Abstract
The COVID-19 pandemic and Brexit were separate yet inter-related developments which affected the British National Health Service (NHS). The UK's state-funded health sector had historically relied on migrant labour and depended on a migration infrastructure designed to solve its nursing labour shortages. The analysis of primary qualitative and secondary quantitative data shows that the NHS migration infrastructure increased its orientation towards Asia to compensate for the effects of Brexit. The paper reveals how the persistent use of temporary visas along with conditional contractual arrangements has led to various exclusions for migrant nurses and midwives. These data also demonstrate how international travel restrictions associated with COVID-19 created temporary obstacles for nurses' inflows. Alongside Brexit, this has also resulted in an increase in outflows amongst EU health workers. The article identifies the development of migrant support infrastructure amongst Filipino and Indian nurses as a major COVID-19 linked innovation.
INTRODUCTION

Frontline accounts of nurses during the COVID-19 health crisis showed that British health professionals were acutely aware of the UK health system's reliance on migrant nurses from across the world and were concerned about the system's ability to retain and attract these whilst being affected by overlapping shocks: the COVID-19 pandemic combined with the uncertainty associated with Brexit (Allen, 2022). These concerns were linked to the existing conservative estimate of 39,000 job vacancy rate in nursing, and the acknowledgement that nursing labour shortages in the state-funded health sector would not be solved without engagement in overseas recruitment (Palmer et al., 2021). Brexit and the COVID-19 pandemic were identified as destabilising forces threatening to further accelerate labour shortages for the UK's National Health Service (the NHS), which has historically relied on international medical professionals' recruitment, especially in the field of nursing (Spiliopoulos & Timmons, 2022). Brexit and the pandemic are distinctive phenomena with differentiated implications for migrant nurses: the former specifically affecting EU nurses' rights and the latter disrupting the recruitment process and international travel. However, Britain's separation from the EU's single market and the start of the pandemic occurred within overlapping time intervals. Such a temporal proximity justifies a joint Brexit-COVID-19 analysis of changing dynamics of nurse migration to the UK.

From a social policy perspective, international migration of nurses is regulated within a multi-actor global governance system (Ennis & Walton-Roberts, 2018). The migration of nurses to the UK is a consequence of an entrenched governance system: the recruitment of nurses to the UK was made possible by the existence of a web of intermediating actors involved in job advertising, initial screening and international transportation. It was also shaped by a variety of labour market actors, especially the state through its immigration policy, but also by transnational codes of practice designed to reduce the 'brain drain' for lower-income countries and prior to December 2020 by EU freedom of movement and qualifications' recognition directives. Significantly, professional and migrant-supporting bodies have a responsibility to improve socio-economic situation of nurses in the receiving country. The involvement of these actors and accompanying regulatory interventions together constituted a transnational social field, which Xiang and Lindquist (2014) conceptualised as a migration infrastructure. This article interprets the NHS migration infrastructure as a regulatory mechanism designed to reduce labour shortages and as a form of governance of migrant nurses' flows to the UK. The analysis seeks to investigate how the shift towards a greater national sovereignty in migration policy because of Brexit and the COVID-19 pandemic control have altered both the directionality and scale of migration flows. The analysis also examines how these global events affected the socio-economic experiences of migrant health workers, particularly the emergence of an additional layer in migrant support infrastructure in response to COVID-19. It does so by situating the study within the existing literature on nurse migration—within the study of health worker mobility, this tends to include both nurses and midwives (Kingma, 2006). The interpretation draws on the registration data from the Nursing and Midwifery Council (2022) and analyses exploratory interviews conducted with British health managers, representatives of the professional and trade union body, and migrant health professionals.

TRAJECTORIES OF NURSE MIGRATION TO THE UK

Bach's (2010) analysis of the role of the British state in regulating the migration of nurses highlighted two main trends. First, nurse migration is a long-standing phenomenon in the UK, especially from the Commonwealth and the Philippines; by 1977, migrants from this bloc of countries accounted for 12% and 6% of all nurses, respectively. Second, in the 2000s, until the EU membership referendum, the state's policy encouraged the NHS to hire EU nurses as opposed to recruiting non-EU nationals. By contrast, non-EU nurses were treated as a transitory component of the workforce (Bach, 2010) in spite of the fact that non-EU nurses showed a greater commitment to stay with their employer than UK/EU nurses (Palmer et al., 2021).

When it comes to the environment shaping the flow of migration of nurses to the UK, several supply–demand factors are important. On the supply side, there has been an expansion of nurses training internationally—for example in India, there were 30 colleges in 2000 and almost 2000 (mainly private) in 2019; similarly, a so-called 'train for export'
model of nursing has been dominant in the Philippines for years (Buchan & Catton, 2020). On the demand side, ageing populations and the decline of nursing as an attractive profession in high-income countries has been described as the main factor for the demand for migrant labour in the sector (Adhikari & Melia, 2015). For the UK, there are clear financial benefits of hiring internationally trained nurses instead of investing in its own education programmes (Palmer et al., 2021): the cost of hiring a migrant nurse ranges from £10,000 to £12,000. By contrast, the expenditure of the UK government to educate a single nurse or midwife can reach £26,000. There have been long-standing criticisms in relation to nurses’ recruitment from developing countries, which are blamed for skills and ‘brain drain’ (Kingma, 2006) and accused of being a legacy of British imperialism (Spiliopoulos & Timmons, 2022). In response, international and national ethical codes of practice for recruiting foreign nurses designed to balance the demand of labour, choices of professionals and the needs of developing countries were established: nurse migration was conceived of as a temporary professional experience which could benefit developing countries in the long-term (Stievano et al., 2021). Although blamed for exploitative practices such as high fees and intrusive controls over migrant lives, labour market intermediaries were able to maintain their function globally as gatekeepers (Calenda & Bellini, 2021).

