SAGE Open Nursing
Volume 10: 1–14
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DOI: 10.1177/23779608241262143
journals.sagepub.com/home/son

Redeployment Among Primary Care Nurses During the COVID-19 Pandemic: A Qualitative Study

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Abstract

Introduction: Throughout the COVID-19 pandemic, primary care nurses were often redeployed to areas outside of primary care to mitigate staffing shortages. Despite this, there is a scarcity of literature describing their perceptions of and experiences with redeployment during the pandemic.

Objectives: This paper aims to: 1) describe the perspectives of primary care nurses with respect to redeployment, 2) discuss the opportunities/challenges associated with redeployment of primary care nurses, and 3) examine the nature (e.g., settings, activities) of redeployment by primary care nurses during the COVID-19 pandemic.

Methods: In this qualitative study, semi-structured interviews were conducted with primary care nurses (i.e., Nurse Practitioners, Registered Nurses, and Licensed/Registered Practical Nurses), from four regions in Canada. These include the Interior, Island, and Vancouver Coastal Health regions in British Columbia; Ontario Health West region in Ontario; the province of Nova Scotia; and the province of Newfoundland and Labrador. Data related to redeployment were analyzed thematically.

Results: Three overarching themes related to redeployment during the COVID-19 pandemic were identified: (1) Call to redeployment, (2) Redeployment as an opportunity/challenge, and (3) Scope of practice during redeployment. Primary care nurses across all regulatory designations reported variation in the process of redeployment within their jurisdiction (e.g., communication, policies/legislation), different opportunities and challenges that resulted from redeployment (e.g., scheduling flexibility, workload implications), and scope of practice implications (e.g., perceived threat to nursing license). The majority of nurses discussed experiences with redeployment being voluntary in nature, rather than mandated.

Conclusions: Redeployment is a useful workforce strategy during public health emergencies; however, it requires a structured process and a decision-making approach that explicitly involves healthcare providers affected by redeployment. Primary

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care nurses ought only to be redeployed after other options are considered and arrangements made for the care of patients in their original practice area.

Keywords
primary care < practice, nurse, pandemic, COVID-19, qualitative research < research

Received 13 December 2023; Revised 13 May 2024; accepted 20 May 2024

Introduction

In 2020, the World Health Organization classified COVID-19 as a global pandemic (World Health Organization, 2020). The COVID-19 pandemic placed pressure on already vulnerable healthcare systems (Kissel et al., 2023), and worsened health workforce challenges, including pre-existing nursing shortages globally (Catton, 2022). Redeployment, defined as reassigning personnel to a different location or retraining personnel for a different task (Panda et al., 2021), was a strategy used during the pandemic to help address these workforce challenges, and is an approach that has been used in previous pandemics such as H1N1 influenza and severe acute respiratory syndrome (Considine et al., 2011; Fitzgerald et al., 2012) to meet vital workforce demands. Despite this, little attention has been given to the specific experiences and impacts of redeployment within the nursing workforce (Ballantyne & Achour, 2022). In addition, existing pandemic-related literature does not adequately incorporate the unique experiences and perspectives of primary care nurses who often played a leading role in facilitating access to healthcare during the COVID-19 pandemic.

Primary care is the initial point-of-contact within the healthcare system and includes comprehensive, person-focused care over the lifespan while coordinating patient services across health services/departments (Starfield, 2009; World Health Organization, 2023). Nurses working in primary care were impacted by the COVID-19 pandemic in many ways, including redeployment. Redeployment during the pandemic resulted in the assignment of healthcare providers, including nurses, to different sites and areas specific to the pandemic response (Kennedy et al., 2022), increased responsibility for providers, and the request for retired providers to temporarily return to the workforce (Martinez et al., 2022). In this paper, redeployment includes nurses working in primary care settings who were both mandated for redeployment and those who volunteered for redeployment in a variety of areas outside of their regular work location. Within Canada, the COVID-19 pandemic created challenges with the supply and distribution of the nursing workforce, and surge capacity initiatives were implemented. Regional legislation/ministerial directives were passed in Ontario (ON), Quebec, and Nova Scotia (NS) to allow for surge strategies to be implemented. These strategies included changing work schedules, cancelling leaves of absences, and utilizing the military (NS Government, 2020; Williams et al., 2020).

In Canada, nurses in primary care include three self-regulated professions: Nurse Practitioners (NPs), Registered Nurses (RNs), and Licensed Practical Nurses (LPNs) (known as Registered Practical Nurses [RPNs] in ON, Canada). NPs are advanced practice nurses with a Master's degree who are able to incorporate skills associated with nursing/medicine in order to assess patients, diagnose illnesses, prescribe medications, interpret tests, conduct medical procedures, and treat various diseases autonomously (Canadian Nurses Association [CNA], 2023; International Council of Nurses [ICN], 2020; Lukewich et al., 2018). RNs are baccalaureate prepared (except in the province of Quebec which has both baccalaureate and diploma preparation) (Almost, 2021) and practice across various domains, including administration, clinical care, education, policy, and research (CNA, 2015). They provide leadership in a wide range of practice situations, and administer, coordinate, and provide clinical care across the lifespan (CNA, 2015). In contrast, LPNs are diploma prepared (Almost, 2021) and provide routine care to stable patients (British Columbia Ministry of Health, 2019) and consult with other providers when necessary (Canadian Council for Practical Nurse Regulators, 2021). Although primary care nurses played a key role in the COVID-19 pandemic response (Couper et al., 2022), and their expertise was required across different healthcare settings, limited research has focused on their redeployment (Ballantyne & Achour, 2022; Gamble et al., 2022).

