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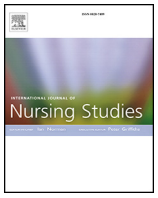

Managing nurse redeployment during the Covid-19 pandemic, lessons for future redeployment: A qualitative study

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ABSTRACT

Background: The mass redeployment of nurses was critical across countries necessitated by the acute health impact of Covid-19. Knowledge was limited regarding how to manage nurse redeployment or the impact that redeployment might have. Redeployment continues, particularly in response to the current staffing crisis and surges such as winter pressures. This study aims to address these gaps in evidence to inform guidance on how best to manage nurse redeployment in practice.
Objectives: First, to understand the processes and underpinning decisions made by managers when managing nurse redeployment prior to and during the Covid-19 pandemic. Second, to identify the lessons that can be learned to improve the management of on-going nurse redeployment.
Design: Qualitative study utilising semi-structured interviews and focus groups with nurse managers (ISRCTN: 18172749).
Setting(s): Three acute National Health Service (NHS) Trusts in England with geographical and ethnic diversity, and different Covid-19 contexts.
Participants: Thirty-two nurse managers and four Human Resource advisors responsible for redeploying nurses or receiving and supporting redeployed nurses.
Methods: Participants took part in face-to-face or virtual semi-structured interviews from February 2021 to November 2021 and virtual focus groups from July to December 2021. Qualitative data were analysed using reflexive thematic analysis.
Results: Four themes were evident in the data, capturing four distinctive phases of the redeployment process. There was a fundamental mismatch between how different parts of the nursing and managerial workforce conceived of their decision-making responsibilities across different phases. This led to managers taking inconsistent and sometimes contradictory approaches when redeploying nurses, and a disconnect between nursing staff at all levels of the chain of command. Furthermore, in conjunction with limited guidance in operationalising redeployment and the distressing experiences vocalised by nurses, nurse managers found nurse redeployment logistically and emotionally challenging; and felt 'caught in the middle' of meeting both their managerial and mentoring responsibilities. This became increasingly challenging during subsequent phases of redeployment and remained challenging once the pandemic waned.
Conclusions: The approach to nurse redeployment in response to the Covid-19 pandemic prioritised nurse staffing numbers over personal well-being. Key principles of good practice relating to nurse redeployment during the Covid-19 pandemic can be applied to improve future redeployment of nurses and support positive outcomes. Having a planned approach for staff redeployment during normal service delivery comprising operational guidance for those tasked with implementing redeployment, that is scalable in a crisis setting, would be beneficial for the nursing workforce.

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What is already known

- The redeployment of nurses is common globally during normal service delivery to fill staffing gaps and is likely to continue; yet there is a paucity of evidence on how it is carried out in practice, the experiences of those involved in the process.
- Research during the Covid-19 pandemic has indicated that managing the staffing and emotional needs of nursing teams was challenging and mentally exhausting for nurse managers, but managing redeployment and redeployed nurses has still not directly been explored.

What this paper adds

- This paper provides an understanding of how redeployment is carried out in practice, the associated logistical and emotional challenges faced and the complexities underpinning the decision-making processes of those tasked with operationalising it.
- With a lack of available operational guidance and support, nurse managers took inconsistent and sometimes contradictory approaches when redeploying nurses, leading them to feel 'caught in the middle' and carrying the guilt, moral distress, and emotional burden of those approaches.
- The findings demonstrate a fundamental disconnect between the nursing management structure, including senior leaders and middle managers when operationalising redeployment, which has possible implications for nursing teams and perpetuating a working environment and culture that is not conducive to effective leadership, redeployment practices, or patient safety.

1. Background

Nurses comprise half of the healthcare workforce globally and for decades have experienced staffing shortages that are projected to continue (Drennan and Ross, 2019; Jester, 2023). Maintaining sufficient nurse staffing levels is critical for ensuring patient safety and optimal patient outcomes (Aiken et al., 2014; Griffiths et al., 2016). Despite available nurse staffing tools and strategies, sufficient staffing is often not achieved, requiring daily mitigation by wards, departments, or hospitals, primarily by temporarily moving i.e., redeploying, staff from sufficiently staffed areas to short-staffed areas (Saville et al., 2019). In many countries, such as the UK, US, Canada, Australia and India there is guidance from government, regulatory or local bodies on *when* to redeploy staff based on set staffing ratios (Sharma and Rani, 2020), yet there is a dearth of guidance on *how* to operationalise redeployment processes effectively.

To meet patients' needs during the Covid-19 pandemic, nursing teams were redeployed en masse, involving long-term redeployment of individuals and whole teams, and ad-hoc shift-to-shift redeployment, (https://www.england.nhs.uk/coronavirus/documents/covid-19-deploying-our-people-safely/). Early ethical concerns were discussed, with consideration given to viable, alternate models (e.g., volunteering; lottery; mandatory redeployment), and the degree of control that both nurses and managers should have in decision-making (Dunn et al., 2020). However, no empirical research to date has explored what approaches to redeployment were taken, what models (if any) were adopted, and what reasons underpinned these choices.