The fact that most nurses and midwives are women is important in understanding the migration process: the UK can be seen as a place where it is more acceptable for women to work, including being the main breadwinner (Adhikari, 2013). However, for migrants, the process of entry into the occupation may include a prolonged gap between getting a job offer and starting paid employment. Vaughn et al. (2020) associated the process with lengthy bureaucratic procedures related to visa applications, expecting work permits, being registered with professional bodies and so on. It could also depend on migration status: whilst the qualifications of EU nurses were recognised by the UK because of the EU nursing directive, non-EU nurses had to go through the adaptation process, consisting of a trial under close supervision; only after completing it successfully would they be allowed to register with the regulatory body (Kingma, 2006). The organisational positioning of migrant nurses has been also structurally disadvantageous since even highly qualified and experienced nurses often tended to be placed within the lower pay bands upon joining the NHS (Smith & Mackintosh, 2007). The postmigration environment could be also challenging socially: Tuttas (2015) argues that migrant nurses experienced different forms of discrimination involving difficulties in being promoted or managers’ turning a blind eye to racism by patients and colleagues. On the contrary, the shared occupational and national backgrounds amongst migrants could foster collective coping practices: Ryan (2007) showed how Irish nurses in the UK supported each other when it came to pressures of motherhood and work.

The discussed sources highlight different spatial–temporal points related to the migratory experiences of nurses. However, the literature tends to treat the subject in a compartmentalised way and, crucially, does not allow for unexpected events to transform or reinforce established structures. Such shortcomings make the application of the concept of migration infrastructure a useful device to understand the migration of nurses in the context of such transnational developments as a regional change represented by Brexit and the global pandemic emergency of COVID-19. Xiang and Lindquist (2014) introduced the concept of migration infrastructure as a tool to explain the mobility of workers—it incorporates all steps of the migration process from recruitment to labour market integration within the receiving country; it also includes return migration. According to Xiang and Lindquist (2014), the process and outcome of migration is moulded by five dimensions: the role of labour market intermediaries; employment regulations set by statutory bodies; technological aspects such as transportation; the humanitarian dimension, understood as interventions by voluntary organisations; and informal networks created by migrants themselves. The five dimensions interact amongst themselves and affect actions of migrants in a summative way; whilst the role performed by dimensions is functionally identifiable, the content of dimensions is time and context specific. Xiang and Lindquist (2014) explicitly linked the concept of migration infrastructure to the state’s liberalisation of labour migration and its enabling of market forces as the principal regulatory mechanism of the international flow of labour.

Central to the argument developed by this article, the migration infrastructure is an elastic concept which can be updated for the purpose of analysing of how Brexit and COVID-19 affected employment experiences of migrant health workers and staffing implications for their main employer in the UK—the NHS. Whilst this concept was developed in the context of the greater marketisation of migration flows, the aftermaths of both Brexit and COVID-19 share...
a commonality in the nation-state reregulating immigration controls temporarily or/and permanently and reshaping the migration infrastructure. The time-tailed use of the concept allows for a move away from the assumed stability of nursing migration patterns. Brexit and COVID-19 almost simultaneously disrupted this stability and created a new regulatory framework for the NHS’s drive to retain and secure a supply of geographically diverse sources of migrant labour. The migration infrastructure concept, with its emphasis on multi-agency regulatory actors and changing environments, allows for an exploration of the fluid reality of the Brexit-COVID-19 moment.

**METHODOLOGY**

These data were gathered as a part of a project funded by the World University Network examining the impact of COVID-19 on the regulation of migration in Australia, China and the UK. Ethical approval from the lead University of this project was obtained in June 2020. These data in this article are specifically focussed on the UK healthcare sector and come from two sources: exploratory interviews with seven stakeholders in the health sector, and secondary quantitative data. The former comprises: an interview (November 2020) with an independent HR consultant who also acted as a non-executive director of an NHS trust and prior to it was a director of HR at a hospital between 2014 and 2018; a Global Learner Programme coordinator from the NHS-affiliated education body who had direct responsibility for international nurses' recruitment (February 2021); two separate interviews with heads of Indian and Filipino migrant nurses' associations (March and April 2021); an interview with a migrant EU (Dutch) midwife (June 2021); and a joint interview conducted with two senior policy analysts representing the major health worker professional organisation in the UK which simultaneously also acts as a trade union (May 2022). The inclusion of managerial, voluntary and professional/union actors allowed the introduction of different perspectives on the infrastructure. All interviews were conducted remotely via Zoom by the first author; interviews’ notes then were shared and analysed jointly with remaining co-authors. For this article, all names are anonymised to avoid revealing interviewees identities. Whilst the NHS is named as an employer, the locations of specific hospital trusts are not revealed. For the interview with the midwife, written consent was gained, and the interview was fully recorded. For all other interviews, verbal consent was sought and notes were taken without any form of audio recording.

