made a distinction between asylum seekers, including one refugee who was granted asylum, and migrants that were included in the above-mentioned visa categories. Seven asylum seeking participants from Russia identified as men who have sex with men (MSM).

Due to interviews being conducted in 2022, the COVID-19 vaccination, as well as travel restrictions associated with the pandemic were dominant topics in conversations. All except five participants received COVID-19 vaccinations, which was motivated by diverse reasoning, including protection of one's health, and having the ability to travel to other countries. Except for one migrant, all participants reported to have received childhood vaccinations in their home countries, specifically mentioning receiving MMR and diphtheria vaccines. All participants were familiar with adult vaccines against influenza but had different reasons for acceptance or refusal of the vaccine. Other vaccines, including Hepatitis A and B, HPV and Mpox vaccines were only mentioned by MSM participants.

To outline the diverse experiences of Russian-speaking migrants within UK vaccination programs, below, we first explore our participants' experiences with accessing primary care services as a key element of the UK public health infrastructure. Then, we map our participants' COVID-19 vaccination experiences as well as other adult vaccinations in both participants home countries and in the UK. This will allow us to elaborate on participants' expectations, as well as practices of adaptation and challenges of navigating unfamiliar public health infrastructures.

Table 1
Characteristics of interview participants (n = 25).

		Asylum seekers[a]		Migrants	
		Female	Male[b]	Female	Male
Total n		4	11	8	2
Age (years)	21–30		3	1	1
	31–40	3	5	4	1
	41–50		3	2	
	51–60	1		1	
Time in the UK (years)	<1	4	10		
	1–3			4	1
	>3		1	4	1
Country of origin	Russia	2	11	5	
	Ukraine	2			
	Kazakhstan			1	
	Belarus			1	
	Latvia			1	2

[a] Including one refugee.
[b] Including seven MSM asylum seekers.

4.1. Accessing primary care services

Depending on their English language proficiency, participants had significantly different experiences interacting with the UK healthcare infrastructure and registering with a GP. While those who could speak English fluently did not report any challenges with finding information, filling in forms and registering with a GP, non-English speaking participants often had to rely on their social networks in the UK, either receiving information from friends or asylum seekers who arrived earlier. For instance, an MSM asylum seeker from Russia and an asylum seeker from Ukraine highlighted how important it was to have a social network to help navigate their way through GP registration:

> *"I was living with my friends who let me stay with them while I was waiting for the decision on my asylum status. They helped me, they brought me to a GP and told me that I had to register. They also explained to me how the system worked here [in the UK]"* (MSM asylum seeker from Russia)

> *"We [asylum seekers from Ukraine] have a WhatsApp group for people who arrived to [the city] and we share all information there. … Nobody give us any information [about GP registration], we have to find everything ourselves"* (Asylum seeker from Ukraine)

For participants who did not have a social network and who could not speak English fluently, the initial registration with a GP was a major challenge. Without support from national institutions, such as the Home Office, participants found it difficult and discouraging to try and navigate the system by themselves, with one person commenting:

> *"As a result [of having no support from the Home Office], I am not registered with a GP. I got tired of looking for information myself"* (MSM asylum seeker from Russia)

The frustration with the lack of information in the Russian language and a lack of a centralised support system were core themes among newly arrived asylum seekers with limited social networks in the UK. Consequently, five of the participants were not registered with a GP. These were also the participants who did not speak English and were registered as asylum seekers. When navigating the processes of GP registration, the two themes of English language proficiency and the lack of a central administration that could guide participants' registration dominated the narratives. These two themes persisted throughout different topics discussed during the interviews, highlighting that not only language but also infrastructural familiarity and expectations towards how the system *should* function, shaped our participants' vaccination experiences. If a healthcare system does not function as expected by the participants, and there is no social network or institutional support that could introduce and navigate a newly arrived migrant though that system, we could see that our participants felt lost and experienced challenges receiving access to vaccination services.