Literature Review

Areas Affected by Redeployment

Outbreaks of infectious diseases create the need for increased capacity and challenge all areas of the healthcare system, including primary care (Gupta et al., 2021). This was observed during the COVID-19 pandemic when an increased need for healthcare providers was coupled with a decreasing number of available workers (Gupta et al., 2021). As a result, primary care nurses were often redeployed to other crucial areas of the healthcare system (Ballantyne & Achour, 2022). The purpose of redeployment during the COVID-19 pandemic was to mitigate staffing shortages that occurred

in combination with an increased number of acutely ill patients, and to maintain safe patient care (Ballantyne & Achour, 2022; Kennedy et al., 2022). As such, most redeployment was to acute and critical care settings (e.g., intensive care units, emergency departments, medical/surgical units) as these areas saw the largest nursing staffing challenges (Keeley et al., 2020; Kissel et al., 2023; Mhawish & Rasheed, 2022, Murphy et al., 2021). However, nurses were also redeployed to other areas, such as long-term care (Bourne, 2021; College of Nurses of Ontario, 2023) and designated COVID-19 units (Kennedy et al., 2022). In some cases, primary care nurses were redeployed from their regular role to other areas of primary care to support pandemic activities such as administering COVID-19 vaccinations, providing virtual care services, educating patients and the public, and collaborating with community groups to address health equity gaps. Nurses redeployed to other areas of primary care helped to maintain capacity as gaps in primary care delivery, resulting from the COVID-19 pandemic, were identified (Duong, 2022).

Khalil-Khan and Khan (2023) conducted a scoping review focused on the impact of COVID-19 on primary care. The review highlighted the effects that the pandemic had on service redesign (e.g., rapid implementation of virtual care), chronic disease care (e.g., difficulties in accessing in-person care), the well-being of healthcare providers (e.g., depleted workforce), and the future of primary care post-pandemic (e.g., benefits/limitations of new digital platforms). Given the essential nature of primary care within the larger healthcare system (Khalil-Khan & Khan, 2023), the lack of research specifically focused on the redeployment of primary care nurses is concerning. There is a need to understand the diverse experiences of primary care nurses concerning redeployment during the pandemic, specifically their contributions across the health system and the challenges/opportunities they experienced (Hakmaoui et al., 2024).

Therefore, the objectives of this paper are to: (1) describe the perspectives and experiences of primary care nurses (NPs, RNs, and LPNs/RPNs) with respect to redeployment, (2) discuss the opportunities and challenges associated with redeployment of primary care nurses, and (3) examine the nature (e.g., settings, activities) of redeployment by primary care nurses during the COVID-19 pandemic.

Methodology

Design

This qualitative study was part of a larger study of four regions in Canada, namely, the Interior, Island, and Vancouver Coastal Health regions in British Columbia (BC); Ontario Health West region in ON; the province of NS; and the province of Newfoundland and Labrador (NL). The objectives of the larger study (Mathews et al., 2021) were to describe the roles of primary care nurses throughout the pandemic and the facilitators and barriers that nurses faced in enacting these roles. A qualitative descriptive approach was chosen as it allowed for straightforward descriptions of a complex issue relevant to policy-makers, administrators, and primary care providers (Sandelowski, 2000).

Research Question

What were primary care nurses' experiences and perceptions of redeployment during the COVID-19 pandemic?

Qualitative Interviews

The Principal Investigators developed a semi-structured interview guide (see Supplementary Material) which was pre-tested by members of the broader research team. This data collection method aligns with the qualitative descriptive approach used (Sandelowski, 2000) and allowed interviewers the flexibility to probe for additional details if salient topics arose within the interviews. Minor changes were made to the interview guide after pre-testing (e.g., modified questions on the acute care crisis phase to reflect the fact that not all regions experienced this pandemic phase). At the beginning of the interview, participants were asked demographic questions (see Table 1). In the initial interviews, no direct questions were asked about redeployment. However, because the topic of redeployment arose frequently in early interviews, particularly when discussing testing/assessment and vaccination, interviewers inquired about redeployment with each participant thereafter to obtain more details about redeployment experiences (see Supplementary Material).

Interviews took place between May 2022 and January 2023, and ranged between 24 min and 125 min (mean = 58 min). Interviews were conducted by experienced interviewers, via video conference (Zoom Video Communications Inc.) or phone, depending on participant preference. Interviews were recorded with the participant's permission, transcribed verbatim, and checked for accuracy by a second member of the research team.

Study Sample and Recruitment

A maximum variation sampling approach (Palinkas et al., 2015) was applied in order to obtain multiple perspectives across a wide range of characteristics including gender, primary care settings, and urban/rural regions. Specifically, participants were recruited through health and nursing organizations that sent study information by email, social media posts to primary care nurses (e.g., Canadian Family Practice Nurses Association), and research team members who sent invitations via email or facsimile to NPs in independent practice and members of interdisciplinary primary care teams. Recruitment materials were also shared through the

Table 1. Demographic Characteristics of Study Participants.