Broad patterns and flows of nursing professionals are drawn from secondary quantitative data from the Nursing and Midwifery Council (NMC) register. These data are relevant as the main themes of interviews relate to experiences of migrant nurses and midwives. Nursing professionals working in the UK need to register with the NMC and are taken off the register if they indicate that they are leaving their professional practice in the UK. The NMC compiles six-monthly reports on joiners, leavers and overall numbers of nursing professionals, and these data also highlight the country of origin of registrations. We draw on these data to look at changing registrations and flows in and out of UK, the EU/European Economic Area and non-EU nursing professionals (including nurses, midwives, and from 2019, the new assistant nurse role). We draw on data from NMC Annual data reports from 2016 to 2022 to consider the effects of Brexit and COVID-19 on the supply of labour from particular countries and regions.

Drawing on grounded theory principles (Charmaz, 2006), the qualitative data were subjected to theoretical sampling which led to the identification of analytical categories. The analysis is organised around three analytical categories: the category of *disjuncture* reflects changes occurring due to global and regional influences; the category of *continuity* relates to uninterrupted trends and; the category of *innovation* encapsulates the development of the new dimension within the infrastructure as a response to the pandemic. The secondary data on migrant nurses' flows are used to thicken and contextualise qualitative data included in the first two analytical categories. The final innovations category is used to analyse migrant nurses' associations that came into being during the COVID-19 crisis.

The presentation and interpretation of data draws on researchers’ written notes taken during five interviews, a transcribed interview with a midwife and the registration data from the Nursing and Midwifery Council. The following abbreviations are used for interviewees’ anonymisation purpose: the Global Learning Program coordinator is referred as the GLP coordinator; the INA and FNA stand for Indian and Filipino nursing groups, respectively; and senior analysts from the professional body/trade union organisation are referred as PTO analyst 1 and 2.
DISJUNCTURES

Data from the Nursing and Midwifery Council Register reveal how the migration of health workers to and from the UK significantly altered after Brexit. The top segment of Table 1 shows how the total numbers on the register (including nurses, midwives, and from 2019, the new assistant nurse role) was stable from 2016 to 2018 and then increased by 60,000 from 2019 to 2022. Total numbers of health professionals from the EU and the European Economic Area (EEA) on the permanent register fell from over 38,000 to just under 29,000 between March 2017 and 2022, with the steepest fall coming in 2017–2018. The numbers of health professionals from the UK have increased, particularly following campaigns and recruitment drives by the NHS and the state during COVID-19 to recruit more nurses. The biggest increase in registrations has occurred from professionals outside the EU, with numbers nearly doubling between 2016 and 2022. By 2022, health professionals from outside the EU made up 15% of the total number of registrations, compared to 9% in 2016.

The lower segments of Table 1 show leavers and joiners to the register and highlight the rapid fall in joiners from the EU/EEA since 2017. Since then, fewer than 1000 nursing professionals have joined the register each year (the figure was 10 times higher in 2016–2017), whilst the number of EU/EEA health professionals leaving the register has increased sharply since the EU referendum. By contrast, joiners to the register from outside the EU/EEA have risen sharply, particularly since COVID-19, with nearly 23,000 health professionals from outside the EU joining between 2021 and 2022 (a figure 10 times higher than in 2016). These data reveal a rapidly changing profile of health professionals, with a sharp decline in nurses from the EU starting very soon after the EU referendum and continuing to the present date. These data also show a temporary decline for non-EU joiners between March 2020 and March 2021, which is most likely related to international travel disruptions and nurses' exit bans imposed during this period by the major sending country—the Philippines.

Table 2 highlights the main countries of origin of nursing professionals from within the EU/EEA on the NMC register and shows where some of the biggest declines in numbers have occurred. The number of nursing professionals from Romania has remained relatively constant since the EU referendum in 2016. By 2022, with falling numbers

