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Article Title:
Exploration of the views and experiences of research healthcare professionals during their redeployment to clinical roles during the COVID-19 Pandemic

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Conflict of Interest:
None declared.

ABSTRACT

Aim: This study aimed to explore the views and experiences of research healthcare professionals towards their redeployment to front-line clinical roles during the COVID-19 pandemic.

Background: Healthcare professionals working in research were redeployed during the COVID-19 pandemic to support the delivery of clinical services across the National Health Service. They are experienced clinicians with research knowledge and skills, and specific working patterns. It is important to understand how these professionals were utilised and supported during their transition to clinical roles during the pandemic.

Method: Between July and September 2020, 15 research healthcare professionals were recruited into this qualitative study. Each participant completed a single semi-structured interview lasting approximately 30-60 minutes, conducted remotely using a teleconferencing platform. Interviews were transcribed verbatim, and data analysed by the process of inductive thematic analysis with the assistance of NVivo 12.06 (Nov,2019).

Findings: Four main themes emerged from analysis of the transcripts: 1. Initial personal response to the pandemic (subthemes: of anxieties due to unknown disease impact and concern for others); 2. Mobilisation for clinical redeployment (subthemes: Motivations for voluntary redeployment, the professional challenges, personal fears and the organisation and preparedness for redeployment); 3. Adaptive deployment to clinical roles (subthemes: Adapting to new roles and responsibilities, challenges faced and coping mechanisms), 4. Reflections and Learnings (subthemes: reintegration to original roles and sense of achievement).

Conclusion: Research healthcare professionals are highly adaptable professionals equipped with core transferable skills. With the appropriate support, re-familiarisation and induction they are a valuable resource during the pandemic response.

Implications to practice:

- Research healthcare professionals are experienced practitioners with transferrable skills and strong sense of duty and resilience.
- Induction programmes to promote recalibration to clinical settings would improve their adaptability, foster confidence and emotional wellbeing.
- Careful consideration is required prior to mass redeployment to ensure research continuity in both COVID-19 and other health conditions.

KEYWORDS: healthcare professionals, research, redeployment, transition, COVID-19

INTRODUCTION

COVID-19 infections resulted in a sudden increased demand on health services across the world and the United Kingdom (UK) was no exception. The UK's National Health Service (NHS) had to undergo a substantial transformation and emergency planning to cope with the health needs of critically ill patients with the appropriate infrastructure, equipment, expertise and clinically trained staff. As part of that transformation, existing services were re-structured and entirely new ones created. This included the conversion of conference centres into field hospitals, also known as the Nightingale Hospitals. The restructuring endeavour was the product of an effective partnership between the NHS, universities and private companies in order to build new hospitals and outfit them with specialist equipment to take the pressure off existing hospitals during the outbreak. However, a key limited resource was the availability of clinically trained staff, which was further complicated by the challenge of the growing number of staff absences, due to illness from contracting the virus, self-isolation or absence due to personal commitments. To boost the NHS workforce, recently retired nurses and doctors were invited to return to work whilst nursing and medical students were enlisted to work in frontline roles (NHS England, Second Phase Response, 2020). Existing staff working in non-clinical roles were asked to be redeployed into new clinical roles and environments to support the delivery of clinical services. These strategic workforce changes were widespread across the NHS and placed staff in roles that were outside of their normal scope of practice.

NHS England and NHS Improvement (NHS England, 2020) outlined their principles to ensure safe staff redeployment during the COVID pandemic for both staff and patients safeguarding, whilst E-learning programmes were created by Health Education England to assist and support staff transitions into new roles and new settings. According to NHS England, the decision-making for redeployment should be done locally taking into account skill mix, staff availability, demands of the services, patient populations and the impact of the COVID-19 pandemic. Both the Royal College of Nursing and the British Medical Association advocated for health professionals to be flexible for the benefit of patients, but redeployment must be done pragmatically within the principles of best practice and for staff to work within the bounds of their individual competence. Ultimately, employers had the responsibility to ensure adequate training, competencies, inductions and supervision of redeployed staff (British Medical Association, 2020 and Royal College of Nursing, 2020).

BACKGROUND

According to the emerging literature in the area, the process of redeployment can be a difficult experience for staff as working in new environments with new systems and unfamiliar colleagues can all affect morale. At the time of conducting this study, the literature search yielded a small number of studies investigating the redeployment of an emergency workforce in response to pandemics. Following the H1N1 outbreak in Australia, one study was conducted using surveys investigating health workers' absenteeism and sickness during the pandemic (Considine et al, 2009). Seven studies, surveys and articles were found relating to COVID-19 redeployment, of those only one touched on the needs of non-medically trained