4.2. COVID-19 vaccinations

Participants who received the COVID-19 vaccination, either did so in the UK for the first time or were re-vaccinated upon arrival to the UK. Migrants who were not asylum seekers received either an SMS or a mail invitation from their UK healthcare provider for vaccination. They also mentioned the role of their GPs in convincing them to vaccinate and in explaining the importance of vaccination.

At the same time, asylum seekers discussed the various challenges they experienced when trying to ascertain information about the COVID-19 vaccination or arrange a visit to a vaccination site. In particular, asylum seekers from Russia who were living in an asylum hotel, reported a lack of available information about the COVID-19 vaccination in Russian language and logistical difficulties reaching the

vaccination site. One participant described a situation where vaccination was offered multiple times, but no arrangements were made to bring people to a vaccination site:

> *"Very bad organisation of vaccination, in terms of control. Several companies arrived to organise vaccination, and they did not coordinate. And in March we were asked about four times "do you want to vaccine?" and nobody had a list about who had vaccine in the hotel and who not. There was no organisation. So they did not tell, if you want to vaccinate, you have to go there, or someone will pick you up, or go there, or something like this. Nothing was done"* (MSM asylum seeker from Russia)

Another MSM asylum seeker from Russia highlighted that he did not receive any information on where to get a COVID-19 booster vaccine, although he expected that this was an information that would be provided by the asylum centres:

> *"I got COVID vaccine in Russia. … But now I don't know how to get a vaccine [in the UK], a booster against COVID. Maybe I have to go to a GP …. Nobody told me about it"* (MSM asylum seeker from Russia)

Participants who received information about vaccinations faced practical challenges around getting to a vaccination site and receiving confirmation regarding their vaccination appointments. Participants reported not having sufficient financial resources to travel to a vaccination site or not being able to find information about COVID-19 vaccinations on the government websites, also due to lack of English language skills. One participant explained that he hoped to be offered a vaccination at the location of an asylum hotel as arranging their own vaccination could be challenging and financially burdensome:

> *"Travel cost [to vaccination site] is 7 pounds one way but I only have 8 pounds a week subsidy. … So I did not go and was hoping that they [healthcare workers] will come to a hotel and give us a vaccine"* (Asylum seeker from Russia)

The lack of centralised organisation for vaccination was repeated throughout the course of interviews with diverse groups of migrants expressing that they were unvaccinated due to logistical challenges rather than their unwillingness. Specifically, participants explained that they expected a centralised and supervised organisation of vaccination processes – something that they were familiar with coming from post-soviet contexts where vaccination is often organised at workplaces. Our participants highlighted that they found information about vaccination in the UK to be fragmented, with individuals having to find and organise their visits to a vaccination site themselves without any external support. For instance, two asylum seekers from Russia compared their experiences of vaccination organisation in their home country and in the UK by reflecting upon their expectations for vaccination to be an integral part of mundane infrastructures:

> *"We are used to that our employer organises it [vaccination]. When I was working at a factory, it [vaccination] was all organised there on site. The director would come a week in advance and talk to the workers when they have to come to the factory to get a vaccine. But here [in the UK] as far as I understood, they don't have it, they just give you some booklet and you decide if you want to go or not. I think it was better organised in Russia"* (Asylum seeker from Russia)

> *"Vaccination in Russia, I think, is much easier because it is all organised. They even offer you an influenza vaccine at your workplace, you don't need to go anywhere, you can just go two floors down and there is a doctor there. The work is organising vaccination for you. … Here [UK] I get information from the family that migrated earlier, and I could not even think that half hour from my house there is a pharmacy where you can do it [vaccination]"* (MSM asylum seeker from Russia)

Therefore, participants from Russia highlighted the ease of their vaccination experiences and vaccination compliance when it was centrally organised through their employer in Russia. We could see throughout different interviews that such a centralised and predetermined organisation for vaccination was regarded by participants from different post-soviet contexts as convenient and reduced the need for participants' proactive involvement in the organisation of their vaccination. It is this centralised organisation of vaccination that was regarded by our participants to be an embedded part of a broader healthcare infrastructure that they came to know as the norm. Engaging with the UK vaccination programmes, which do not have such a central organisation created a feeling of uncertainty among some of our participants in terms of how they should adapt their practices.