### Table 1 Registrations to the nursing and midwifery council register, 2016–2022

|                         | March 2016 | March 2017 | March 2018 | March 2019 | March 2020 | March 2021 | March 2022 |
|-------------------------|------------|------------|------------|------------|------------|------------|------------|
| **Total on register**   |            |            |            |            |            |            |            |
| Total                   | 692,556    | 690,773    | 690,273    | 698,236    | 716,593    | 731,900    | 758,303    |
| UK                      | 590,991    | 585,404    | 586,724    | 591,893    | 600,905    | 609,310    | 615,860    |
| EU/EEA                  | 34,572     | 38,024     | 35,115     | 33,035     | 31,385     | 30,331     | 28,864     |
| Outside EU              | 66,993     | 67,345     | 68,434     | 73,308     | 84,303     | 92,259     | 113,579    |
| **Joiners (in previous 12 months)** |            |            |            |            |            |            |            |
| Total                   | 30,638     | 29,025     | 25,454     | 30,620     | 38,317     | 34,517     | 48,436     |
| UK                      | 19,114     | 20,240     | 21,930     | 23,496     | 25,381     | 24,555     | 25,028     |
| EU/EEA                  | 9389       | 6382       | 805        | 968        | 913        | 810        | 663        |
| Outside EU              | 2135       | 2403       | 2719       | 6156       | 12,023     | 9152       | 22,745     |
| **Leavers (in previous 12 months)** |            |            |            |            |            |            |            |
| Total                   | 27,479     | 36,477     | 31,411     | 29,133     | 25,488     | 23,934     | 27,133     |
| UK                      | 23,788     | 29,434     | 25,442     | 24,069     | 21,305     | 20,334     | 22,914     |
| EU/EEA                  | 1981       | 3081       | 3962       | 3333       | 2838       | 2066       | 2319       |
| Outside EU              | 1710       | 2426       | 2003       | 1730       | 1345       | 1534       | 1898       |

Note: Data taken from the Nursing and Midwifery Council Register, Annual Data Reports, 2016–2022. Figures show total numbers of new registrations, leavers and joiners to the permanent register, and includes nurses, midwives, joint registrants and, from 2019, nursing associates. Leavers and joiners show totals over the preceding 12 months. "UK," "EU/EEA" and "Outside of EU" refer to the country/region where the nursing professional made their registration to the NMC.
of nurses from the EU overall, Romanian nursing professionals comprised over one-quarter of the total from the EU/EEA. There has been a sharp fall in numbers of nurses and midwives from Spain, with numbers halving since 2016. The numbers of nursing professionals from Portugal and from Italy have also fallen sharply.

These data in Tables 1 and 2 highlight a general trend amongst EU nurses and midwives: it unambiguously points to Brexit as an instrumental process in the decline of overall numbers of EU health workers in the UK. Qualitative data provide additional insights into the significance of this outcome. Interviews revealed how the aftermath of the EU membership referendum was experienced on a personal level. The Dutch midwife recalled the upset caused by the support for Brexit shown by some of her British colleagues:

I was friends with the deputy manager because I knew her from Derby and she was on my Facebook, and she posted just before the referendum – vote leave. British jobs for British workers. And I was like, whoa...

The participant interpreted the social media posts as reflective of a worldview which excluded EU citizens like her from a British polity. This individual experience fits a broader picture of backlash experienced by EU citizens: it was not uncommon for EU migrants in the UK to feel personally upset by the result but also intimidated by Brexit-supporting voters in communities and workplaces (Mas Giralt, 2020). For the Dutch midwife, it was particularly upsetting as she experienced it from a colleague with whom she was on friendly terms and who she assumed would be supportive of EU citizens because of their contribution to the UK healthcare system.

The redefinition of the relationship between the UK and the EU also created a climate of uncertainty for EU migrant health workers: in the opinion of the HR consultant, the perception that the UK government turned the future status of EU citizens in Britain into a bargaining tool with the EU instead of immediately granting the right to remain had a detrimental effect on the NHS’s ability to retain EU staff. In his previous capacity as the HR director of an NHS hospital, the HR consultant organised meetings with employment lawyers for EU migrant staff to discuss their future status in the UK, legal matters, and next steps. Such action from the side of the NHS as an employer could be interpreted as a serious effort to make EU professionals feel valued. The Dutch midwife recognised such efforts coming from human resource managers of the NHS:

HR department was very pro-European. So, they send us a lot of emails saying, look, if you need any help, if you need any support from us, if you need any proof from us that you are European, you are at work here, you need your settled status.

This experience is suggestive in terms of illustrating the role played by the NHS as an employer within a migration infrastructure ill-prepared to lose health workers: Brexit had created gaps in trust as far as some EU staff were concerned; HR departments sought to minimise further harm through practices designed to ease the transition to the future migration regime under which the status of EU health workers would be different. The HR manager believed that when the pandemic was brought under the control, the discussion over Brexit and the new migration system would play an even greater role because of labour shortages. The Dutch midwife echoed this point: with the

| Country | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---------|------|------|------|------|------|------|------|
| Romania | 6535 | 8116 | 7720 | 7545 | 4459 | 7477 | 7388 |
| Portugal| 5107 | 5262 | 4884 | 4673 | 4497 | 4374 | 4157 |
| Spain   | 7260 | 7372 | 6261 | 5327 | 4464 | 3735 | 3407 |
| Italy   | 4003 | 5086 | 4546 | 4172 | 3918 | 3843 | 3230 |
| Poland  | 2823 | 3013 | 2858 | 2746 | 2630 | 2600 | 2547 |

Table 2: Top 5 EU/EEA countries on register

Note: Data taken from the Nursing and Midwifery Council Permanent Register, Annual Data Reports 2016–2022. Figures include nurses, midwives, joint registrants and, from 2019, nursing associates.
requirement for EU health professionals to apply for visas post-Brexit, she did not think that she would have come to the UK in the first place. According to PTO analyst 1, the mutual recognition of EU and UK nurses’ qualifications would end in 2022; from 2023, migrant nurses from the EU will be treated in the same way as all other migrant nurses which means that they will need to undergo an adaption period prior to gaining full recognition as registered nurses by the Midwifery and Nursing Council. This interviewee recognised that this shift—more than just a visa requirement—would complicate the occupational socialisation of potential EU health migrant workers to the UK post-Brexit.