	ON N = 27	NS N = 20	BC N = 13	NL N = 16	Total N = 76
Gender, n (%)					
Man or non-binary	1 (3.7)	1 (5.0)	2 (15.4)	0 (0)	4 (5.3)
Woman	26 (96.3)	19 (95.0)	11 (84.6)	16 (100)	72 (94.7)
Nurse type, n (%)					
NP	9 (33.3)	8 (40.0)	2 (15.4)	5 (31.3)	24 (31.6)
RN	9 (33.3)	11 (55.0)	11 (84.6)	6 (37.5)	37 (48.7)
LPN/RPN	9 (33.3)	1 (5.0)	0 (0)	5 (31.3)	15 (19.7)
Community size, n (%)					
Rural	10 (37.0)	11 (55.0)	1 (7.7)	6 (37.5)	28 (36.8)
Small urban	5 (18.5)	6 (30.0)	3 (23.1)	0 (0)	14 (18.4)
Urban	12 (44.4)	3 (15.0)	9 (69.2)	9 (56.3)	33 (43.4)
Mixed	0 (0)	0 (0)	0 (0)	1 (6.3)	1 (1.3)
Years in nursing practice, mean (SD)	13.6 (10.1)	15.6 (11.3)	17.7 (11.2)	14.0 (9.8)	14.9 (10.3)
Redeployed, n (%)					
No - not called/asked	19 (70.4)	9 (45.0)	4 (30.8)	9 (56.3)	41 (53.9)
Yes - mandated	2 (7.4)	2 (10.0)	2 (15.4)	6 (37.5)	12 (15.8)
Yes - volunteered	6 (22.2)	9 (45.0)	7 (53.8)	1 (6.3)	23 (30.3)

Note. ON = Ontario; NS = Nova Scotia; BC = British Columbia; NL = Newfoundland & Labrador; NP = nurse practitioner; RN = registered nurse; LPN = licensed practical nurse; RPN = registered practical nurse; SD = standard deviation. *Note.* Due to small numbers, we grouped men and non-binary people together to protect participant confidentiality.

stakeholder networks of research team members. Once eligible participants completed the interview, they received a $30.00 honorarium. They were asked if they could recommend anyone else who met the inclusion criteria (i.e., snowball sampling [Kirchherr & Charles, 2018]) (in regions where permitted by ethics boards) and if so, these individuals were contacted for potential inclusion in the study. Where snowball sampling was not permitted by the ethics board (i.e., Western University in ON), participants were asked at the end of the interview to share the study information with any colleagues who would be eligible and have them reach out to the study team if interested. If contacted, the study team followed up with the interested colleague. Recruitment continued until saturation was reached; that is, until the research team determined that gathering additional data revealed no further insights (Bryant & Charmaz, 2007; Creswell, 2014). This determination was supplemented by post-interview debriefings with the team and review of field notes.

To be included in the study, participants had to have been practicing in primary care at some point during the pandemic and must have been licensed to practice at the time of the interview. Nurses who did not work in primary care settings at any point during the COVID-19 pandemic, were not currently licensed, or who were unable to participate in an English interview were excluded.

Data Analysis

Experienced researchers from each of the four regions where data collection occurred independently read and coded selected transcripts. After initial coding was complete, the team met to compare coding and a cross-provincial coding framework was developed. When disagreements occurred, decisions were made through consensus and documented. Meetings occurred every one to two weeks until no new codes were identified. This allowed for the development of a robust harmonized coding template (Berg, 1995; Guest et al., 2012). Once the data were coded, the research team met occasionally to discuss how to code certain quotations related to broader themes. This process was successfully used by several team members in a previous related study focused on perspectives of family physicians during the COVID-19 pandemic (Mathews et al., 2023b).

Positionality and Study Rigor

The research team included individuals with expertise in mixed methods and health workforce research across a variety of professions and health sectors, including nursing, family medicine, and public health. To enhance rigor and demonstrate trustworthiness, an audit trail (Carcary, 2009) was maintained for interview recordings, transcriptions, recruitment documents, coded transcripts, and analysis. NVivo Version 12 software (QSR International) was used to assist in the coding process. Member checking occurred during the interviews (i.e., participants were asked to clarify responses that were unclear and/or data was summarized to ensure completeness and accuracy). The member checking process helped to ensure that the interview data reflected the participants' experiences. Investigator triangulation (Patton, 1999) occurred during coding, analysis, and

manuscript preparation. Additionally, thick description is provided in the presentation of results, including detailed accounts of the research methodology, contextual information, and multiple quotations from participants, to ensure trustworthiness. Credibility was enhanced by using experienced researchers to mentor trainees who participated in both data collection and analysis. The research team discussed themes in the data to balance different perspectives and the diverse backgrounds of team members.

Ethical Considerations

This study has received ethical approval from the following review boards: Research Ethics Board of British Columbia (File: H20-02998), Health Research Ethics Board of Newfoundland and Labrador (File: 20222815), Nova Scotia Health Authority Research Ethics Board (File: 1027959), and the Western University Research Ethics Board (File: 120519). Participants were sent study information and a letter of consent by email prior to being interviewed, and informed consent was obtained verbally by the interviewer prior to initiating any interviews. Participant confidentiality was maintained by assigning each interview a code and removing identifying information in the reporting of the results. Additionally, when reporting demographic variables, if there were very few individuals in a specific category (i.e., gender) provincial numbers were grouped together to protect anonymity of participants.