While the majority of our participants reported logistical challenges of receiving COVID-19 vaccinations, several participants expressed overall hesitancy towards being vaccinated against COVID-19. In addition, two asylum seekers were feeling left without the option to refuse vaccination due to their migration status. One asylum seeker from Ukraine expressed her worry that she would not be able to refuse the COVID-19 vaccination as she believed that she may lose social subsidies and the possibility to stay in the UK:

> *"You asked me about vaccination. You think we have a choice? They have some requirements, and we cannot say no, that's what I want to tell you. … Nobody is forcing us yet, but if it will be a requirement, we will lose social subsidies and support [if not vaccinated]"* (Asylum seeker from Ukraine)

She was worried that she would not have a choice if the government required her to have the vaccine as she believed that it would impact her migration status in the UK. She explained that she learned this from other asylum seekers from Ukraine through social media platforms, such as WhatsApp and Facebook.

Social media is a crucial source of information for migrants where they can find information in their own languages and communicate with other migrants regarding their understanding and interpretation of the UK vaccine regulations, which has been reported for different migrant groups (Goldsmith et al., 2022). Asylum seekers and migrants from Russia referred to Telegram as the main media platform for information exchange and communication, while asylum seekers from Ukraine reported that WhatsApp groups were the main platform used. Several interview participants who were fluent in English mentioned that they preferred to read health and vaccination related information from government websites, such as gov.uk and nhs.uk. Others mentioned that they searched for alternative sources to learn about COVID-19, including those provided in the Russian language. For instance,

> *"I was monitoring alternative sources. There was a lot of criticism [towards COVID-19 vaccine] online from different academics and experts, people from healthcare systems who talk about lack of evidence base for vaccination"* (Migrant from Russia)

> *"I was watching Good Evening [TV programme] on Russian TV. And then I read that all these things about vaccination is related to marketing. And also they want to reduce the number of people on the planet, there are too many people. And you know, all these stopped me from taking a vaccine"* (Migrant from Latvia)

Five of our participants did not take the COVID-19 vaccine mentioning distrust in the vaccine and the rapid development in which the vaccines were released as the main reasons for their hesitation. This was reported to be a common challenge in COVID-19 vaccine hesitancy in all population groups (Lazarus et al., 2022; Troiano & Nardi, 2021).

However, despite the expressed hesitancy towards the COVID-19 vaccination by some of the participants, we can see throughout the interviews that the discussion on vaccination processes among Russian-speaking migrants was often narrowed to the discussion of simplicity and the centralisation of vaccination programmes. Participants highlighted that the UK public health infrastructure expects newly arrived migrants to take active steps towards receiving vaccinations, which includes, at least, finding the right information, making an appointment,

and travelling to and from that appointment. Such a system of active participation in vaccination processes was unfamiliar to our research participants who expected the vaccination process to be centrally organised and brought to a person.

4.3. Adult catch-up vaccination

Only participants who self-identified as MSM mentioned being asked and offered vaccination by a GP. Others did not have experience of discussing their vaccination history with a GP in the UK, and were not offered any vaccinations apart from COVID-19:

> *"They [GP] asked about my health/illness history, what diseases I had and chronic conditions my parents had, like diabetes but they [GP] didn't ask anything about vaccination"* (Migrant from Kazakhstan)

All participants were familiar with the influenza vaccination as it had been routinely offered in their home countries. However, there was not a clear consensus on whether it should or should not be taken. In their motivation for accepting or refusing the vaccine, participants tended to measure its potential benefits against the ability of their bodies to fight the virus with some highlighting that they would rather build their own immunity than take a vaccine:

> *"I am absolutely not against vaccines, but I do not see a purpose in influenza vaccines because I am never ill with influenza"* (Migrant from Latvia)

> *"I had last influenza vaccine, I think 13 years ago, and I felt very bad. So I made a decision that if I get ill, I will rather deal with it myself"* (Migrant from Russia)

At the same time, one participant who did not accept the COVID-19 vaccination because she did not trust the evidence behind it, took the influenza vaccine yearly due to her occupation, which required her to have interactions with children:

> *"I work with children and I heard and read that consequences, if you get sick with influenza, are very serious"* (Migrant from Latvia)

She seemed to perceive the influenza vaccine as trustworthy and important for protecting her health and the health of the children with whom she worked. This indicates that COVID-19 hesitancy is a separate phenomenon that cannot be associated with hesitancy towards other vaccines and requires separate research.

While COVID-19 vaccination had dominated our interviews and other vaccinations were rarely mentioned by the participants, the group of MSM asylum seekers from Russia were proactive in seeking vaccination and information about vaccines upon arrival to the UK. All seven MSM asylum seekers either asked about vaccination from a GP or went to a sexual health clinic to inquire about it. They perceived their migration to the UK as an important opportunity to receive some of the vaccines that they may not have had access to before. However, despite being well informed and proactive, one of the participants experienced challenges when asking for the HPV vaccination from a GP who was not informed about HPV vaccination for men. This participant had to search for other places where he could receive an HPV vaccine, and that is how he came across a sexual health clinic:

> *"I did a pre-emptive move. I brought my translated vaccination list to a GP. Nobody initiated a talk with me about vaccination. … As I can use vaccination program as a man who have sex with man, I asked to receive an HPV vaccine, but they [GP] did not have information about this vaccine, they did not know what is the difference between an adult and child vaccine. … I came to sexual health clinic, and they were very helpful, and I could get an HPV vaccine the same day"* (MSM asylum seeker from Russia)

Other MSM asylum seekers shared their positive experiences with sexual health clinics in the UK, highlighting that it was easy for them to access the clinics without having to present any identification documents. All MSM participants in our study learned about sexual health clinics either from friends or by searching online, highlighting the importance of social networks as well the ability to search information in English:

> *"I saw on Facebook [an organisation that provides Mpox vaccine] that you can walk in or send an email. So I emailed them to make an appointment to get a vaccine"* (MSM asylum seeker from Russia)

> *"I think that vaccinations are very good. I did not think that I need an HPV vaccine, I never did it. But my family who lives here [UK], they told me that there is an option to get it here. I read about it that apparently it is a disease that can occur in everyone so it makes sense to get this vaccine. So when I arrived here, I asked about this vaccine [in the sexual health clinic]"* (MSM asylum seeker from Russia)

The seven MSM asylum seekers from our research were highly informed about different types of vaccines and were searching for opportunities to receive those vaccines upon arriving to the UK. However, they all reported that they were not provided with any specific information about vaccination by the migration authorities or a GP, therefore it is only due to them being pro-active that they found sexual health clinics and ultimately received vaccinations. The vaccinations that they were seeking included Mpox, hepatitis A and B, and HPV.

Reflecting on the differences in vaccination experiences between MSM and non-MSM migrants and asylum seekers after their arrival to the UK, we could see an important expectation that the UK public health infrastructure shapes towards newly arrived migrants. Coming from Russia where access to health prevention for MSM communities faces challenges due to stigmatising and homophobic attitudes, as well as regulatory constraints, MSM asylum seekers saw their migration to the UK as an opportunity to access healthcare infrastructures that they were otherwise excluded from in their home country. Therefore, MSM asylum seekers became active participants within the unfamiliar public health infrastructures – actively searching for information, support and resources that would allow them to receive access to vaccines. At the same time, non-MSM migrants and asylum seekers did not see vaccination and access to healthcare infrastructures as a priority, nor as important part of their migration process. This meant that non-MSM migrants were not taking active actions to engage with the UK public health infrastructure but rather relied on their familiar understanding that important prevention measures, such as vaccinations, would be organised centrally and brought to them. From this, we can see that the UK public health infrastructure and vaccination programs rely on the familiarity of its users to find and receive vaccinations, thus expecting newly arrived migrants to become active and adaptive learners and participants in this infrastructure.