The NMC (2022) data further show that Brexit had a much greater impact on EU nurses and midwives’ decision to leave the UK than the COVID-19 pandemic.

Survey evidence from the NMC confirms the impact of both Brexit and COVID-19 on the movement of labour. Leavers from the NMC are asked to complete a survey about their reasons for leaving. Table 3 reports the top five reasons cited by leavers from the UK, the EU/EEA and from outside the EU in 2022. For the EU/EEA and those outside the EU, COVID-19 was also cited as an important reason for leaving in 2022 (by 13% and 14% of leavers from these groups, respectively). The most important reason for leaving for both EU/EEA and non-EU nursing professionals was because they were leaving the country (cited by two of three leavers from the EU/EEA and one of three non-EU workers). This could be attributed to pre-existing patterns of relatively low retention rates amongst EU nurses in the UK (Palmer et al., 2021). However, for EU/EEA workers, a stark finding was that 38.5% reported that Brexit had led them to consider working outside the UK (with this being the second most important reason for leaving for this group). PTO analyst 1 asserted that the registration data from the NMC strongly validated the assumption that Brexit encouraged the transnational exit of EU health workers.

When it came to both the entering and exiting potential of migrant health workers to the UK at the start of the pandemic, this study’s participants pointed to a multiplicity of factors which had a potential to disrupt the migration infrastructure produced to reduce the NHS’s labour shortages. One possibility was articulated by the HR consultant: migrant nurses would be expected to return to their countries of origin to take care of their family members. This speculation reflects the fact that most nurses and midwives are women and the influence of gender norms on return migration patterns: women are more likely to decide on their movements not only due to earnings maximisation but also due to their family obligations (Kingma, 2006). When it came to practicalities of joining the NHS workforce from overseas, the heads of migrant nurses’ associations and the coordinator for the GLP concurred that the ability of migrant nurses to enter the UK was restricted because of some countries being on the UK’s travel “red list,” health workers’ exit bans, reductions in flight numbers and increases in ticket prices. According to PTO analyst 1, as an exceptional measure in response to COVID-19 and to the drop in international arrivals, the Midwifery and Nursing Council created a temporary register for domestically resident health workers who left their professions but were willing to rejoin the NHS. The heads of the INA and FNA also pointed to divergences existing between their respective groups. In the case of Indian nurses, there was a continuous flow of migrants during the pandemic to the UK of up to 100 each week. By contrast, there was a country exit ban introduced by the government of the Philippines which for some time prevented the flow of migrant nurses to the UK; even when the ban was abolished, the arrival of Filipino nurses

| Reason                                                      | UK (%) | EU/EEA (%) | Outside EU (%) |
|-------------------------------------------------------------|--------|------------|----------------|
| I am leaving or have left the UK                             | 66.6   | 35.5       |                |
| Brexit has encouraged me to consider working outside the UK  | 38.5   |            |                |
| I have retired                                               | 49.3   | 18.3       |                |
| My personal circumstances changed                           | 23.2   | 10.2       | 18.8           |
| Too much pressure (stressful, mental health)                | 20.1   | 8.8        |                |
| The workplace culture was having a negative effect on me    | 14.3   |            |                |
| The COVID-19 pandemic has influenced my decision to leave    | 11.5   | 12.7       | 14.1           |
| Poor pay and conditions                                     |        |            | 12.7           |
was still complicated by the Philippines being placed on the UK’s “red list” for travel. The heads of the FNA pointed to UK government exemptions which were made through the establishment of safety corridors enabling nurses to travel to the UK: this policy can be interpreted as a way to prioritise the needs of the UK health sector and a mechanism to protect the transportation dimension of the NHS’s migration infrastructure against COVID-19-related controls.

CONTINUITIES

During the COVID-19 pandemic and throughout Brexit-induced uncertainties, the migration infrastructure of the UK’s state-funded health sector was characterised not only by disjunctures but also by a certain degree of continuity. Interviewees acknowledged that the NHS continued to rely on medical migrant labour, especially when it came to foreign educated nurses, from within and outside of the EU, in coping with the pressures brought by the pandemic. These data from the NMC reported above revealed that there was some success in recruiting new nurses, with nearly 15,000 new registrations from UK health professionals between 2020 and 2022. Significantly, this increase could not have been achieved without the ability to tap into migration flows from non-EU countries—India and the Philippines in particular. Indeed, as Table 1 shows, the biggest numbers of new recruits were from outside the UK, and specifically from outside the EU/EEA, with over 30,000 new registrations recorded between 2020 and 2022 alone.