Results

Researchers interviewed a total of 76 primary care nurses across the four study regions (24 NPs; 37 RNs; 15 LPNs/RPNs). The study sample consisted mainly of women (n = 72; 94.7%), represented different geographical areas, and experiences with redeployment during the pandemic. A total of 35 participants reported experiencing redeployment during the pandemic, whereby twelve participants (15.8%) were mandated for redeployment and twenty-three (30.3%) indicated that they volunteered. The remaining participants were either not asked to redeploy or, upon responding to a request for redeployment, did not receive a return call (Table 1).

Three overarching themes related to redeployment during the pandemic were identified. The themes include: (1) Call to redeployment, (2) Redeployment as an opportunity/challenge, and (3) Scope of practice during redeployment.

Call to Redeployment

Primary care nurses had a wide range of experiences related to redeployment processes. Experiences varied across the settings that nurses were invited/mandated to redeploy, in the methods of communication surrounding the call to redeployment, and in the policies and legislation guiding nursing workforce redeployment. The specific locations in which participants were redeployed are presented in Table 2. Many calls for redeployment were delivered through email communication and electronic mailing lists asking for volunteers, although occasionally the requests to redeploy occurred face-to-face via the employer. The communication for those mandated for redeployment was targeted and formal (e.g., direct communication from a supervisor).

Table 2. Locations of Redeployment.

	ON	NS	BC	NL
Long-term care/assisted living homes	✓	✓	✓	✓
Public health (e.g., contact tracing, vaccination clinics, COVID-19 assessment centers)	✓	✓	✓	✓
Hospitals	✓	✓	✓	✓
Emergency/rapid response teams		✓	✓	✓
Correctional centers	✓			
Remote COVID-19 patient monitoring teams		✓		✓
First Nations community clinic		✓		
Outreach teams for at-risk groups (e.g., shelters, COVID-19 hotels)			✓	
Respiratory/influenza-like illness centers				✓
Clinic for unattached patients		✓		
Information management and information technology (IMIT) work			✓	

Note. ON = Ontario; NS = Nova Scotia; BC = British Columbia; NL = Newfoundland & Labrador.

Communication Processes and Expectations. Communication played a key role in the call to redeployment. Oftentimes nurses were asked if they would volunteer to be redeployed. Nurses recalled being approached frequently throughout the pandemic to fulfill voluntary shifts outside of their regular primary care positions. One RN described how emails were used throughout this communication process:

> We were constantly getting emails asking for nurses to volunteer to do … other jobs for … two to four weeks. You would do something else and then you could go back and do your job and then kind of redeploy if need be. (NS06, RN)

This RN volunteered for redeployment and worked in areas such as vaccine clinics and contact tracing sites. Another nurse, who was not redeployed, discussed receiving multiple communication requests to volunteer for redeployment:

> Probably through this January until … almost the end of April [2022], I probably got an email a week asking for volunteers to do shifts in [different regions]. Pretty much anybody anywhere, they would take, just bodies. So, they were emailing really quite frequently for volunteers. (NS01, NP)

In some situations, community size influenced the call for redeployment. In larger urban areas, nurses were often asked to put their name on a sign-up list if they were willing to be redeployed. However, in smaller communities where many nurses knew each other, more informal communication occurred:

> It's a small town. The manager in the intensive care unit knew where to find me and the manager knew that I would be willing to say 'yes' for a short, six weeks kind of a thing. I was kind of voluntold. (BC03, RN)

While a few nurses reported being mandated to redeploy, others volunteered but were never called upon: "A lot of us, primary healthcare nurses, definitely offered [to redeploy] and some of them heard back but a lot of us didn't" (NS01, RN). This suggests that these nurses were not needed for redeployment or there were gaps in the process of responding to nurses who were volunteering to redeploy, resulting in the underutilization of some primary care nurses who were willing to be redeployed.

Although NPs received communications related to redeployment, many believed they should not be redeployed as they were vital to maintaining primary care services: "I was sort of on standby because I'm a NP. The need for primary care in NS is pretty bad, so we were the last group to be tapped, I think" (NS02, NP). A second NP noted they were "pretty low on the allocation list" (NS01, NP) as they were more difficult to replace (compared to their RN colleagues). However, it was noted that nurses in certain roles could be redeployed more easily, as there was adequate staff to backfill positions: "The [focused primary care clinic] has more than one staff [and] other staff can do what she [RN] was doing, therefore she can be moved" (NS01, NP).

Some nurses reported being redeployed without receiving any communication regarding the location and what was expected from them. One LPN who experienced mandatory redeployment stated: "So, I really didn't have a job description … It was just, 'where we need you, we need you', and I just went with the flow" (NL07, LPN). An RN, who experienced mandatory redeployment noted: "Essentially we were told that we could be scheduled into any clinics and then we just waited for schedules to go up" (ON08, RN). Redeployment without sufficient communication led one nurse to comment: "It kind of just made it chaotic. I had no sort of time frame; I would plan for something and then I'd have to change it two minutes later …" (NS08, RN). This nurse was redeployed part-time during regular working hours while also expected to fulfill her responsibilities within her regular job. In addition, this nurse did voluntary overtime in the emergency department.

One nurse who volunteered for redeployment suggested nurse involvement in decision-making could have improved communication and daily operations during the pandemic:

> But I think it helps to have that lens of somebody who does the work to know what's needed … And so, it really does a disservice to the [patients] when you're not really listening to the people who are doing the actual work and not getting input from them. (BC10, RN)

Policies and Legislation. Policies and legislation had varying impacts on primary care nurses during the redeployment process. Nurses mentioned that policies, designed to prevent cross-contamination between sites, prevented them from working in more than one setting, and limited redeployment opportunities. An RN who was mandated for redeployment and worked in a mass testing/assessment center stated: "I did it for about a month until they decided that we had to sign a single site order [agreement to work in single site to prevent cross-contamination]" (BC07, RN).