staff (Coughlan et al, 2020, Faderani et al, 2020, Johnston et al, 2020, Lim et al, 2020, Monroig-Bosque et al, 2020, Mummery & Kipps, 2020 and Spiegelman et al 2020) but the focus remained on medical doctors. Mummery and Kipps (2020) advocates for flexibility, accounting for individuals' circumstances, health risks and skills when considering redeployment strategy and staff wellbeing. These findings were supported by Lim et al (2020) who conducted a survey on ophthalmologists. They found that junior ophthalmologists were more comfortable with redeployment due to their more recent general medical experience compared to their senior colleagues. All seven publications reported high levels of anxiety amongst staff prior to redeployment although these were alleviated once they started the pre-deployment training. Redeployed doctors experienced anxiety in relation to mal-practice and liability when practising outside their clinical expertise (Coughlan et al, 2020). Only one study reported better staff wellbeing than would have been expected (Faderani et al, 2020). This finding was associated with doctors' confidence in their core medical skills as well as training and induction programs undertaken prior to the redeployment. They also reported negative impact on career progression as a key concern for doctors during their redeployment. Spiegelman et al (2020) and Coughlan et al (2020) concentrated on junior doctors highlighting the need for adequate support, continuity of education and minimising disruption to training. These findings were consistent with a study looking at the redeployment of pathologist trainees (Monroig-Bosque et al, 2020). The article by Coughlan et al (2020) on the other hand, viewed the experience as opportunities for professional development and this was shared by Johnston et al (2020) who identified the redeployment of dentists into community nursing roles led to improved clinical knowledge and enhanced transferability of their skill sets.

The evidence so far is generally focussed on medically trained professionals and their redeployment from one clinical area to another. There is no in-depth exploration of the experiences of healthcare professionals whose main responsibilities do not involve direct patient clinical care such as those working in research and their mobilisation to clinical roles during the COVID-19 response in the UK context. Research staff are experienced professionals with specific skills and knowledge as well as have predefined working conditions which can make redeployment into different working environments and work patterns challenging. With experts anticipating a likely increase in pandemic frequency (Hui, 2006), mass re-structuring of services and redeployment of clinical staff may be required more frequently in future. This study sets out to explore the redeployment experience from the perspectives of the research healthcare professionals, understand their preparedness from a training and emotional perspective to undertake this transition and understand how they can be effectively utilised and supported during transitions to clinical roles in the future.

THE STUDY

Aim

This study aimed to explore the views and experiences of research healthcare professionals towards their redeployment to front-line clinical roles during the COVID-19 pandemic.

Research Design and Participants

An exploratory qualitative study design was used with one-off, in-depth semi-structured interviews. The study aimed to explore the views and experiences of healthcare professionals who were redeployed from research roles to clinical roles during the COVID-19 pandemic, understand training and emotional needs for the transition, the perceived readiness of the clinical services to support them and gain knowledge to potentially better inform future redeployment.

Fifteen research healthcare professionals were recruited across hospitals in a major teaching London NHS Trust. The majority of participants sought voluntary redeployment to clinical roles and those who were asked felt it was their duty to help. The sample included nurses, medical doctors and other health professionals (1 biomedical scientist and 1 physiologist) to gain a broad range of perspectives. The study used semi-structured, opened ended questions to generate information-rich and nuanced accounts of these redeployment experiences (Sandelowski, 1995; Higginbottom, 2004). The study adopted a fully voluntary and opt-in approach to participation. Information about the study and the Participant Information Sheet (PIS) were provided to research managers who circulated these amongst members of staff. Staff working in research for a minimum of 6 months and had been redeployed to clinical roles met the eligibility criteria and those were interested to participate contacted the research team for further information.

Interviews and Data Collection

Due to governmental and Trust policies on social distancing restrictions and to minimise risk of COVID-19 infection, all interviews were conducted remotely via Microsoft Teams videoconferencing platform by the lead author (JDV). The interviews took place over a 6-week period (July to September 2020), at a time convenient for participants and each lasted between 30 and 60 minutes. The interviews were semi-structured using a topic guide with 5 main sections: 1. Demographics with personal information 2. Professional background 3. Experience of the redeployment process 4. Experience of the clinical roles 5. Experience of the return to their research roles. The topic guide ensured that information on main areas of interest were collected whilst allowing flexibility for interviewer to adapt questions to gain a deeper understanding. The follow-on questions probed and prompted for more information in response to participant answers to gain better understanding and clarity (Mishler, 2005). The semi-structured format of the interview yielded information-rich data which, in turn, provided reliable and comparable data (Newcomer et al, 2015). The interviews were digitally recorded and transcribed verbatim by the lead author prior to conducting a thematic analysis (Braun & Clarke, 2006).

Data Analysis

Analysis of qualitative data aims to analyse texts to extract trends and recognise patterns of words as well as meaning in relation to the research question (Vaismoradi et al, 2013). The steps outlined by Braun and Clarke (2006) for thematic analysis were used to generate a comprehensive and nuanced understanding of the data collected. Firstly, the transcribed data was read and re-read, then initial concepts noted that were relevant to the research question prior to systematically creating codes for interesting features across the entire dataset. The

codes were grouped to generate broader themes. Redundant codes were discarded. The themes were reviewed at regular meetings between the lead author (JDV) and the second author (EM), to ensure they were accurate, succinct and relevant. This was an iterative and reflective process. Coding and data analysis were performed with the assistance of NVIVO 12.06 software program.