Table 4 shows the top five countries of origin for new registrations onto the NMC. It points to the long-standing importance of the Philippines and India as sources of nursing professionals for the UK, as well as the growing reliance on these countries following Brexit and during the pandemic. In 2016, India and the Philippines made up around 6% (nearly 41,000) of all nursing professionals in the UK; by 2022, this figure was nearly 11% (79,000). The number of nursing professionals from India and the Philippines has risen every year since 2016, but particularly sharply during the pandemic in 2021–2022. This, alongside the evidence on outflows of nursing professionals from the EU, points to an entrenched and increased use of migrant health workers from India and the Philippines to manage nursing shortages.

This picture was reinforced by interviewees, who highlighted how increasingly, India and the Philippines, rather than EU countries, constituted the main sources of migrant labour for the sector. The HR consultant explicitly said that from the start of the pandemic the recruitment of nurses from the EU stopped. This increase of India and the Philippines’ significance for the NHS could also be consistent with longer historical patterns of nurses’ recruitment geography. Whilst from the early 2000s and especially after EU enlargement in 2004 (Bach, 2010), there was an expansion in EU recruitment, the NHS had a long-standing policy of recruiting Indian and Filipino nurses which both pre-dated and went hand-in-hand with the hiring of EU nurses and midwives. In this sense, the practice to recruit and bring migrant nurses from these two Asian countries in spite of restrictions associated with COVID-19 should be interpreted as a deeply entrenched practice to cope with shortages and to fulfil state-planned nursing workforce expansion targets. According to PTO analyst 2, the international recruitment of nurses followed the pattern of health worker hiring since the inception of the NHS: migrants mainly from lower-income countries would be recruited to

| Country       | 2016   | 2017   | 2018   | 2019   | 2020   | 2021   | 2022   |
|---------------|--------|--------|--------|--------|--------|--------|--------|
| Philippines   | 23,645 | 24,800 | 26,189 | 29,033 | 33,297 | 35,679 | 41,090 |
| India         | 17,032 | 17,302 | 17,730 | 19,326 | 24,006 | 28,192 | 37,815 |
| Nigeria       | 2823   | 2792   | 2796   | 3021   | 3684   | 4310   | 7256   |
| South Africa  | 3332   | 3204   | 3082   | 3050   | 3014   | 2946   | 2894   |
| Zimbabwe      | 2219   | 2198   | 2228   | 2356   | 2574   | 2946   | 2894   |

Note: Data taken from the Nursing and Midwifery Council Permanent Register, Annual Data Reports 2016–2022. Figures include nurses, midwives, joint registrants and, from 2019, nursing associates.
sustain the UK health sector and health needs of British population. PTO analyst 2 further elaborated that the following organisation of international recruitment could be interpreted as a form of postcolonial “pillaging” and a substitute for long-term nurses' training and retention provision.

The reliance on two Asian countries was explained and justified as ethical through the logic of supply and demand by the coordinator of the GLP: staff shortages in the UK created the demand, which was met by the over-supply of trained nurses in India and the Philippines; it was claimed that the NHS would avoid recruiting in countries which themselves had nurse shortages. The GLP scheme was described as an ethical recruitment policy balancing the needs of the NHS, migrant nurses' education, and implications for sending countries: migrant nurses' joining of the NHS was linked to skills development which could last up to 3 years, after which nurses could have an option to return to their countries of origin. The fact that training and education in both India and the Philippines was conducted in English was also seen as an advantage by the NHS. The interviews with migrant nurses' associations suggested that potential movers shared a similar set of push factors such as un- and underemployment, job insecurity and low pay in the countries of origin, which predated and even increased with the COVID-19 pandemic.

According to the GLP's coordinator, one of the ascribed ethical highlights of the GLP was the overhaul of labour brokerage and intermediation processes. However, the reality was more complex than these declared principles of the GLP. Whilst the coordinator of the GLP stressed that the NHS followed the principles of ethical recruitment and sought to work mainly with local government agencies and did not engage with commercial intermediaries, the head of the INA did not believe that it was feasible or realistic in the case of transnational hiring: government agencies in Indian states simply did not have the capacity to recruit nurses. Moreover, in the two PTO analysts' evaluations, whilst recruiting for the UK, commercial intermediaries (including those from the NHS approved list) did not always provide clear and specific information to overseas nurses on their employment prospects. PTO analyst 2 suggested that there was also a common practice amongst intermediaries to target diasporic communities to accelerate recruitment in scale and scope without considering family and broader social contexts affecting potential migrants. The difficulty of bringing one's family members and potentially coping with transnational separation was highlighted as a key concern by PTO analyst 2.