5. Discussion

Ensuring that migrants have non-discriminatory access to vaccinations is an essential step in protecting individuals and public health, as well as reaching national and international goals for the elimination and eradication of communicable diseases (WHO, 2020). However, participants in our research who have been in the UK for longer than 2 years highlighted that they were not checked for their immunisation status or offered vaccinations at the level of primary care (except for the COVID-19 vaccine). These findings are in line with previous research on catch-up vaccination for migrants in the UK, such as research by Deal et al. (2024), highlighting the poor implementation of catch-up vaccination guidelines for people with uncertain or incomplete vaccination status.

While proficiency in English has often been reported as a major challenge in healthcare access for migrants, our research draws attention to the importance of familiarity with public health infrastructures and participants' expectations for how such infrastructures should be

working based on the experiences from their home countries. Asylum seekers residing in the asylum hotels could not financially afford to travel to the vaccination sites and expected the hotel to organise vaccination on site – similar to the centralised organisation for vaccination that they were familiar with from their home countries. However, as the responsibility for vaccination and finding information about vaccination in the UK fell on individual migrants – expecting them to become active participants in the healthcare system – it created multiple obstacles for accessing vaccination, including a lack of knowledge on how to navigate that system.

Our results show the distinct vaccination experiences of MSM and non-MSM asylum seekers, with the former adopting the role of active participants in an unfamiliar public health infrastructure that holds a promise of care that they did not have in their home countries. Specifically, sexual health clinics were viewed by MSM asylum seekers as being informative and accessible in providing vaccination. This group of asylum seekers was highly informed about the different types of vaccines, including Hepatitis A and B, Mpox and HPV, and were actively searching for the possibility to receive these vaccines. It is important to note that the national roll-out of HPV vaccination started to be offered in the UK sexual health clinics in 2018 aiming to target gay, bisexual and other MSM after being piloted in 2016 and 2017 (Public Health England, 2017). While the evaluation of this program among UK residents showed its overall acceptability (Checchi et al., 2019), we did not find research looking into the role of sexual health clinics in promoting HPV and other vaccines among MSM asylum seekers and migrants. Based on our findings, sexual health clinics offer an important opportunity to promote and provide vaccination to migrant communities, however further research is required on this topic.

In this article, we built on the concept of infrastructure developed by Bowker and Star (2000) and Star (2002) as something that organizes and provides grounds for different practices and routines. Adapting this concept, we aimed to reflect on both migrants' expectations towards how public health infrastructures should function, as well as public health infrastructures' expectations towards how its users should, in turn, interact and participate within those infrastructures. Coming from countries with post-soviet public health infrastructures, the majority of our participants, and non-MSM participants in particular, struggled to navigate the UK primary care and vaccination processes as it required them to be pro-active in seeking information. This included through the activation of their social networks, making appointments and finding financial support to be able to attend those appointments. Such expectations towards users of public health infrastructures contrasts with migrants' experiences from their home countries where vaccination programmes, are often centrally organised and do not require its users to be active participants. At the same time, MSM asylum seekers from Russia seem to fulfil the expectations of the UK public health infrastructure by adopting the role of active participants as it opens to them opportunities that were not accessible in their home country.