Trustworthiness

Trustworthiness of the study was achieved by following the criteria of credibility, confirmability and transferability (Lincoln & Guba, 1985). The study aims were reviewed and approved by an independent scientific peer-reviewed committee. The first author (JV), a senior research nurse adopted a reflexive approach at all stages of the study countering potential bias and assumption due to prior experience. The transcripts were read and analysed by both authors independently prior to agreeing the final themes. Whilst the diverse professional backgrounds of the participants support transferability of the findings.

Ethical considerations

Informed consent is a key principle of ethically conducted research and should be given freely (Polit & Beck, 2004). The first contact with participants was made through their respective managers and those willing to participate, voluntarily contacted the research team thus minimising risk of any potential coercion by the researchers. All participants were appraised of the purpose of the study and adequate time was given for participants to have their questions answered. All participants signed a consent form prior to the interviews. Each participant was assigned a study identification number and the data was de-identified to maintain confidentiality and handled in adherence with the Data Protection Act 2018 and the General Data Protection Regulations (EU GDPR, 2016).

Ethical implications of performing interviews were considered during the design of this study. Asking participants to relive a potentially distressing experience could trigger an emotional response. The interviewer was a novice qualitative researcher but was a senior research nurse experienced in clinical trial delivery and able to handle the interviews with sensitivity. All participants were aware that they were free to withdraw consent at any time and were provided with details of further psychological counselling and support should they feel they required it. The study was reviewed and approved by the City, University of London Ethics Committee (Reference: ETH1920-1547), the COVID-19 Research Review Committee for the trust and gained approval from the Health Research Authority.

FINDINGS

The study recruited 15 healthcare professionals who were redeployed from their research settings to clinical roles during the COVID-19 pandemic in 2020. The sample comprised of 10 nurses, 3 medical doctors and 2 other health professionals (1 biomedical scientist and 1 physiologist). The mean length of working experience as a healthcare professional was 11.3 years (Range 8 to 25). The mean period of time working in research was 2.87 years and ranged from 1 to 10 years. All participants had been redeployed to clinical roles for at least 6 weeks

during the first wave of the pandemic in April 2020. Table 1 presents the participants characteristics.

Analysis of the interviews resulted in the emergence of four main themes: 1. Initial personal response to the pandemic, 2. Mobilisation for clinical redeployment, 3. Adaptive deployment to clinical roles, 4. Reflections and Learnings (Table 2).

Theme 1: Initial personal response to the pandemic

Subtheme 1.1: Anxieties due to lack of knowledge of the disease and its impact

All participants, at the outset, were working fulltime in a research capacity and were generally not engaged in direct patient clinical care. At the onset of the pandemic, there was an initial feeling of fear and apprehension about how COVID-19 would impact them professionally and personally. The uncertainty and anxiety were primarily due to the unknown nature of this unprecedented event. These feelings were expressed regardless of professional discipline, length of professional experience or time out of direct clinical care. These negative feelings were exacerbated by the perceived lack of information and clarity. Initial communication from their employing organisation about the pandemic and its potential impact was described as confusing by the participants. This uncertainty was exacerbated by mixed messages from other sources such as the media, the government, and their professional regulating bodies. The information and guidance provided sometimes differed according to the source which added to the sense of confusion:

> "*A lot of fear, a lot of apprehension and a lot of uncertainty about what was coming*" (PT1).

> "*constant worry initially about how bad it was going to get or how far it is going to escalate*" (PT8).

> "*Some of the guidance from, for example, our national governing body, which is the British society of echocardiography, was slightly different from the trust guidance, from the government guidance. And so, it's some, again, confusion on*" (PT15).

Subtheme 1.2: Concerns for others

Many participants described a certain dissonance between what was being reported in the media about the spread of COVID-19 infections compared to what they felt the reality actually was. Working in a healthcare environment highlighted an urgency which they felt was not being reflected in the general media. They had their own concerns of their family and friends contracting the disease and some warned their families to start taking precautions prior to the UK national lockdown coming into force. The majority of participants were worried about how their duties as healthcare professionals could expose their close ones to the disease. This was a main concern articulated by those with dependents or personal caring responsibilities such as childcare or elderly parents prior to the pandemic. Some decided to take pre-emptive actions to potentially minimise the perceived risks by either isolating themselves from the rest of their households or moving out of their family homes whilst they were on duty. They

adopted hygiene routines to reduce the risks of transmitting the virus such as showering after shifts and not taking used work clothes inside their houses.

> "*we are fine its weeks away. And outside work everyone was saying that. And inside work it FELT Very much that is happening and this is happening now*" (PT1)

> "*My mom has metastatic lung cancer. So Yes. So, she was up here on her own in the house… a BIG source of anxiety… essentially, it's like, am I ever gonna see my mom again? Like is this, have I made a big decision here to never see my mom again*" (PT4).

> "*I made the decision to actually just separate entirely from friends and family and almost self-isolate between home and work*" (PT6).

Theme 2: Mobilisation for clinical redeployment

Subtheme 2.1: Motivations for seeking voluntary redeployment

All participants described their awareness that the rapid escalation of the pandemic in the early weeks and the demands on the NHS would potentially lead to redeployment to support the COVID-19 effort. The majority of the participants sought voluntary redeployment and described a sense of professional responsibility and feeling that it was their "*duty*" to contribute their efforts to the pandemic response.