Some nurses offered to be redeployed voluntarily in addition to their usual work, but the organizational policies in place regarding minimum availability and scheduling prevented them from doing so: "I said, 'Well, I can commit to weekends, I can do the evening,' and they said, 'No, you have to commit to three days a week.' And I wish there had been different rules" (ON11, RPN).

In some situations, NPs were not able to be redeployed due to policies related to funding models. One salaried NP, who worked in a community health center described this situation about being asked to work at a COVID-19 assessment center, stating:

> We found we weren't actually able to help out for a variety of different reasons, but one of them was actually funding models. Our NPs within the clinic are primary care providers here, but we're salaried. We're salaried by our organizations to provide primary care to our patients and there was no remuneration for providing any sort of care outside of the organization. Family docs who could bill for COVID assessments or later on for immunizations, that structure didn't exist for NPs. (ON07, NP)

Similarly, administrative processes were time-consuming and unclear, and may have deterred some nurses from volunteering for redeployment. An NP noted: "There were also administrative hurdles. I had no interest in jumping the hoops that had to be jumped so I just didn't bother" (NS01, NP). These hurdles related to receiving payment for working overtime and completing paperwork required for redeployment.

Redeployment as an Opportunity/Challenge

Some primary care nurses viewed redeployment as a professional opportunity. Many nurses felt "really happy to jump in and help" (BC04, RN), and were doing so for the widespread benefit it would have on the population, not for personal gain: "I'm not in it for like, a hero kind of status, but just so … I

made a difference, or I helped a bit or whatever. I did contribute as much as I could" (NS01, RN). This nurse volunteered to be redeployed but was not contacted. When nurses were asked to help with various pandemic-related programs outside of their normal responsibilities, many were eager to do so: "You know I got asked to go, and I … was very grateful to help out with the COVID remote monitoring program. It's something I really wanted to do" (NL14, NP). Some even took it upon themselves to advocate for redeployment to areas of need, such as vaccine clinics, independently responding to workforce challenges:

> I went and said, 'I really feel really passionate about vaccination, and I really feel this is the way to get us out of this mess. So, I want to do it. So, I'm willing to do it. Can you spare me?' … So, I kind of redeployed myself. (NS06, NP)

Nurses felt that there were financial benefits and flexibility with redeployment scheduling that made it more appealing and achievable. In certain areas, they could work shifts on the weekends (in addition to their regular hours) "which was kind of nice and kind of an incentive to pick up extra shifts" (ON21, RPN). Due to the heightened need for individuals in certain departments/sites, nurses could essentially choose their preferred shifts: "I was a bit of a princess about it, I'll be honest. I said 'well, I don't want to do nights and I don't want to do weekends' and they were able to accommodate me …" (BC03, RN).

In contrast to those nurses who viewed redeployment as an opportunity, some perceived it as a challenge. Notably, many nurses perceived that redeployment had the potential to impact their primary care patients negatively and leave them without a provider if nurses chose or were asked to work elsewhere: "If I was deployed, I had … 800 patients who would have no provider" (NS02, NP). They believed that without sustaining primary care services, their patients were "… going to be the ones that end up in the [emergency department] with something simple that could have been seen in primary care" (ON07, NP). Due to the nature of the COVID-19 crisis, some nurses believed that primary care services were disregarded in order for nurses to attend to acute, critically ill patients: "Those [intensive care unit] shifts had to take priority over my primary care shifts. And unfortunately, it's just the way it is, right?" (BC03, RN). In certain primary care settings, it was clear that nurses "were needed in primary healthcare … and there was never a threat of … being moved" (NS07, RN).

Another challenge associated with redeployment was the impact it had on primary care nurses' workloads. An RN stated, "who's going to do my work if I'm not in the office?" (ON19, RPN), indicating that work in one area would be left undone if they were redeployed to another department/site. As well, one nurse who was not redeployed highlighted the "absolutely unmanageable workload" (NL01, RN) left behind when colleagues were redeployed, which negatively impacted their work environment. Others opted not to be redeployed when their leadership team recognized the negative impacts redeployment would have had on their team. "They [leadership team] actually specifically worked not to have us redeployed … our team is too small and … having one person redeployed would have just absolutely crippled us" (ON24, NP).

Redeployment often involved the addition of shifts to an already busy work schedule. Some nurses felt overburdened with the demand to work across various locations while maintaining a work-life balance. For instance, an RN in ON stated:

> There was a retirement home that was in a real pickle at one point, and they really just needed staff. And I had said that I would help, but that wasn't like a redeployment … that would be me having to basically work my weekend … I was like, 'oh, I can't really … I have two young kids at home and I still have to be a mom and a wife.' (ON12, RPN)

Scope of Practice During Redeployment

Scope of practice issues varied depending upon nurse designation and redeployment area. Three sub-themes emerged: (i) Utilization, (ii) Implications on professional nursing license, and (iii) Mitigating uncertainty about scope of practice.