Despite identified shortcomings, there was evidence that the ethical dimension of the GLP was not purely rhetorical. Migrant interviewees from the INA and FNA stressed that even during the recruitment coinciding with the COVID-19 pandemic, which was characterised by an increase in travel expenses and other related costs (e.g. mandatory self-isolation upon arrival), the NHS continued to fully cover agents' and travel expenses which contrasted to their own experience of joining the NHS decades ago. However, according to PTO analyst 1, many employment contracts continued to include punitive clauses for leaving employment: it could oblige migrants to repay up to £14,000 to leave the NHS or the private sector employer prior to the end of the contract even if they worked for a considerable period of time. PTO analyst 1 asserted that his organisation, in its capacity of the trade union body, had to represent their migrant members in such cases. PTO analyst 2 also stressed the possibility of financial indebtedness associated with such contractual conditions and the restrictive impact of a time-limited visa arrangement for migrants recruited as part of the GLP: their work permits only lasted for 3 years. As such, the use of the GLP during the pandemic, despite its ethical emphasis, was characterised by familiar forms of socio-legal marginalisation of nurses who were treated as temporary labour migrants with inferior mobility rights.

Various forms of disadvantage relating to and predating the COVID-19 pandemic underlined the need for the humanitarian dimension within the migration infrastructure. Amongst Indian and Filipino nurses, willingness to improve the situation for migrant nurses led to the creation of support groups which could be interpreted as a major innovation in the aftermath of COVID-19, as discussed below.

INNOVATIONS

In the opinion of PTO analyst 2, the COVID-19 pandemic created an unprecedented situation in which nurses had to develop survival strategies in the context of the absence of standard protocols. One of the innovative developments
during the pandemic was the creation of migrant nurses' associations representing professionals working in the NHS from India and the Philippines. Pre-existing informal contacts amongst migrants were converted into the development of more formalised groups aiming to strengthen the humanitarian infrastructure. Whilst both nationalities had a significant numerical presence in the NHS workforce historically, these specific support groups were created during the pandemic. The demand for extra-organisational support combined with the availability of experienced migrant professionals ready to step into leadership roles allowed a new element of migration infrastructure to be developed.

Two senior nurses with long-standing experience working for the NHS launched and led organisations representing Filipino and Indian nurses. They did this on a completely voluntary basis with no financial or other forms of institutional support. According to the head of the INA, COVID-19 highlighted the vulnerability of migrant professionals and the need for pastoral support. Furthermore, as the head of the FNA group stressed, the COVID-19 crisis was opportune in terms of launching a support group with the purpose of making the voices of Filipino nurses heard within the NHS. Mass media attention on the contribution of migrant health workers and the disproportionate impact of COVID-19 on migrants within the NHS acted as catalysts in founding support groups. The INA and FNA also maintained wider connections with diasporic organisations, especially in the case of the Filipino group: because of historic migration patterns, nurses were the most visible constituency of Filipino migrants in the UK. The INA also connected with the wider Indian community in the UK, which included Indian doctors. The INA and FNA cooperated and shared similar goals: to give confidence to migrant nurses in instances of managerial intimidation and to promote upward career mobility within the sector amongst community members. The groups sought to influence attitudes, especially fears about challenging management in the context of work risk assessments, for example the deployment to COVID-19 patients' wards of migrant staff members with pre-existing health conditions, which would put their lives at risk (prior to vaccination becoming available). Prepandemic abuses such as bullying of migrant nurses by management (Calenda & Bellini, 2021) did not disappear during the COVID-19 crisis. According to the head of INA, there was a fear about standing up and saying “no” to managers, even when migrants had objective reasons to do so. One long-term solution, according to the head of the FNA, was to get more migrants into leadership roles in the health sector to make it more representative of the workforce's overall make-up. The heads of nursing associations saw their groups as mentoring and confidence building enablers for their respective communities. The FNA also had a specific policy agenda: the NHS survey did not include "Filipino" as a category. In the context of the COVID-19 crisis, it was impossible to learn how many nurses of this ethnicity passed away; only estimates could be made. For the FNA, it constituted a problem both in relation to COVID-19 and beyond. The FNA pressed for the category of "Filipino" to be added on the auditing system to determine how many nurses of this ethnicity were working across the NHS and to monitor their career progression, or lack of it. Incidentally, this type of auditing was recommended by the World Health Organisation 2030 HR strategy (WHO, 2016).

The INA and FNA took upon themselves the development of responses to occupational stress produced by COVID-19. The groups offered online support to newly arrived migrants through webinars that aimed to help new recruits to settle in the UK. The head of FNA said that their group offered mental health resilience courses online to address psychological pressures. The online support developed by the associations was seen as appropriate for dealing with mental health pressures affecting nurses because of the cultural, language and professional commonality by its leaders and members. This was facilitated by a greater mutual trust which was more difficult to achieve when it came to relations between health workers from a migrant background and British health professionals: PTO analyst 2 suggested that sometimes overseas nurses would be afraid to make eye contact due to cultural barriers and the sense of insecurity vis-à-vis British colleagues and managers.

These migrant groups also showed a capacity to develop rapid responses. The head of INA managed to successfully prevent two newly arrived Indian nurses from having to leave the UK (against their wishes). Due to their health conditions, they could not work in COVID-19 wards and initially the NHS management considered ending their contracts. Whilst usually internationally recruited nurses are subject to screening by officials from UK hospitals who would travel directly to India (Kingma, 2006), it appears that due to COVID-19 such screening did not take place. Significantly, the INA was uniquely placed to help these nurses: newly arrived nurses did not have access to the trade
union organisation as they had not started work; the INA, however, would signpost Indian nurses to the appropriate union group when necessary. Moreover, both the INA’s and the FNA’s heads stressed that the nursing associations were not seen as an alternative to the trade union: they saw their roles as supplementing functions which the union did not perform.