Some participants expressed a sense of responsibility that went beyond their professional call of duty. It was a personal and social obligation to act. They described their duty of care towards patients but also the professional solidarity to support colleagues during the pandemic. Every participant described their willingness to do whatever was necessary in the fight against COVID-19 and felt that not getting involved was not an option. Several of the participants recounted that they felt that inaction would have been psychologically detrimental to them. Seeking active redeployment was also their way of maintaining control and proactively assisting their colleagues during a period of high level of uncertainties and anxiety. Some participants took the initiative to prepare and undertook clinical refresher courses or contacted their clinical managers to arrange their own redeployment to those services.

> "*I think as a group of nurses, we thought that was our professional duty to do that. We were we had the skills that were suddenly going to be so of in the spotlight. We knew there was a shortage of those people with those skills. So, I don't think it ever crossed anyone's minds........We decided what we were willing to do and we decided that we were willing to do everything*" (PT5).

> "*The main thing I'm stressed about was not doing anything to help. So, I was trying to get redeployed*" (PT4).

"they are going to ask people to go up to ITU (Intensive Care Unit) anyway. And I'd rather go up at the beginning before stuff gets really bad and just get my head around it" (PT8).

"Personally, I'd been preparing for it in terms of doing some e-learning on the COVID-19 stuff. And I did all my I.V Training and all of that online" (PT11).

Subtheme 2.2: Perceived professional challenges due to redeployment

During the period prior to redeployment, numerous participants told of their apprehension about returning to clinical duties. This related particularly to anticipation of a change in environment, altered working patterns, fear of being *"rusty"*, as well as concerns about having lost touch with the clinical setting and how well they would cope with the sudden transition. These anxieties were expressed to varying degrees by all participants across all disciplines irrespective of the time out of direct clinical care settings. Additionally, most participants described apprehension about the practical aspects of working in a clinical environment such as familiarity with IT systems, internal organisation of departments or access to uniforms. A major concern related to performing well and meeting the expectations of their colleagues in their redeployed clinical roles:

"It was a little bit daunting and because you're doing a job which you should be able to do, but you haven't done it for a certain amount time in a centre where you've never worked" (PT14).

"*I haven't been clinical for more than a year. And then I was actually scared to be going there because, first of all, I didn't have any uniform."* (PT9).

"*They knew me as a ward sister 20 years ago. They didn't know me now... God, they're going to judge me. I'm not as good as I was or I'm slow or I didn't know this. And, you know, so, yeah, kind of probably put a lot of pressure on myself to perform really well*" (PT11).

Subtheme 2.3: Personal safety and fear of illness

In the early weeks of the pandemic, most of the participants were aware of the unknown dimensions of COVID-19 infection and its impact on the human physiology but did not express a high level of fear of personal illness. They were fully aware of the risk of infection, but few participants voiced concern about access to Personal Protection Equipment (PPE). Of these four, two participants were redeployed to ward environments potentially treating COVID-19 patients. They were initially concerned with the level or categories of PPE being provided and whether they will be protected enough rather than the availability of appropriate PPE. Whilst the other two, redeployed to ITU, were concerned about their training and ability to properly don and doff the PPE. Donning and doffing refers to the technique of putting on and taking off protective clothing to reduce risk of self-contamination or self-inoculation and is performed under the supervision of another trained colleague to ensure maximal protection (Richard & Kanchi, 2020). Due to the numbers of patients and staff resources required, some

participants reported that it was not always possible to have this supervision. Those who received regular communication around supply and PPE requirements valued the updates. They felt supported by their managers and the majority stated they felt confident the Trust would provide adequate PPE to allow them to perform their duties safely.

> *"Am I protected enough to just be in an apron and have and be in direct contact?"* (PT13).

> *"I just wasn't sure if I was testing or I was accurately doing the seal test for myself So we had to just erm.. whenever we put on PPE, do our testing ourselves"* (PT3).

> *"so, like the matron's, the clinical directors err handled the PPE thing very well. They were very honest with us…. we have kind of a daily update of what was within the department each day of what PPE requirement was"* (PT1).

Subtheme 2.4: Organisation and preparation for redeployment

Most participants described the communication and organisation of their transition from research to the clinical areas as inconsistent with "*mixed messages*" creating some confusion and uncertainty. Nevertheless, they appreciated the urgency of the situation, the difficulties the organisation was facing in restructuring services and planning the large-scale redeployment of personnel to meet urgent healthcare needs.

> "*communication at start was a bit patchy. But trying to mobilise hundreds of staff into new clinical roles is a real challenge"* (PT8*).*

> *"everybody was just working with information that they get day to day and that changes day to day"* (PT3).

Once the redeployment was planned, it was carried out at short notice allowing limited time for staff to prepare for the transition. One participant described the logistical challenges of obtaining uniform and equipment having been given one weekend's notice period to report to duty. Some participants received training prior to redeployment and described it as the best that could be provided under the current circumstances. They expressed a level of acceptance of the chain of events due to the unprecedented nature of the situation and the need to act fast as numbers of COVID-19 related admissions snowballed in the first weeks of the pandemic.

> *"So, it was just kinda a bit of thrown in…. It just felt very kind of: You're being redeployed now. Off you go!"* (PT1).