This gap in the literature is noteworthy as international research from the Covid-19 pandemic has described the wider mental health impact for staff working through the pandemic, particularly on frontline nurses, leading to the exodus of staff from the profession (Chatzittofis et al., 2021; Muller et al., 2020). One recent study with nurses identified redeployment during the pandemic as a source of stress and anxiety and suggested that the manager plays a key role in a nurse's redeployment experience. These negatives were primarily due to poor communication of redeployment requests and insufficient transparency in decision-making (Ballantyne and Achour, 2023). More broadly, existing literature suggests the impact that leadership behaviours of healthcare managers can have on nurses, with strong links to nurse job satisfaction, organisational culture, quality, safety, and patient outcomes (Feather et al., 2015; Kaufman and McCaughan, 2013). Other recent qualitative studies in North America (Chipps et al., 2022; Jackson and Nowell, 2021) have found that managers experienced challenges, ethical dilemmas, and negative emotions whilst managing their teams' staffing and emotional needs during the pandemic. Additionally, they often felt unsupported by their senior leaders and organisation as the scope of their own job changed.

In view of the varied pandemic-related impacts on the nursing profession that intersect with managerial decisions about staffing, it is important to understand how redeployment occurred, was managed and experienced by those responsible, and where improvements could be made. Redeployment is likely to remain integral to achieving patient safety in health service delivery, particularly given the ongoing staffing crisis (Drennan and Ross, 2019), coupled with the strategic move towards a more flexible workforce. Therefore, it is imperative to identify best practice for managing nurse redeployment in the future that is scalable to surge or crisis settings. The mass redeployment of nurses during a pandemic provided an opportunity for such learning.

2. Methods

2.1. Study design and setting

This qualitative study involved 36 semi-structured interviews and three focus groups. We took a pragmatic interpretivist approach to the data to provide a rich understanding of redeployment experiences and to contribute practical solutions. This study was part of a larger programme of research exploring redeployment experiences with nurse managers and nurses who were redeployed (ISRCTN: 18172749). Here, we focus on the practices and experiences of nurse managers only. Our aim was to identify and understand nurse managers' experience of the processes, procedures and decisions in relation to redeployment of nurses both prior to and as part of the organisational response to, the Covid-19 pandemic. Three hospitals in three different acute NHS Trusts in England were purposively selected for differences in workforce ethnicity, geographical location, and Covid context (e.g., different experiences of peaks, plateaus, and dips of Covid admissions). Two Trusts were in urban locations in the North and South of England. The third Trust was in a southern, rural location. The number of beds at each site ranged from 800 to 900 and the size of population served ranged from 500,000 to 1,000,000.

The study was supported by local collaborators (senior nurses) at each site; a patient and public involvement group comprising patients, carers or family members of patients that had stayed in hospital during the pandemic; and a staff advisory group of nurses with redeployment experience. All groups contributed to the project across different stages e.g., data collection tool development, recruitment, data analysis and dissemination.

2.2. Sampling and recruitment

Nurse managers from different clinical areas were purposively sampled. The term 'nurse manager' was used to represent individuals who were either responsible for or contributed to the redeployment of nurses at the organisational level, or who managed teams during the pandemic which received redeployed nurses and who were responsible for ward-based redeployment. Human Resource advisors involved in redeployment systems were also recruited. Recruitment primarily took place online (owing to Covid-19 restrictions), supplemented with on-site 'walking the ward visits' where possible. Local collaborators

advertised the study at each site via emails to nurse manager mailing lists and by facilitating researcher attendance at virtual matron huddles. The human resource advisors were recruited via emails from human resource leads at each site. On completion of their interview, nurse managers were asked if they would be willing to be contacted to take part in a focus group.

2.3. Data collection

Individual, one-off semi-structured interviews were conducted by two researchers (HH & AD) between February 2021 and December 2021. Topic guides were developed and piloted with the project's advisory groups, and focussed on four main areas (see Table 1. and supplementary information for example of topic guide).

These interviews were retrospective in nature capturing experiences prior to and across different waves and stages of the pandemic. Interviews were primarily conducted virtually using video call software (Zoom or Teams). Three were conducted in-person, in a private room in a hospital. Interviews lasted between 40 and 60 minutes.

Following the completion of preliminary analysis of the interviews, one virtual focus group was carried out at each site with nurse managers between July and December 2021, facilitated by two researchers (HH and AD). These served as a member checking exercise (Doyle, 2007) to validate emerging findings and sense-check our interpretation of the data. A personalised topic guide was developed for each site-specific focus group. Focus groups involved presenting preliminary findings and further exploring topics relating to the managers' experiences, what had worked well or not so well with regard to redeployment processes, and what lessons could be identified for future redeployment (see supplementary information for example of topic guide). With the exception of one participant, all those involved in the focus groups had already been involved in the interviews. The final participant contacted the research team to take part in the focus group during our recruitment efforts.

2.4. Data analysis and data trustworthiness

Two researchers (HH and AD) analysed the interview data independently, guided by an inductive reflexive thematic analysis approach (Braun and Clarke, 2021). Transcripts were first read to acquire an overview and understanding of the data, then annotated to identify line-by-line codes. These codes were grouped into descriptive themes, capturing re-occurring topics across the interviews. Recruitment ceased once it was agreed (by HH and AD) no new themes were identified and data saturation (Guest et al., 2006) had been achieved. Monthly meetings were then held with the research team (including local collaborators, the staff advisory and public and patient involvement groups) to support interpretative engagement with the data to review, define and refine the themes. These meetings involved reading and discussing the raw data and interpretative concepts in the theme, enabling interpretive rather than merely descriptive findings to be made. Initial themes were presented and explored with participants during the focus groups by way of member checking. Focus group data were mapped to and synthesised with the existing thematic structure developed from the interviews, exploring similarities and differences in experiences and our interpretations of the data by one researcher (HH). This mapping and synthesis process was also included in meetings with the team, staff advisory and PPIE groups as outlined above, allowing them to further refine the thematic structure.