CONCLUSIONS

The concept of migration infrastructure was used to explain how Brexit and the COVID-19 pandemic affected the international flow of health workers to and from the NHS. The deployment of the concept revealed the disjunctions, continuities and innovations taking place within the healthcare system, which is characterised by a long-standing dependency on migrant labour. The COVID-19 crisis affected the ability of the NHS to bring migrant health workers into the country: travel restrictions had disruptive effects on international recruitment. At the same time, Brexit and, to an extent, COVID-19 made the UK’s health sector more reliant on traditional areas of labour resourcing in Asia. Contrary to the rhetoric of “Global Britain,” expecting to be endowed with an increased capacity to attract skilled workers from across the world instead of relying primarily on the EU labour market, the direction shifted away from the EU but, rather than expanding internationally, recruitment turned to pre-existing and well-established sources of nurses’ supply in India and the Philippines. Furthermore, the outflow of EU nurses and midwives following the EU referendum vote rather than the NHS’s own choices acted as the major factor in redirecting recruitment patterns. The pre-existing recruitment links with India and the Philippines were strengthened and expanded to compensate for the outflow of EU nurses and midwives.

Whilst bringing multiple challenges, the COVID-19 pandemic also led to the emergence of new actors within the migrant support infrastructure. The migrant nurses’ organisations tapped into diasporic ties within the NHS occupational community and sought to improve migrants’ positions within the organisation through bottom-up activities which cooperated with but were independent from other actors such as NHS management, labour market intermediaries and professional trade union associations. Moreover, it was not coincidental that the voluntary groups of this kind were launched during the COVID-19 crisis: individual and group-specific work pressures affecting Indian and Filipino migrants made the demand for effective support even stronger.

At the same time, the analysis also pointed to a potential of contextualising and updating the conceptualisation of migration infrastructure as originally articulated by Xiang and Lindquist (2014). This article’s interpretations highlighted the role of the state in the aftermath of Brexit and during the COVID-19 pandemic, as opposed to an increased marketisation trend captured by Xiang and Lindquist (2014). Moreover, the state acted not only as a more interventionist architect of the infrastructure but in the times of crisis as its reactive redeveloper. The migration infrastructure continued to serve its purpose, that is to solve the labour shortages of the NHS, but it did so under the new regulatory environment that prioritised state controls over sectoral/organisational labour needs. The role of the state was particularly salient since even though the NHS had a strategic interest in retaining its relationship with EU health workers and whilst its human resources departments did its utmost to protect its EU migrant workforce from the uncertainties of Brexit, the NHS and the UK’s professional bodies could not circumvent the state’s turn towards re-nationalising migration policy with regards to EU citizens.

The other important revision to the concept of migration infrastructure in the context of nurse migration to the UK stems from the inclusion of professional-trade union bodies in this study. Significantly, it exposed three levels of inequities. The first is linked to the postcolonial legacy of extracting trained nursing labour from developing countries as a way to reduce costs to the system. The second is associated with the continuous precarisation of migrant health workers due to temporary work permit arrangements and contractual clauses. The rhetoric of ethical recruitment is contrasted with the reality of an unequal power relationship between the NHS as an employer and migrant nurses. This indicates that the migration infrastructure which developed to service the NHS’s drive for overseas nursing labour is not only a morally guided market mechanism used to facilitate the international flow of nursing labour but
also a nationality biased system with potentially disadvantageous implications for migrants. Finally, the streamlining of the post-Brexit regulatory system which removed EU freedom of movement of labour and EU nursing directives points not to an equalising of rights amongst migrant nurses of different nationalities but to a stripping of rights for one group which is not accompanied by an increased social inclusion for migrant nurses overall.

To conclude, several takeaways can be gathered from these findings. First, qualitative data compliment the understanding of reasons associated with the increase in transnational nurses and midwives’ exit captured by a quantitative analysis of flows. For EU professionals, the vote for Brexit was associated not just with the downgrading of their socio-legal status, which the NHS sought to mitigate through its human resources’ departments’ engagements, but with more hostile social and working environments which EU migrant health workers experienced in the aftermath of the referendum. Second, the discussed form of changing migration governance is a consequence of the drive to compensate for nursing labour shortages in the NHS. These relegated the rights and opportunities of mainly Asian migrant nurses to second place ahead of fulfilling a labour shortage reduction agenda. Finally, a more inclusive approach to the UK’s healthcare sector shortages could build on community-based initiatives involving the recruitment of domestically resident skilled migrants and refugees to hospitals (Green et al., 2021).

DATA AVAILABILITY STATEMENT
The primarily qualitative data that support the findings of this study are available from the corresponding author, Dr Zinovijus Ciupijus, upon reasonable request. The secondary quantitative data that support the findings of this study are openly available from the Nursing and Midwifery Council registration data reports at https://www.nmc.org.uk/about-us/reports-and-accounts/registration-statistics/, Annual Data Report - March 2022.

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