> *"The preparation was 2 days, so there was no there was no preparation"* and *"they were doing the best they can on the information they had"* (PT15).

Theme 3: Adaptive deployment to clinical roles

Subtheme 3.1: Adapting to their new roles and responsibilities

Transitioning from research settings to their clinical roles came with a period of processing and adapting to new environments such as Accident & Emergency, adult ITU, General Medicine, Haematology, Dialysis, Cardiology, Trauma and Respiratory. Some participants questioned the appropriateness of their reassigned roles and whether their skills and expertise were aligned with their new responsibilities. Some felt their level of experience and knowledge could have been more useful in different settings. They reported a lack of proper assessment to confirm their skills and expertise prior to being assigned to the roles. For example, the following participant was a research assistant with a background as a biomedical scientist but was redeployed as a healthcare assistant.

> *"I do not know why I was being redeployed as a health care assistant rather than in the lab"* (PT13).

> *"I think from the very beginning as well, the reason I wasn't given much responsibility is that for the people doing the rota didn't know me well enough "*(PT1).

Most participants were aware of their own competencies and were pragmatic in their approach to their reassigned roles. They acknowledged their limitations arising from being out of direct patient clinical care for a period of time and they might have become "rusty" in certain aspects. Some participants did not find the transition particularly daunting and were able to recall their clinical skills quite easily. They also recognised that their skills and prior clinical experience might also be an asset in their new roles. With time, they settled into their new roles and were able to gain the trust of new colleagues and patients. As confidence in their clinical skills grew and their competencies recognised, some reported being given responsibilities at the appropriate level of their expertise.

> *"I'm not stupid enough, that I don't recognise that I have been de-skilled over the times"* (PT5).

> *"You do have your basics of fundamentals in nursing that you carry wherever you go. It doesn't matter whether you're in intensive care, research, the ward, you always carry that with you. You just have to tweak things a bit to each speciality"* (PT12).

> *"like riding a bike. The technical skills don't go away….it was like going back home, to be honest"* (PT10).

Subtheme 3.2: Challenges of the clinical environment

COVID-19 had an immense impact on the configuration and delivery of clinical services across hospitals within the NHS. Both the physical layout and organisational structures of departments were being modified to accommodate the urgent needs of patients and healthcare demands placed on those services. The majority participants found themselves in unfamiliar settings having to work in new clinical specialities, collaborate with new colleagues

in departments and hospitals that they were not accustomed to and under new operating procedures. Participants described the challenges of working within a team where everyone was new to the department and processes were changing constantly:

> "things just changed quite rapidly, especially…. every two weeks that, you know, the wards might have changed around or something, then the process was different" (PT7).

Infection control measures meant new ways of working and a few participants found the use of PPE posed unique challenges to adapting to these new settings. Wearing PPE for such extended periods of time was physically demanding as well as inhibited communication between colleagues and patients. As experienced health care professionals, all participants were skilled at having difficult conversations and communicating under difficult circumstances. PPE and COVID-19 safety restrictions further hindered effective communication and some participants described the emotional burden due to the lack of face-to-face communication with relatives of dying patients. Despite the emotional challenges, they showed resilience, altruism and perseverance as they grappled with the gravity of the situation and the need to carry on despite the challenges:

> "the main challenge for us was wearing PPE that long, because it really does, it really, really does destroy your skin...PPE is not designed to be worn for five hours… identifying who people were, it's quite hard when all you can see is their eyes" (PT10).

> "I'm a bit hardened to death. I think working on ITU 3 years I was harden. What was awful was the fact that no one could have anyone there. People dying alone or dying on a Zoom call like this, like that was horrible. That was absolutely all I hate. I think that affected me more than anything happened to all. Just the sheer sadness of it" (PT12).

> "if you don't carry on working flat out, they all gonna die really it's pretty bad. I still can't really talk about it properly. You know, I'm feeling tearful. It was brutal" (PT5).

Subtheme 3.3: Coping Mechanisms and Support systems

Working in these new clinical environments came with certain anxieties and worries related to COVID-19 infection as opposed to the redeployment in itself. Some participants recounted developing new coping mechanisms to deal with the psychological stress. They developed routines to minimise the risks of infecting members of their household. They would have showers prior to leaving the workplace and leave their work shoes outside their house. Participants who live alone worried about infecting other people they might come in contact with. They perceived themselves as higher risk or carrier of the virus and felt the need to protect others against potential viral exposure.

> "I was worried about infecting them all. I used to, after the shifts, most of the critical care people, we were fairly obsessed about showering." (PT5).

"I think I was very aware of the fact that I'm the risk…. going for, you know, go for a run. And I would be taking great big like arcs around people like to avoid them." (PT4).

Many participants described being aware of the professional support and strategies put in place by their Trust to promote their well-being. However, all participants when asked, stated they did not access them. They knew how to access those services but did not feel the need for professional support. Instead, they found the support afforded by family, friends and colleagues to be preferable. Some participants also felt motivated by the show of support and solidarity demonstrated by the public and described it as a morale boost during a difficult time.