Data analysis was supported by data management software (NVivo 10 for Windows).

Table 1
Topic guide areas.

Section	Topic area
1	Redeployment processes implemented before and during the pandemic and differences between these approaches
2	How and why specific decisions concerning redeployment were made
3	Experiences of implementing these processes at both the institutional and ward-based levels
4	Lessons for future redeployment practice

2.5. Ethical approval

Ethical approval for this study was granted by the University of Leeds Research Ethics Committee, approval ref: AREA 20-041 IRAS Project ID: 290616. Granted 03/12/2020.

3. Results

3.1. Participants

Thirty-two nurse managers and four human resource advisors were interviewed and 11 nurse managers took part in the focus groups. Demographic data are presented in Table 2. Participants' mean age was 46 years with an average of 20 years of post-registration experience. The sample included nurse managers from a range of departments and specialities including critical care, surgery, outpatients, and paediatrics.

3.2. Thematic overview of qualitative data (interviews and focus groups)

Four themes were identified capturing distinctive dominant features across the phases of the redeployment process and pandemic:

1. "*Unprecedented territory*": Configuring managerial processes for redeployment
2. "*Pawns on a chessboard*": Challenges of enacting redeployment decisions
3. "*I have never felt more responsible*": Providing additional support to redeployed nurses
4. "*We have all been impacted in different ways*": The ripple effects of redeployment.

An overarching theme of 'Disconnect: Nurses vs numbers' highlights a fundamental mismatch between how different parts of the managerial workforce conceived of their decision-making responsibilities across all themes. The disconnect highlighted by this overarching theme is demonstrated throughout the themes and explored further in the discussion. Job title and number of years clinical experience post-registration are reported alongside each illustrative quote, N/R denotes not reported.

3.2.1. "Unprecedented territory": configuring managerial processes for redeployment

3.2.1.1. Initial changes in response to pandemic. Redeployment was acknowledged by nurse managers as an essential and immediate requirement in response to the early phase of the pandemic, and further waves in 2020–21. Trusts adopted a 'command-and-control' structure in their initial pandemic response, whereby staffing levels across the Trusts were assessed by senior management teams (e.g., a mixture of executive and operational directors, and senior nurses) who then shared plans with local nurse managers on what needed to happen locally. This replaced the pre-Covid structure where redeployment was managed at departmental level by nurse managers. Strategic planning during the pandemic primarily involved assessing patient-staff ratios daily and identifying immediate redeployment needs across the Trust to achieve safe staffing levels. This numerical assessment of redeployment needs was then cascaded down the chain of command to be operationalised:

Table 2
Participant demographics.

Characteristic		Job title description[a]	Number
Nurse managers and Human Resource advisors			
Gender	Female		31
	Male		3
	Not reported		2
Ethnicity	White		25
	Black Caribbean		3
	South Asian		2
	Other White		2
	Black African		1
	Black and White African		1
	Not reported		2
Trust	A		12
	B		14
	C		10
Job titles	Matron	Usually an AfC[b] band 8a role. A nurse leader who has responsibility for a number of wards/departments and operational manager of nurses/Nursing Associates/Health Care Assistants	13
	Head of Department	A generic term that is a senior role, the banding would reflect the size of the patch being covered. It may be a senior nurse type role for a specialty area such as orthopaedics with operational responsibility for that area. In this context this role was held by a nurse hence involvement in the study.	5
	Human Resources	Staff who are trained HR professionals and work in HR roles at various levels within the organisation.	4
	Lead Nurse	Could be an example of a head of department. Usually lead nurses have a clinical focus seen as an expert in their clinical field and responsible for their clinical area.	3
	Deputy Matron	A deputy for the matron role described above. Takes on delegated tasks, involving a portion of the wards/departments covered by the matron overall. Will cover (deputise) in the matron's absence.	2
	Associate Director of Nursing	Usually a leadership/operational role over a large group of wards/departments, being directly responsible to the 'director of nursing' or 'chief nurse' board level role and line manager of a number of matrons and senior nurses.	2
	Deputy Associate Director of Nursing	A deputy for the ADN role described above. Takes on delegated tasks, involving a portion of the wards/departments and services covered by the ADN overall. Will cover the whole patch in the ADN's absence. A matron would usually develop into this role first and then onto an ADN.	2
	Senior Nurse	A very generic role which may be a clinical nurse specialist type role, i.e., a nurse who has developed an area of expertise such as cardiology. Or could be an operational role in charge of a ward or department(s).	2
	Ward Manager	An inter-changeable role with senior sister. Is usually associated with AfC band 7 and involves a nurse who has progressed from nurse at AfC band 5/6 to take on the accountability and responsibility of a defined ward.	2
	Senior Sister	This could be used in the context of a ward manager as above, and may also refer more specifically to a department manager such as theatres or AED(A&E) - not referred to specifically as a ward. Trusts commonly take their own stance on this title, opting for senior sister as a more generic term for the nurse leader of wards as well as departments.	1

[a] The role titles used in the NHS are multiple and varied and differ between organisations. Some titles are generic and easy to identify with, such as Matron, others less so and may be used in several situations with not necessarily the same identified responsibilities attached to it or indeed the pay band. The job titles listed were those identified with by the participants themselves. Therefore, the descriptions offered below are based on the experience of the research team and individuals encountered as part of the study.
[b] Agenda for Change NHS pay scale.