Utilization. There were instances where both NPs and RNs expressed that their professional scope of practice was not fully utilized during their redeployment. For example, one NP stated: "I was functioning within an RN role, but like in an occupational health capacity, but I wasn't doing anything other than occupational health" (NS03, NP). This nurse went on to speculate that NPs could have been utilized more effectively, given their scope of practice:

> I don't know that it was the best use of us because it was an RN scope of practice, so to have an NP filling that role, … especially given what our scope of practice is and what we could have been doing, I don't know that it was the best use of us but we did help out there. (NS03, NP)

Similarly, another NP who was not redeployed commented: "NPs were asked to do RN shifts in [intensive care unit], [emergency room], COVID ward, … pretty much anywhere, they would take anybody, I think." (NS01, NP). This was sometimes a secondary result of RN or LPN/RPN redeployment which, in turn, shifted the responsibilities of these nursing providers to the NPs: "They [RNs and LPNs] were redeployed intermittently, so [I] would have to pick up some of their roles" (NL02, NP). Specific to the administration of vaccines or routine injections, this NP who was employed with a collaborative healthcare team, stated: "… at times I would give vaccines or give a B12 injection,

where normally the RNs would do that or the LPNs" (NL02, NP). These efforts helped to ensure patients were receiving care that otherwise may not have been available during the COVID-19 pandemic. Likewise, RNs noted underutilization of their full scope of practice and engagement in tasks that could have been undertaken by other healthcare providers (e.g., LPN/RPNs). One RN who experienced voluntary redeployment commented: "We weren't redeployed a ton. But I feel like the client care that we provided was very limited" (BC11, RN). Another nurse who experienced mandatory redeployment noted:

> It [redeployment to a testing site] was a tasky sort of thing … So, no, basically that was not a good use of where I am coming from. Whereas the LPNs that were there – awesome. Very good use of their skill sets. But for someone like myself – waste. (BC07, RN)

Another RN noted potential for redeployment to a vaccination clinic, which she was willing to do as it was within her legislated and professional scope of practice:

> They [the employer] were going to use Public Health first, their resources and their staff and then if they needed to, they were going to pull us. And I said that I'm fine, like I give immunizations every day, it's totally within my scope, I'm very comfortable with that, so I had no issues being pulled. (NS03, RN)

In contrast to NPs and RNs in this study, most LPNs/RPNs reported appropriate use of their scope of practice to meet patient care needs. However, in some instances LPNs/RPNs performed clerical duties, such as entering information into databases and arranging patient appointments. One LPN, who was mandated to be redeployed, commented on being removed from their redeployed positions if patients were considered unstable, requiring care beyond their legislated scope of practice: "So, because those patients were so unwell, then I got moved to another part of remote patient monitoring" (NL11, LPN).

Implications on Professional Nursing License. Some nurses were redeployed to unfamiliar practice settings where they were confused about whether clinical activities were within their legislated and professional scope of practice. An NP who did not experience redeployment recalled that during the acute phase of the pandemic "a lot of nurses [were redeployed] to different areas, where they might not even necessarily [have] been comfortable working" (NP03, NS). An RN, who had volunteered for redeployment to an acute COVID-19 unit expressed similar concerns realizing that they would be working with a patient population they were not familiar with:

> I just felt like I got this huge kick in the guts. I honestly was probably looking like a deer in the headlights because I was just thinking, 'oh my gosh, we're going to have infants and children here who are in respiratory distress'. That's not my comfort level at all. I don't do pediatrics. I've never done pediatrics, I'm more comfortable with the acute adult med-surg nursing. So, I started to panic a little bit. (NS03, RN)

New roles during redeployment created uncertainty about scope of practice and in some instances presented a perceived threat to nurses' professional license: "They [the employer] didn't have those safety nets [policies and resources] and for me, that felt dangerous, and … I didn't want to put my license at risk" (BC10, RN). Another NP shared a similar perception:

> It seems that there was a misperception that the primary care nursing role is transferable across settings without any training/orientation: 'A nurse is a nurse is a nurse' is not true. We all have specialties and I think they [RNs, LPNs] were preyed upon a little bit because they didn't have much of a voice to say no. (BC13, NP)

An RN also emphasized the need for training when being redeployed to increase their preparation for working in new settings:

> You can't just walk into an orthopedic ward or, you know, any other wards and expect to function; you can't. So, it's not [like] they can just pick people off the street … any nurse and put them in the ward. You have to be trained in that area. (NS09, RN)

Mitigating Uncertainty About Scope of Practice. Amidst the uncertainty about scope of practice in unfamiliar practice environments nurses drew upon different resources, both internally and externally. Nurses' self-awareness of their own competencies was noted:

> You had to [know] … what your scope was because when we started a shift, it was because people were coming from all across the province and from all different disciplines. [We needed to ask] 'what can you do?' This is how we're going to divide up what we need to do today. … And then being able to [say], 'That's not within my scope, I can't do that.' (NS04, RN)

An LPN, who was mandated for redeployment, contacted her professional licensing body for support regarding scope of practice:

> There were a couple of times I even called in to the Council of Licensed Practical Nurses just to make sure it was within my scope or in my role that I was able to do different things, to help out with the clinic. (NL18, LPN)

Discussion

This study highlights primary care nurses' experiences and perspectives with redeployment throughout the COVID-19 pandemic in four Canadian provinces. Nurses across all regulatory designations expressed variations in how the process of redeployment was implemented by health authorities and institutions (e.g., single site orders). Major themes included the call to redeployment which focused mainly on communication; the challenges and opportunities associated with redeployment; and issues related to scope of practice during redeployment. Notably, the majority of nurses in the study sample discussed experiences with redeployment being voluntary in nature, rather than obligatory or mandated. Nurses had both positive and challenging redeployment experiences that seemed to be more related to the work environment than whether they volunteered or were mandated for redeployment.