"the trust done well in trying to support staff is. I personally didn't feel I needed to take that on, but I think if staff need to. And it was available" (PT12).

"My kids and my partner were quite proud of what we did. So, they were really supportive...I think we support each other to clinical team. We all self-supporting… I think I found all the clapping stuff. Absolutely pathetic really, you know, clap for the NHS" (PT5).

"from a wellbeing side of things, obviously there was a lot of emphasis put on staff wellbeing and with the kind of the food and, you know, these lovely gift packages that people were getting and all that kind of stuff really helped. Just to kind of, you know, boost morale at times" (PT7).

Theme 4: Reflections and learnings

Subtheme 4.1: Reintegration to original roles

As the number of COVID-19 cases gradually decreased at the end of the first wave of the pandemic in April 2020, so too did the demands on clinical services. The majority of participants felt they were no longer needed within those clinical areas but mentioned a general reluctance by clinical services to repatriate redeployed staff due to fear of a second wave. As researchers, they recognised the need to return to their research duties and pushed to return to their original research roles. They expressed apprehensions about abandoning their research responsibilities for prolonged periods of time. They described multiple barriers to resuming research activities such as previously well-established research systems and infrastructure were no longer in place due to re-structuring of services during the pandemic response, research patients' reluctance to attend hospital, lack of resources and resistance from the organisation to pursue research activities during the pandemic. Staff harboured fear for the future of clinical research on both personal and organisational levels. They described the halt in research activities across their employing organisation as having far reaching consequences. This affected research delivery, finances and negatively impacting health outcomes for patients. Most of the participants emphasised the need to strike a balance between maintaining clinical services and research activities to find solutions for both COVID and non-COVID related illnesses.

"Managers in ICU were also very reluctant to say that, okay, you are allowed to go back now because they're, of course…, afraid that they're going to get a sudden spike in cases." (PT3).

"at that point in time, the research infrastructure of the Royal London was just decimated" (PT1).

"obviously all those other conditions, if they ever find a cure or a vaccine for COVID-19 and it goes away, these other things are still going to persist…..I think it's important that we try to get research and it's non COVID-19 related back up and running in the not too distant future" (PT7).

Subtheme 4.2: Sense of achievement

Despite the initial fear and anxieties brought on by the pandemic and the apprehension of redeployment at the outset, many participants described a sense of achievement and professional pride in their contribution to the pandemic effort. They acknowledged their individual accomplishments and felt a sense of fulfilment in overcoming difficult circumstances. Most of the participants described teamwork, camaraderie and expressed gratitude for the support and contributions of colleagues. Despite the fears of a potential second wave, they identified numerous positive aspects of their shared experiences. They found the teamwork across the healthcare system inspiring. They expressed faith in their fellow healthcare professionals and the ability of the health system to be dynamic and successfully rise to future challenge.

"I think the best part was probably the first time I think I've felt probably proud to be, to do nursing." (PT2),

"I feel privileged. I had the chance to do the right thing" (PT5)

"It was exhausting but fulfilling" (PT9).

"the way that a hulking, great organisation like the NHS can just change? They say we're not dynamic, we can be dynamic, and we need to be dynamic and it's inspiring" (PT4).

DISCUSSION

This study focuses on a specialist group of healthcare professionals (HCP) in order to explore their experiences of redeployment to frontline clinical duties during the early months of the COVID-19 pandemic in 2020, in the UK. This study explores the transferability of the clinical skills and expertise of this group, the challenges to re-familiarise themselves with clinical settings, their perception of the readiness of the clinical services to support them and the impact of this sudden professional transition under challenging circumstances.

The psychological impact of COVID-19 on frontline healthcare workers is coming increasingly to light through studies recently conducted (Saleem et al, 2020, Sun et al, 2020, Tan et al, 2020 and Que et al, 2020). This study showed due to their redeployment, research HCPs were exposed to similar or higher levels of uncertainty and psychological stressors during the pandemic compared to their clinically based counterparts. Their initial emotional response of fear and anxiety was related to loss of control and lack of information. Similar findings have been shown to be common amongst health workers during previous outbreaks of highly infectious diseases such as Severe Acute Respiratory Syndrome (SARS) (Chung et al. 2005) and Middle-East Respiratory Syndrome (MERS) (Kim, 2018). Our findings suggest that research HCPs faced added stress due to recalibration to clinical settings along with concerns relating to performance, peer expectations and adapting to unfamiliar working patterns and environments. The participants in our study acknowledged the need for a period of readjustment regardless of length of time out of direct clinical practice. The clinical speciality seemed to be an important factor affecting the ease of the transition. Understandably those redeployed to clinical areas within the same speciality as their research roles made an easier transition compared to those redeployed to different specialities or hospitals.