> "We used to have a daily meeting with all the senior nurses that was led by either one of the associate directors of nursing or the chief nurse predominantly, and she would kind of lead what needed to happen. Then we were tasked with doing it."
>
> [(Deputy Associate Director of Nursing, 36)]

Nurse managers discussed aspects of redeployment practices that were different to those used prior to the pandemic e.g., the redeployment of whole teams, redeployment outside of a department or specialist area, and a faster pace of decision-making and implementation processes. Nurse managers also reflected on how pre-pandemic experiences shaped this modified approach. One Trust scaled up existing procedures, which relied on an established 'pool' of nurses who volunteered to be redeployed when necessary. Having a scalable redeployment process already in place was viewed positively by nurse managers within this Trust:

> "Because we had such a good process in place to start with, we were in a very fortunate position, so yes we were able to very quickly mobilise the workforce."
>
> [(Lead nurse for staffing, 29)]

3.2.1.2. Perceptions of early senior leadership decisions. Nurse managers acknowledged that the command-and-control structure change was necessary for quick decision-making in response to the pandemic. However, they held strikingly different views towards the organisational response at the senior level. Those who were involved in strategic discussions acknowledged the extent of organisational planning, even in the absence of operational guidance:

> "We had lots of meeting to discuss how we were going to approach the whole situation, manage the patients, keep everybody safe. So, we had a lot of planning and meetings to discuss with senior management and they didn't necessarily give us guidance to say this is how you're going to move people, but we discussed and identified the areas that will need the support."
>
> [(Matron, 14)]

Others perceived a lack of strategic planning, which pointed towards poor communication between management structures. As a result, some nurse managers sought information from their colleagues or senior leaders regarding operational directives. Others acknowledged the *presence* of a plan, but voiced frustration about its *content*. Many nurses interpreted the plan as lacking specific detail on how to put goals into practice, and as being too narrowly focussed on lists of numbers and absence rather than on the requirements for decision-making and procedural implementation. Nurse managers voiced feelings of unpreparedness and anger at being excluded from key discussion or sources of information:

> "I felt that we needed people who were going to make decisions and quick decisions and sensible decisions and I didn't get the impression that that was happening […] I did have angry words with one of the senior nurses in my division, because I felt that there […] wasn't a plan […] I was told consistently that there was a plan and I asked for it consistently, but it was never shared."
>
> [(Matron, N/R)]

3.2.1.3. Compounding pre-pandemic redeployment experiences. Much concern related back to pre-pandemic redeployment practices, which took place within departments in a largely ad-hoc fashion owing to dynamically changing clinical needs. Nurse managers were primarily responsible for managing pre-pandemic redeployment within their departments, drawing on a 'pool' of 'redeployable' nurses, where available, or through small-scale temporary reconfigurations of the team. During normal service delivery, redeployment was largely considered a contentious task that nursing teams viewed negatively:

> "It was also a little bit difficult and jarring, often because nobody […] really wanted to go if they were asked to go. So it was one of those little slightly unpopular things that you got involved in that no one really wanted to be involved in."
>
> [(Matron, 20)]

Given their previous experience, and in response to this backdrop of a perceived lack of planning from senior leaders, some nurse managers took informal preparatory actions to buffer the top-level directives. Here, their primary objective was to protect their own teams. They made lists of potentially 'redeployable' nurses, taking into account these nurses' skill-sets, experience, perceived resilience and likelihood of 'coping' with redeployment. They also invited colleagues to provide informal training or to talk with their team, discussed redeployment as a possibility with their team, and aimed to allay fears and acknowledge the challenges ahead. There was a perception by nurse managers that these actions served a protective role for themselves and their team:

> "I suppose it was about trying to, mentally prepare the team […] So we as a paediatric team, what they really needed was critical care skills, so, okay, 'I haven't looked after anyone over the age of like 16, 17 [years]'… 'but you know how to use a ventilator you know how to…' It's sort of selling that back to the team and saying, actually, you'll be able to do this."
>
> [(Head of Department, 33)]

3.2.2. "Pawns on a chessboard": challenges of enacting redeployment decisions

3.2.2.1. Numbers-orientated instructions to redeploy. As the spreadsheet for daily redeployment was cascaded down to ward-based managers, redeployment instructions predominantly consisted of directives to close their department and redeploy their team to an alternative area, or to redeploy a particular number of nurses from their team to a specific ward. Nurse managers experienced disempowerment and loss of autonomy as their only role was to implement decisions, which perpetuated a sense of disconnect:

> "It was higher up, the powers that be. We do have consultants […] and managers that lead the unit that is above our matron as well and they were the ones that that made the decisions. We were just told to do it."
>
> [(Ward Manager, 30)]

3.2.2.2. Identifying which nurses to redeploy. Nurse managers considered multiple factors when choosing which nurses to redeploy, similar to those listed above when identifying 'redeployable' nurses. Typically, they first assessed the available skillset of their nurses and other clinical factors to narrow the pool of 'redeployable' nurses. They then saw seeking volunteers as the optimal redeployment approach because it preserved an element of nurse autonomy in the process and allowed the positive aspects of redeployment to be stressed. However, as the pandemic progressed across subsequent waves, the number of volunteers reduced which made a volunteering model unreliable:

> "I think asking for volunteers is always a good thing, because then you're going to get people who actually don't mind moving […] So of course the best thing to do would be to ask for volunteers, obviously, sometimes you're not going to get enough, and so there is that, but in terms of good practice it was about, when you were trying to convince people to move, it's not just about you need to move because they're short, it's about 'you're moving, but these are skills you're going to learn from it, this is the difference that you're making, and this is the support you're going to get', and so it's kind of making people feel valued and not just dumped, which is what some people felt like they were."
>
> [(Senior Nurse, 21)]

3.2.2.3. Approaches taken to redeployment. Importantly, whilst most nurse managers favoured a model that redeployed the most skilled and resilient nurses, in the absence of volunteers, these were not always the nurses redeployed. The factors taken into account when identifying the most appropriate nurses to redeploy were not weighed up consistently, and in the absence of guidance, nurse managers adopted an approach of 'what they thought was best'. 'What was best' differed for nurse managers at different times, resulting in inconsistent, sometimes contradictory redeployment approaches within and across organisations. For example, managers of different wards taking different approaches, and some managers starting with the intentions of using more 'fair' approaches e.g., volunteering and lottery and matching skillset and experience, but as the pandemic progressed and managers experienced increasing conflict, pushback, and moral burden from ongoing redeployment, some would try to avoid conflict by approaching alternative nurses who represented 'the path of least resistance', those less likely to pushback a redeployment request. They recognised that these nurses were often more junior, and consequently less experienced, members of the team:

> "Generally, I would say the cohort of relatively newly qualified people who were a bit more flexible to go and do other things would move and those that have been there for a long time won't"
>
> [(Matron, 19)]

3.2.2.4. Responding to nurses' feedback and evolving redeployment approaches. Furthermore, feedback from nurses about their redeployment experiences influenced the redeployment models over time, acting as an informal feedback loop. Nurse managers became increasingly aware that their teams often felt redeployment requests were 'unfair', resulting in individuals feeling 'picked on' even when volunteers were sought. Managers recognised that these responses contributed to nurses becoming less receptive to redeployment requests. Some nurse managers tried to overcome this by making redeployment decisions random, for example 'picking names out of a hat' or by continually rotating who was redeployed. These modifications faced challenges, however, owing to the radical shortage of available nurses and basic skills and clinical factors that they considered. Ultimately, nurse managers often felt that whichever model they enacted to identify which nurses to redeploy, would be perceived as unfair:

> "It was a multitude of things that we had to think about, which I don't think the staff realised we were having to do, they just saw it

as 'I'm going, I've got to go' you know they didn't see the pressure that it was to look at the skill mix at the same time."

[(Ward Manager, 30)]

3.2.2.5. Treating people as resources and the impact on nurse managers. Nurse managers experienced additional logistical and emotional challenges when redeploying nurses to meet the numbers-focussed staffing directives whilst simultaneously striving to respond to the needs and interests of those they were redeploying. This dilemma of feeling caught in the middle of meeting both their managerial and mentoring responsibilities, became even more challenging as nurses became increasingly less receptive to redeployment requests:

"I hated it, I felt like I was dealing with pawns on a chess board, we'll move this one here, and this one here, this one here. I would regularly stop and say to the sisters 'oh my God, these are people, these are their jobs and we're just literally moving them around them and plugging gaps with them.' I found it really hard actually because I thought, I know they hate moving I know they don't want to have to do it and we're kind of making them do it quite regularly."

[(Matron, 20)]

Broadly speaking, these nurse managers felt unsupported by the senior leadership teams who were cascading redeployment requests to them. Some nurse managers attempted to communicate up the chain of command and felt responsibility to represent 'nurses" voices to help inform ongoing decision-making. When they did so, their experiences were mixed. A few felt senior leaders were receptive, whilst others felt that their concerns were ignored. This gap between different levels of management was perpetuated by a perceived lack of visibility, support, and guidance from senior leaders, which gave rise to the view that high-level decisions were being made without knowledge of what was truly happening on the frontline:

"I think from a site team [senior leader's] point of view I think they're very good at sitting completely out of the way and sort of looking at numbers without actually thinking of the effect of what moving people around is doing really, and I don't think they understand that."

[(Senior sister, 35)]

3.2.2.6. Communicating redeployment requests with nurses and managing their response. One of the most challenging jobs in enacting redeployment was communicating the decision to, and requesting that a nurse, move. All recognised this as particularly challenging, given that they were the 'face of the decision' but had limited control over it:

"On a personal level I feel awful because I've sent them to that place, but I do know that as a band 6, as a part of management, that that is a role I have to do and I know it's a role that I don't necessarily agree with, but I have to do. But it's still not nice doing it."

[(Ward manager, 30)]

Incivility and pushback from nurses were commonplace. On occasions, nurse managers reported how nurses would simply refuse to redeploy, respond with abusive language, or threaten to leave their shift, go home, or go off sick. There was inconsistency within and between Trusts as to how nurse managers dealt with pushback or refusals in response to redeployment requests. Nurse managers reported "thinking carefully" how to discuss redeployment with nurses in a transparent way to avoid conflict and reduce resistance, but ultimately all expressed ongoing difficulties. A variety of strategies were adopted to respond to refusals. Some nurse managers endeavoured to work through nurses' concerns and provided rationale for their decisions; others used negotiation or coercion, for example by re-iterating their contractual agreement with the Trust, threatening escalation to Human Resource processes beyond the ward, or using emotional blackmail. The first approach was preferred by managers. However, the increasing resistance to redeployment requests as the pandemic progressed led nurse managers to feel that it was only partially successful:

"I don't think it would have mattered how I said it [redeployment request]. I could have bought her a bunch of flowers, and taken some chocolates, and carried her across the threshold of a ward, but she would have still felt I was the baddie."