Communication is a fundamental component of the redeployment process. The literature suggests that effective redeployment requires transparent, regular, and consistent communication (Panda et al., 2021) that is employee-centered (Ballantyne & Achour, 2022). Despite this, nurses within this study reported that many of their communications, such as their responses to requests from employers and professional associations to volunteer for redeployment, went unanswered; this suggests that the system may have been underprepared for communication related to broad redeployment campaigns. Although communication surrounding redeployment improved as the pandemic progressed, nurses were left feeling uncertain about why their initial expressions of interest to redeploy were overlooked. Additionally, effective communication during pandemics must be both clear and timely (Lowe et al., 2022) as well as collated and relevant (Young et al., 2023). Nurses noted that sometimes they received incomplete information or short notice regarding their redeployment, which prevented them from adequately preparing to work in this new setting.

Nurses in this study reported both opportunities and challenges associated with redeployment, which is consistent with the work of Karim et al. (2023) who discussed intensive care nurses' perceptions associated with redeployment. Participants in the Karim et al. study felt unsafe in an unfamiliar work environment and worried that they would make a mistake when redeployed that would impact patient well-being. This aligns with the current study, where nurses voiced concerns about working in unfamiliar environments with different populations. Additionally, a prominent concern voiced by nurses when redeployed from primary care to another setting was the fear that patients in their primary care practice would receive substandard care in their absence. This fear was expressed by nurses from all designations, causing some nurse managers to actively ensure nurses from their worksite were not redeployed. The concern also caused some nurses to be hesitant about volunteering for redeployment. Unfortunately, current pandemic plans do not direct staff from other healthcare sectors to be redeployed to primary care during capacity surges (Health Canada, 2003; Ontario Ministry of Health and Long-term Care, 2019). Capacity crises were exacerbated in primary care during the COVID-19 pandemic (Duong, 2022; Mangin et al., 2022; Murphy et al., 2022); and primary care providers were inadequately involved in pandemic planning which influenced pandemic preparedness and service delivery as the pandemic unfolded (Mathews et al., 2023a). Therefore, it is recommended that primary care nurses only be redeployed after other options have been explored and operational plans are in place to ensure patients attached to primary care clinics receive care that meets quality standards. If redeployment of primary care nurses is essential, a capacity assessment of both the sending and receiving organizations would be useful to ensure patient needs are met.

Redeployment of primary care nurses must be supported by appropriate resources and supports. As evidenced by the current study, some salaried NPs working in community health centers believed they were not eligible for redeployment due to funding models related to compensation. Although this did not affect all NPs, as funding models vary across provinces and employment circumstances, the Nurse Practitioners Association of Ontario (n.d.) has acknowledged the presence of inequitable compensation for NPs during the COVID-19 pandemic.

In this study, nurses who were redeployed and appropriately mentored within their redeployment setting found their experience to be beneficial to their professional growth, particularly if they were developing new skills or believed they were making a difference in the lives of people with COVID-19. This may be related to values associated with a duty to care (CNA, 2017; Fernandez et al., 2020; Lam et al., 2020) or altruism often found within the nursing profession (Ballantyne & Achour, 2022). As well, this relates to the values and ethical responsibilities outlined in the Code of Ethics for RNs (CNA, 2017). One of the values in the Code is related to providing safe, compassionate, competent, and ethical care. This value indicates that during a disaster, such as a communicable disease outbreak, nurses care for patients while using safety precautions and following legislation, policies, and guidelines (CNA, 2017). Additionally, the Code of Ethics for RNs identifies other values and ethical responsibilities that may have influenced nurse behaviour and positivity during redeployment. For example, being accountable is also outlined in the Code of Ethics (CNA, 2017). One of the characteristics of being accountable involves practicing within the limits of one's competence and seeking assistance if necessary. Several participants in the current study demonstrated this by seeking direction from managers or their professional licensing body if uncertain about their role when redeployed. Positive experiences with redeployment may also be related

to individual nurse characteristics (e.g., number of years in practice [Ballantyne & Achour, 2022; Sull et al., 2015]), or other factors such as orientation/training (Fernandez et al., 2020; National Health Services, 2020), and empowerment of nursing staff and effective communication from leaders (Ballantyne & Achour, 2022).

Within the literature, scope of practice clarity is reported as being critical to interprofessional team functioning and positive client outcomes (Brault et al., 2014; Nelson et al., 2014). Findings from the current study suggest that some nurses were confused about their legislated and professional scope of practice and contacted their regulatory associations to seek guidance. Because nurses' ability to enact their scope of practice is influenced by legislation, employment policies, practice characteristics, individual competence, and client needs/preferences (CNA, 2015), some questions related to scope of practice continued throughout the pandemic. In this study, scope of practice issues may have been exacerbated as primary care nurses reported being redeployed to a variety of settings (See Table 2), similar to that experienced by family physicians (Mathews et al., 2023b). This is not surprising, as role overlap among healthcare providers in primary care has been reported in the literature (Nazir et al., 2021; Weiner, 2021). Clarifying professional roles and activities, and issues related to scope of practice for primary care nurses may help to guide redeployment decisions during future public health emergencies, as well as improved redeployment experiences.