Flexibility and resilience

Acclimatising to the new clinical settings, regaining confidence in their skills draws parallel to a Spanish study of newly qualified nurses working in emergency departments during the pandemic (García-Martín, 2020). It was a qualitative study of 16 nurses and highlighted the pressure of learning on the job and confidence to put prior knowledge and skills into practice in the absence of formal support structure. Unlike the novice practitioner, the research HCP is experienced, proactive in reclaiming control and recognised their self-worth and strengths in the current situation. They demonstrated resilience in overcoming barriers to perform effectively in their new roles. Resilience is a quality previously linked with the ability to maintain a sense of control during challenging times in order to move forward (Jackson et al, 2007). Research HCP were dynamic, proactive and took initiative in preparing and seeking redeployment. These have been shown to be key personal traits of resilience (Matheson et al, 2016). As clinical researchers, the participants are responsible for the care of their research patients as well as working within specific timeframes and set targets to meet their research objectives. Some researchers are used to pragmatically assessing problems, planning, and re-prioritising during their daily work. These skills may have facilitated their adjustments to the demands of the redeployment whether these were above their comfort zone or below the level of their expertise. This highlights the adaptability of research HCPs who possess valuable and transferrable skills which can be further enhanced with the appropriate period of familiarisation, orientation and induction to new work environments. Faderani et al (2020),

conducted a survey of 172 redeployed doctors across three NHS trusts and showed that less than half felt well supported by either hospital administration or supervisors. A survey of 145 redeployed ophthalmologists in the UK showed the link between increased anxiety levels and lack of support and training (Lim at al, 2020). These were reflected in our findings with participants valuing any induction provided even when delivered under rushed and difficult circumstances. Training and adequate support were the main facilitators of a seamless redeployment and promote staff wellbeing during COVID-19.

Strikingly, none of the participants sought psychological support or counselling despite being aware of wellness services being provided by the trust and how to access these. There may be several reasons for this finding. Participants reported not to have felt the need for counselling, instead choosing the informal support structure of peers, family and friends, instead. These informal support structures can be effective and sometimes preferred by healthcare professionals. Professional camaraderie, shared experiences and the sense of being in the "same boat" sharing the same concerns almost act like a support group of peers. Sun et al (2020) interviewed 20 nurses caring for COVID-19 patients in Henan, China and identified peer support as a major mediator of stress. A cross-sectional online survey of New York healthcare workers emphasised the importance of allowing individuals to choose their own coping strategy (Shechter et al 2020). Another reason for not using the wellbeing support could be related to the timing of the interviews which were conducted between July and September at the tail end of the first wave of COVID-19. The interviews might have been conducted too soon following the experience and participants might not have fully digested their experience and feelings about it. There is also the possibility of response bias and participants modified their answers based on what they think the researcher is expecting. This is referred to as social desirability bias (Gupta & Thornton,2002). Participants were reassured of anonymity and confidentiality during the conduct of the study as a measure to counteract potential response bias (Nederhof, 1985). This finding also brings into question, when is the best time to provide psychological support? Following the SARS pandemic, surveys conducted in Toronto, showed chronically heightened stress levels in HCPs (McAlonan et al, 2007) whilst another survey, three years after SARS revealed that 40% of staff still experienced psychological symptoms (Wu et al, 2009). Employers should appreciate the importance of both the immediate and long-term psychological effects and ensure both short-term and long-term support is available.

Sense of duty and Professional identity

Unlike other studies, investigating the experiences of nurses caring for COVID-19 patients (Galehdar et al, 2020 and Liu et al, 2020), fear of personal safety and infection were not key concerns raised by research HCPs. Several studies have demonstrated that the fear of contracting COVID-19 was driven by the high rate of contagion in the absence of a vaccine and reported shortage of PPE (Nyashanu et al 2020, Galehdar et al,2020 and Shechter et al, 2020). In contrast, the participants in our study were more worried about the impact of COVID-19 on their loved ones, future career and employment rather than concerns on availability of PPE. The shortage of PPE was well publicised, and the disconnect between media reported PPE issues and our participants reported experiences of adequate availability of PPE, can be due to several factors. It may be linked to effective management of both information and supply of PPE by the leaders of the organisation or timing of redeployment.

The peak of the first wave of COVID-19 is estimated to have been the 8th of April (London School of Tropical Medicine, 2020) whilst most staff were deployed at the end of March, at the time of national lockdown, when clearer PPE national guidance was made available (GOV.UK, 2020) and issues with PPE supply chain might have been resolving.

The participants and their willingness to work under difficult circumstances can also be linked to their personal resilience as well as their sense of duty and professional identity. Sense of duty can be considered as having four components: professional, social, contractual and personal obligations. All four are central to the HCP willingness to work in difficult and high-risk environments. Evidence from survey studies on the professional obligation demonstrated its prevalence amongst HCP during past and current pandemics (Damery et al, 2010 and Haghgoshayie et al, 2020). Our results reflect those findings with some participants indicating a pronounced personal sense of duty and responsibility to help.