[(Matron, 25)]

3.2.3. "I have never felt more responsible": providing additional support to redeployed nurses

3.2.3.1. Widening the scope of managerial responsibilities. Nurse managers recognised that the challenges they and their nurses experienced in the face of enacting redeployment decisions triggered a wider range of support requirements, and, consequently, new managerial responsibilities. This heightened sense of responsibility was described by nurse managers across all roles. Enacting these responsibilities and new forms of support took different forms, frequently extending beyond their primary line management duties; they were not simply 'handed over' to the nurse managers in the recipient wards.

3.2.3.2. Supporting nurses whilst working in a redeployed role. A primary concern amongst nurse managers was ensuring that nurses were equipped to provide safe, competent care whilst working in a new environment, embedded within a new team, and performing unfamiliar tasks. Whilst some variation existed between individuals and Trusts, common approaches involved nurse managers 'checking in' with redeployed nurses through ward visits or phone calls, redeploying themselves alongside their team to be 'visible' and show solidarity, negotiating convenient work hours and rotas on behalf of their redeployed nurses, and having an 'open door' in instances their nurses needed additional support. As no guidance was provided, they "did what they thought was best":

"I went to see them every single day that they were there and just to check in on them. […] I felt that I had to look after them really. It felt a bit like sending troops to war like they were just one of the numbers really that were being sent in and that I felt I had to look after them."

[(Matron, 19)]

Simultaneously, however, nurse managers who received redeployed nurses found addressing skill gaps and training needs challenging, particularly as their 'home' working environment (frequently an intensive or acute care unit) was orientated towards one-to-one patient care arrangements. Within these environments, redeployed nurses took subsidiary roles working to support the senior ICU nurses, but this arrangement was reported as causing nurses in the 'receiving' team anxiety as they took on additional accountability and supervisory responsibility for nurses lacking requisite experience. These factors gave nurse managers further reasons for thinking that nurses became less receptive to subsequent redeployment:

"Everybody thinks their specialism is, unique, and therefore if somebody else is coming in to do it the person supervising feels additionally stressed, 'cause they feel that they're having to, stretch in order to supervise somebody else. I think the person being redeployed is in an area that they have not necessarily chosen to be, and there's some vulnerabilities there."

[(Head of Department, N/R)]

3.2.3.3. Supporting nurses at the end of redeployment. The other main period where nurse managers identified that nurses needed additional support was the return of redeployed nurses to their home wards. This need was only identified in retrospect, with managers acknowledging and indicating a sense of regret de-absence of formal guidance, this

process was driven informally by the number of Covid-19 patients, service demand, and nurse skillsets – relying heavily on transparency between teams and departments around their changing staffing needs. Some matrons believed that 'their nurses' were delayed in being returned owing to filling nursing shortages in the redeployed areas. This fostered suspicion between nurse managers across different departments, sometimes damaging relationships that had been built between departments during the pandemic. This provided nurse managers with an additional source of conflict in the redeployment process:

> "There's a daily email that goes around saying how many Covid patients we've got at the Trust and you could see this number just dropping every day. And yet we were being told they can't have them back, 'cause we're still really busy. There's a little bit of 'am I actually just staffing your vacancies? Are my team just staying there filling gaps in rosters?'"
>
> [(Matron, 19)]

3.2.3.4. Re-integrating nursing teams following redeployment. Nurse managers reflected on their initial assumptions that, once nurses returned, it would be business as usual with their teams quick to re-integrate. However, growing resentment between nurses was widely reported in previously very cohesive teams, and particularly between those nurses who were redeployed and those who were not or were shielded:

> "The team is different now. I thought people would come back and feel; 'God I'm so glad to be back and I'm so grateful to work in outpatients', but that's not the case. […] They're not getting on like they used to. Before, I'd say their teamwork was amazing. […] but there's been a lot of petty infighting, moaning and people just not getting on. And there's clearly resentment around those that went and those that didn't go."
>
> [(Matron, age 19)]

Nurse managers believed that this contributed to poor team dynamics. To address this problem in subsequent waves of redeployment and return, inventive strategies such as awarding supernumerary time or proposing the use of annual leave were attempted by a small number of managers as short-term solutions. However, these strategies were often not supported at an organisational level.

3.2.4. "We have all been impacted in different ways": the ripple effects of redeployment

3.2.4.1. Psychological impacts. Nurse managers' management of redeployment processes had ripple effects that extended beyond the redeployment period itself. Nurse managers reported themselves and nurses as experiencing poor mental health and well-being (i.e., depression, anxiety, post-traumatic stress disorder (PTSD), burnout, insomnia), new intentions to leave their role, the Trust or the nursing profession, and a more general feeling of being diminished in their ability to provide the same level of care. It was generally recognised that the psychological impact of redeployment on their nursing team continued as the pandemic waned, with minimal organisational support to improve it:

> "The one thing that keeps coming up, and I think we're going to be dealing with it for a long time, is the wellbeing of staff […] It's something we're still dealing with; we are now in a position to say, you know what, moving forward, we need to have a team of wellbeing support for the team for everybody, not just people on the on the ground, but also the managers and everyone else. […] I think that's something that we need to work on as an organisation."
>
> [(Matron, 14)]