Strengths and Limitations

Interviews were conducted between May 2022 and January 2023, when the majority of jurisdictions had entered the recovery stage of the pandemic (i.e., moved past major outbreak periods). Participants were asked to reflect on their experiences during earlier pandemic stages, and thus, their responses may be subject to memory errors or recall bias (Coughlin, 1990). To mitigate this issue, experienced interviewers provided descriptions of each pandemic period to enhance recall and used consistent probes throughout the interview process. Interviews were conducted across four regions in Canada, and despite using maximum variation sampling and purposefully recruiting to capture a wide range of characteristics, findings may not reflect the experiences of all nurses or those in other Canadian regions where pandemic responses may have differed. The interview guide for this study included broader, open-ended questions related to roles and barriers/facilitators nurses encountered during the different stages of the COVID-19 pandemic. While nurses participating in initial interviews were not asked specifically to describe their experiences related to redeployment, these themes arose organically, and in subsequent interviews, probes were employed to explore these themes further. Examples of probes included questions about the redeployment process, suggestions for how redeployment could be effectively managed in future pandemics, and if the redeployment was based on clinical background. Future research focusing on these themes specifically could produce more robust data and perspectives to strengthen the current findings. Lastly, interview data, as with all self-reported data, are subject to social desirability bias (Bergin & Labonté, 2020); however, this was mitigated through the use of experienced interviewers who encouraged self-reflection, and framed questions carefully to avoid this potential bias.

Implications for Practice

Policy. Redeployment policies based on comprehensive pandemic plans and developed in conjunction with regulatory bodies and other stakeholders should include primary care nurses in clinical practice. By involving primary care nurses in planning, information about clinical environments, including the types of patients served, location of emergency equipment, and normal routines, can be factored into all decisions related to redeployment, increasing nurse satisfaction, patient safety, and appropriate utilization. Also, based on findings from the current study and existing literature, it is recommended that primary care nurses be asked to volunteer for redeployment rather than mandated whenever possible, as this could contribute to a more positive redeployment experience and work environment.

Embrett et al. (2023) recommended that a specific primary care pandemic response plan be developed for future pandemics. The research team agrees with this recommendation and suggests that this would help to ensure primary care nurses are not redeployed to other areas during capacity surges, unless absolutely necessary, which would help avoid delays with preventative and chronic disease care. A significant part of this plan would include detailed procedures for redeploying nurses into primary care if required, and could address issues related to rurality and vulnerable populations.

Professional Development. The researchers suggest that the professional development needs of primary care nurses be at the forefront of all decisions related to redeployment. At a minimum, primary care nurses should receive an orientation to new work environments in advance of redeployment and be given the opportunity to discuss their professional development needs with the manager of their new work environment. They would also benefit from ongoing mentorship through working with experienced nurses during redeployment. Finally, primary care nurses should be encouraged to attend any available workshops related to their new area of practice to ensure they have the knowledge and skills to provide safe patient care.

Communication. Information related to roles and activities should be clearly communicated to the redeployed nurse and the nurses' scope of practice considered in all redeployment decisions. Although it is noted that no best practices related

to communication exist for public health emergencies (Ontario Hospital Association, n.d.), the study team suggests that, when developing communication plans for a pandemic, it is necessary to have a basic communication infrastructure that allows for bi-directional communication (Mathews et al., 2023b), as well as clear, consistent, credible, collated messaging that is applicable to the primary care setting (Young et al., 2023). Reddy and Gupta (2020) note that it is important to consider the unique culture of the audience when developing a strategic communication plan during an epidemic (Reddy & Gupta, 2020). The researchers recommend that this should also be factored into pandemic communication plans.

Conclusion

This study described the experiences and perceptions of primary care nurses from four provinces in Canada who were either redeployed during COVID-19, worked in situations with the potential for redeployment, or observed other nurses being redeployed. Themes related to the call to redeployment, opportunities and challenges, and scope of practice were explored with attention given to the different roles/activities, perceptions, and experiences primary care nurses experienced during this public health emergency. Redeployment is a useful workforce strategy during public health emergencies; however, it requires a structured process and it is important that those involved or affected by redeployment participate in decision-making. These approaches have the potential to increase nurse satisfaction and improve quality of care while mitigating confusion around scope of practice issues.

Contributions

JL, DB, CV, LM, and ED wrote the initial draft of the manuscript. SA, LRR, DR, CC, AR, SM, GY, EW, EGM and LH provided critical review and edited the manuscript. MM, LH, JL, EGM, SS, DR, DB, CV, GY, LM, and LRR carried out the methodology related to the study. JL, MM, LH, and EGM supervised the project. JL, MM, LM, LH, SS, DR, and LRR contributed to administration of the project. MM, LH, EGM and JL acquired funding. All authors contributed to manuscript revision, read, and approved the final submitted version.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the Canadian Institutes for Health Research [grant number 477227].

Statement of Ethics

This study was approved by the Research Ethics Board of British Columbia (File: H20-02998-A005) on March 2, 2022.

This study was approved by the Health Research Ethics Board of Newfoundland and Labrador (File: 20222815) on April 4, 2022.

This study was approved by the Nova Scotia Health Authority Research Ethics Board (File: 1027959) on Feb. 13, 2022.

This study was approved by Western University Research Ethics Board (File: 120519) on Feb. 11, 2022.

Informed Consent

Informed consent was obtained from all individual participants included in the study.

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Supplemental Material

Supplemental material for this article is available online.

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