Although language proficiency among migrant communities is often discussed as a crucial challenge in healthcare access and vaccination provision (Crawshaw et al., 2021; 2022, Deal et al., 2025), in this article we drew attention to the importance of the materialities of healthcare and vaccination infrastructures. Without a strong intrinsic motivation to become active learners and participants of a new system, as we saw with MSM asylum seekers, navigating unfamiliar infrastructures can be a serious burden for newly arrived migrants and hinder public health efforts. Therefore, when designing public health campaigns and developing programs for integrating newly arrived migrants into national healthcare infrastructures, it is crucial to reflect upon the type of expectations these infrastructures pose towards migrants and the opportunities they have to fulfil those.

The concept of infrastructural familiarity offers an analytical angle in approaching questions related to migrants' experiences and their access to healthcare services in host countries. This concept suggests looking at the mundane and the invisible – how healthcare infrastructures are functioning and how they are expecting its users to interact with and within them, what requirements they pose to users. At the same time, applying this concept to migrants' experiences can allow us to unpack the expectations and ideas of norms regarding the healthcare system that people bring with them as they migrate. By focusing on the relational processes between different sets of expectations, shaped through the materialities and historic-cultural contexts of distinct public health infrastructures, the conceptual lens of infrastructural familiarity aligns with a broader conceptualisation of migration infrastructure developed by Xiang and Lindquist (2014). Building on their research of low-skilled labour migration from China and Indonesia, Xiang and Lindquist (2014), propose the concept of migration infrastructure to highlight that migration processes are shaped through the systematic interlinking between "technologies, institutions, and actors that facilitate and condition mobility". They highlight the importance of focusing on the interlinking processes that shape mobility and migration, thus moving away from approaching migration in a way that focuses on individual migrants and their behaviours or cultures. In this research we aimed to show the fruitfulness of approaching migrants' experiences with healthcare infrastructures and its vaccination programmes through the lens of infrastructural familiarity. However, future research is required to further develop this concept and explore its opportunities and limitations when applied to different contexts and diverse migrant communities.

It is important to acknowledge several limitations with this research. First, although we aimed to reach a broad community of Russian-speaking migrants in the UK, the majority of interview participants were Russian-born migrants. While this limitation did not allow us to compare experiences across the diverse group of Russian-speaking migrants in the UK, it did provide us with an opportunity to collect vaccination experiences from people who had been largely excluded from migrant health research. Second, as the interviews were conducted during summer of 2022 when UK-Russia relations were strained due to the Russian invasion of Ukraine, it may have impacted some of the experiences of our participants. Specifically, those regarding trust towards government institutions, as well as real and perceived discrimination. While the topic of the invasion was only mentioned by Ukrainian and Russian asylum seekers, it is crucial to acknowledge that the geopolitical context could have created unique experiences for our participants that could have influenced their responses. Third, while we aimed to recruit participants coming from diverse backgrounds and socio-economic contexts, the recruitment was largely organised through social media, and specifically Facebook. This means that a potential selection bias is present within our study towards participants with digital literacy and some degree of social connectivity, thus our research may have missed some of the more vulnerable and isolated migrants. Further, another important limitation of this study is its predominant focus on COVID-19 vaccination. While the research was aimed to engage with a broad range of experiences related to catch-up vaccination among Russian-speaking migrants, the interview conversations were largely focused on COVID-19. This can be explained by the particular timing of the interviews, in the summer of 2022 when COVID-19 vaccination was of global concern and therefore had been a familiar topic for many participants.

CRediT authorship contribution statement

A. Kamenshchikova: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **A. Deal:** Writing – review & editing, Project administration, Methodology, Funding acquisition, Data curation, Conceptualization. **J. Carter:** Writing – review & editing. **F. Knights:** Writing – review & editing. **O. Bouaddi:** Writing – review & editing. **N. Aspray:** Writing – review & editing. **S. Bojang:** Writing – review & editing. **F. Seedat:** Writing – review & editing. **N. Sanchez-Clemente:** Writing – review & editing. **A. Jachmann:** Writing – review & editing. **S. Hargreaves:** Writing – review & editing, Supervision, Project administration, Methodology,

Funding acquisition, Data curation, Conceptualization.

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Declaration of competing interest

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

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