Managers reflected on what they thought specifically contributed to nurses' long-term negative psychological impacts (aside from the pandemic itself) and identified the detrimental impact of having 'no choice' in redeployment decisions, being redeployed to care for acutely ill or dying patients from areas that rarely care for these types of patients, and the strain of working in higher risk areas without appropriate levels of support. There was a desire for long-term well-being support for both nurses and nurse managers to aid workforce recovery, but concerns that well-being support may be reduced in response to reducing Covid-19 cases:

> "We had a lot of people that, I would say, have suffered. A lot of them have had stress problems […] They were having to look after patients in the most awful, I mean ward X [ICU] was, it was like a field hospital. It was absolutely horrific […] I would say there's been some specific stress. Or maybe almost like a post traumatic stress. Now it's almost over, they're sort of looking back, and I think the stress is probably coming out now 'cause, while everybody just got their heads down and did it at the time."
>
> [(Senior Sister, 35)]

3.2.4.2. Further ripple effects. Alongside their own experiences of guilt and moral distress from their role in the redeployment process, nurse managers reported higher levels of stress-related nurse sickness absence and increased resignations, which they attributed partly to redeployment experiences and more generally to working through the Covid-19 pandemic:

> "I don't know whether PTSD is too harsh, but I think there's people that are really, really upset, I've got 1, 2, 3 people that are off sick now with work related stress. […] And I think I've also had 1, 2, 3, that's 3, 3 resignations, since they were redeployed and I don't think it's, it's the only reason, I think possibly Covid and everything else has made everybody re-evaluate but certainly one of them said to me, 'if this happens again, we're going to be sent again, so I'll go and work somewhere else'. That's not good, you know".
>
> [(Matron, 19)]

One nurse manager reported that they were considering early retirement and sacrificing their pension as they could not face playing any further role in a redeployment exercise, finding it so distressing. In contrast, a smaller number of managers identified some positives associated with redeployment including an increased skillset, more collaborative working, and job progression. However, these were recognised as isolated cases and did not offset the overriding negative psychological impact:

> "I think one perk of Covid is that we understand each other's areas a lot better now, we've got a more collaborative way of working. […] We've got that good working relationship within matrons"
>
> [(Matron, 12)]

4. Discussion

This paper presents four themes that capture the process of redeploying nurses from making decisions about who and how to redeploy nurses, to putting these plans into action, providing the support necessary to ensure the plans did not fall apart and then observing and responding to the consequences. Across these different phases, there was an evident and ongoing disconnect between the understanding of nurses as people with skills, knowledge and emotions and the alternative perspective which simply considered nurses as numbers to fill staffing gaps. Our findings illustrate clear phases of redeployment, reflecting a processual approach to redeployment decision-making that resembles a Donabedian model of 'structure, process and outcomes' (Donabedian, 2005).

4.1. The disconnect between nurses as people and nurses as numbers

It is evident across the themes that all phases of redeployment involved an element of feedback and modification based on the perceived need to factor in dynamic and often competing factors in the decision-

making process. This included contextual considerations (such as staffing ratios or ward closures) and information emerging from earlier phases (such as recalibrating approaches on the basis of negative redeployment experiences or attitudes). As was particularly evident in theme 2, nurse managers worked between layers of the organisational structure, navigating decisions on the ground in the face of significant challenges. In particular, nurse managers who were tasked with working in the ward had to respond to constrained, simplistic requests that focussed on numbers and the availability of nursing staff. They did this in the face of limited guidance but with the knowledge that their decisions may psychologically harm their nursing teams.

It is evident across all themes that a disconnect emerged because senior leaders who were somewhat removed from the day to day operations largely, and perhaps unsurprisingly given their role, viewed nurses as *resources* to be managed and allocated by managers in ways that met contextual needs, but managers also saw their responsibilities towards nurses as *people*, who needed to be engaged with, listened to, and treated respectfully in the redeployment decision-making process. This was viewed and experienced as involving a trade-off between different requirements of managerial roles that the managers felt poorly equipped to handle. Furthermore, this disconnect got worse as the pandemic progressed with managers witnessing the negative impact of redeployment on their staff, with nurses becoming less receptive to redeployment and increasingly likely to pushback to requests. A qualitative study involving hospital leaders from the US, UK, New Zealand, Singapore, and South Korea supports the findings that senior leaders based redeployment decisions primarily to meet 'numbers' i.e., surge demands, the unique clinical demands of the COVID-19 pandemic and safety (Panda et al., 2021).

Research in Finland and the US (Jäppinen et al., 2022; Warshawsky and Havens, 2014), and a systematic review of international literature (Penconek et al., 2021) show how pressure, stress, and burnout all contribute to nurse managers' low job satisfaction, and that their autonomy, social support, and power to effect change can improve job satisfaction. Our findings highlight the specific potential that the practice of redeployment plays in perpetuating disconnects between the perspectives of senior management and nurses, as well as the difficult trade-offs that arise within managerial structures, leading to stress and burnout for those with operational responsibilities of these kinds. Furthermore, nurse managers' concerns about the impact of their decisions and actions on their nursing teams appear to be well-founded, as there is growing evidence that specific behaviours within the managerial role can have a positive or negative impact on nurses' redeployment experiences (Ballantyne and Achour, 2023; Hughes, 2019), on organisational culture, and on the quality and safety of practice and patient outcomes (Feather et al., 2015; Kaufman and McCaughan, 2013; McCay et al., 2018).