The participants in this study felt duty bound to be involved despite their initial apprehension of being "rusty". This sense of duty, professionalism, ethical, social and moral obligation led to healthcare workers' willingness to work in challenging circumstances during both the influenza pandemic (Ives et al, 2009) and COVID-19 (Sun et al,2020, Liu et al, 2020). According to studies during the SARS and COVID-19 pandemics, this sense of duty created a morale dichotomy between the professional commitment and personal responsibilities to their families (Holroyd & McNaught, 2008 and Fernandez et al, 2020). In contrast, in our study, only a minority of research HCPs described this dilemma with the majority describing the option of doing nothing as detrimental to their mental wellbeing. This might be explained by the demographics of the participants with only four participants reported having dependents and caring responsibilities. However, research HCP's still faced a moral dilemma, which is that of their duty of care towards their research patients and duty to help with the pandemic response. Patients involved in clinical research are often undergoing experimental treatment and require very close safety surveillance from their researchers. Research HCP's raised concerns about their ethical and professional duty of care towards their research patients and the service. This highlights the need for adequate resource planning when responding to a pandemic. The need to divert resources and workforce to the COVID-19 front line is unequivocal; however, a balance must be struck. COVID-19 has had and continues to have a profound impact on other services such as heart attack services (Gluckman et al, 2020 and Mafham et al 2020) and delays in cancer treatment leading to increased mortality rate in those patient populations (Sud et al, 2020 and Papautsky & Hamlish, 2020). Similarly, contingency plans are required to ensure continuity of clinical research activities for both the organisation and wider patient benefits.

The findings demonstrated professional pride and achievement. This corroborates with results of other studies on the perception of the call of duty during pandemics promoting a sense of professional identity along with increased appreciation of the value and contribution of their profession to the cause (Li et al 2020 and Sun et al, 2020). Some participants described a personal, social responsibility to help and altruism in the face of adversity that is beyond professional ethical obligations which is intrinsically linked to healthcare professional's sense of worth and doing good.

LIMITATIONS

Although the participants described similar experiences, the majority were nurses and a larger scale study with more balanced representation from different professional backgrounds will enhance breadth and depth of the results as well as generalisability and transferability of the findings. This was a purely qualitative study, and a mixed methods design could provide more perspectives by incorporating surveys and questionnaires. The study was one directional and views from the clinical department would bring different perspectives to the management of staff redeployment. Due to the time constraints and increased clinical demands on the participants, results of the study were not returned to participants.

FURTHER RESEARCH

Findings from the current study suggests that further research from the perspectives of the clinical services or a combined approach to gain deeper understanding of the facilitators and barriers to creating a truly flexible workforce that can seamlessly transitioned from clinical patient facing to non-patient facing duties and vice-versa. Another study exploring the experiences from the viewpoint of managers and hospital leaders would capture different perspectives and better inform future personnel management and workforce planning.

CONCLUSION

The COVID-19 pandemic has brought clinical research and healthcare professionals delivering research in the spotlight. This study provides a unique and deeper insight into the experiences of research personnel redeployed as part of the pandemic, in the UK. The findings of this study show evidence of research HCPs as a group of resilient and highly adaptable professionals equipped with core transferable skills. They can provide effective clinical support during the reactive phase of the pandemic to meet healthcare needs but also play a key role in the pro-active phase to deliver clinical research crucial in learning and finding solutions for emerging infectious diseases such as COVID-19. With the appropriate support and induction, they are an under-recognised resource, valuable in staff redeployment strategy during future emergency workforce mobilisation. However careful planning is important from organisations as to when, where and how they are deployed to maintain the balance between meeting clinical demands and research and development activities pertinent to combat the pandemic.

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Table 1: Participants Characteristics

Participants Characteristics Participants N=15		
Profession		
Nurse	n=10	
Doctor	n=3	
Allied Health Professional	n=2	
Professional Grade*		
Band 5	n=1	
Band 6	n=7	
Band 7	n=3	
Band 8	n=1	
Specialist Registrar	n=3	
Gender		
Male	n=5	
Female	n=10	
Caring Responsibility		
Yes	n=4	
No	n=11	
Length of experience		
	Average	Range
Professional Experience (Years)	11.30	8 to 25
Research Experience (years)	2.87	1 to 10
Redeployment period (weeks)	12.40	6 to 24
Age of Participants		
Minimum Age	29	
Maximum Age	55	
Average	35.4	
Research Speciality	**Redeployment Speciality**	
Trauma and Emergency	Emergency Department	
Paediatrics	Adult Critical Care	
Critical Care	Trauma Ward	
Renal	Respiratory Ward	
Cardiology	Dialysis Unit	
Haematology	Haematology	
Hepatology	Cardiology	

- *Banding is the National Health Service, UK Agenda for Change system for equal pay of work for equal value for non-medical and dental roles. The banding depends on role, years of experience, qualification and seniority and management responsibility. Newly qualified nurses start at band 5 level and Band 8 is matron level.*

Table 2: Key Themes

Main Themes	Subthemes
1. Initial response to the pandemic	Subtheme 1.1: Anxieties due to lack of knowledge of the disease and its impact Subtheme 1.2: Concerns for others
2. Mobilisation for clinical redeployment	Subtheme 2.1: Motivations for seeking voluntary redeployment Subtheme2.2: Perceived professional challenges due to redeployment Subtheme 2.3: Personal safety and fear of illness Subtheme 2.4: Organisation and preparation for redeployment
3. Adaptive deployment to clinical roles	Subtheme 3.1: Adapting to their new roles and responsibilities Subtheme 3.2: Challenges of the clinical environment Subtheme 3.3: Coping mechanisms and support systems
4.Reflections and Learnings	Subtheme 4. 1: Reintegration to original roles Subtheme 4.2: Sense of achievement