4.2. Inconsistent and iterative approaches to redeployment

Our findings also show that nurse managers took different approaches to redeploying staff in an inconsistent manner, but with evidence of variants of the possible models identified by Dunn et al. (2020): volunteering, lottery, and mandatory redeployment. Their choice was dependent on a range of competing factors that presented dynamically as the pandemic evolved. Whilst volunteering and lottery were theoretically favoured by nurse managers as they were perceived as fairer on their staff, they often were not implemented due to incivility and pushback, and the limited number of volunteers who came forward in the later stages. Our findings suggest that mandatory redeployment was favoured in practice by managers, and especially in subsequent waves of the pandemic, often out of desperation to meet the numbers required, to achieve safe staffing levels, and to reduce the risk of refusals from amongst their nurses.

4.3. Implications for policy and practice

Whilst these research findings focus on redeployment during the Covid-19 pandemic, the central insights identified in this paper are also likely to be relevant for redeployment during normal service delivery – especially as improvements in retaining staff and mobilising a flexible workforce are leading priorities for healthcare organisations. Below we posit organisational, policy and practical recommendations to improve future redeployment during normal service delivery and in crisis settings.

The findings also indicate that organisational support around how to undertake redeployment is urgently needed, with key issues that require further exploration including:

- How best to identify nurses to redeploy
- How to communicate redeployment with nursing staff
- How to manage pushback and incivility in the process
- How to manage the competing logistical and emotional challenges
- How best to support redeployed nurses in their role
- How to end redeployment and re-integrate with the nursing team.

Some managers suggested and the synthesis identified several key factors which could help to mitigate the negative consequences of redeployment:

1. Enacting redeployment decisions: A planned, organisational wide approach to redeployment involving the provision of a clear rationale for the request, job expectations, and compassionate communication that recognises the challenge of the task; written guidance for how to implement redeployment decisions in ways that maintain working relationships, team morale, and autonomy for all involved; and a mechanism to feed information up the chain of command.
2. Supporting nurses working in a redeployed role: For redeployed nurses to be introduced to their new work environment prior to redeployment, inclusion of redeployed nurses in all new team activities and integration into established lines of communication, extended support for redeployed nurses whilst working in redeployed role, including the use of buddying and mentoring, tangible support, and well-being check-ins from a clearly assigned line manager whilst working in a redeployed role.
3. Ending of redeployment: A planned, organisational wide approach to returning redeployed nurses, including information on when and how it should be implemented, organisational support of opportunities for nurses to debrief, reflect and share redeployment experiences within their teams, allowing nurses to have a break and be re-integrated to their role and responsibilities through supernumerary time or use of annual leave.

A system level approach to redeployment that incorporates the above suggestions and is scalable for a crisis setting could support those tasked with redeployment, as well as increasing the resilience of healthcare organisations and their preparedness for a future crisis (Wiig et al., 2023).

4.4. Strengths and limitations

This study has many strengths, the first being the in-depth nature of the data collected, achieving a detailed understanding of a complex process and decision-making with an under researched group of healthcare professionals. Additionally, this project was completed during the Covid-19 pandemic despite unprecedented working circumstances and challenges for nurse managers. However, limitations should also be acknowledged. Although steps were taken to recruit participants from different backgrounds and there is some ethnic diversity within the sample, there are sample limitations with two thirds being white females. As with all qualitative research studies exploring the strengths and weaknesses of professional practice, self-reported experiences may be limited by social desirability bias. However, attempts to limit this included member checks and 'naïve' researchers who were not clinically trained. The identification of common themes across participants and sites adds credibility to the findings. Furthermore, participants freely disclosed experiences

that could be classed as socially undesirable, suggesting limited evidence of social desirability bias.

4.5. Conclusions

This study has generated evidence that nurse managers face logistical and emotional challenges when redeploying nurses, compounded by a lack of organisational support and guidance, and negative redeployment experiences from within their nursing teams. With limited guidance on how to undertake and conclude redeployment, managers adopt inconsistent approaches within and across organisations, and feel caught in the middle of competing goals. There is a need for more organisational support to guide managers in operationalising redeployment requests and supporting nurses at the point of redeployment and whilst working in a redeployed role. Redeployment is likely to remain integral to achieving patient safety in health service delivery, particularly in light of the current staffing crisis and a shift towards more flexible work arrangements. As such, it is imperative that these findings are used to inform best practice for managing nurse redeployment in the future.

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CRediT authorship contribution statement

Hannah Hartley: Writing – original draft, Visualization, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Alice Dunning:** Writing – review & editing, Visualization, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Michael Dunn:** Writing – original draft, Supervision, Methodology, Funding acquisition, Formal analysis, Conceptualization. **Angela Grange:** Writing – review & editing, Supervision, Funding acquisition, Conceptualization. **Jenni Murray:** Writing – review & editing, Supervision, Funding acquisition, Formal analysis, Conceptualization. **Ruth Simms-Ellis:** Writing – review & editing, Supervision, Funding acquisition, Conceptualization. **Kerrie Unsworth:** Writing – review & editing, Supervision, Funding acquisition, Data curation, Conceptualization. **Jayne Marran:** Writing – review & editing, Validation, Supervision, Conceptualization. **Rebecca Lawton:** Writing – review & editing, Supervision, Methodology, Funding acquisition, Conceptualization.

Data availability

Data not available as participants were informed and consented to only non-identifiable excerpts of their data being used in publications, they did not consent to data sharing. Also, ethical approval is for the research data to be stored on specific encrypted servers only.

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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Appendix A. Supplementary data

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