

Australian nurses' satisfaction and experiences of redeployment during COVID-19: A cross-sectional study

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ABSTRACT

Objective: To evaluate nurses' satisfaction and experiences of redeployment during COVID-19.

Background: Redeployment to an unfamiliar environment can be challenging; however, it can also present an opportunity for staff to learn new skills. During the COVID-19 pandemic, the need to redeploy health professionals, particularly nurses, increased dramatically. Evaluating nurses' satisfaction and experiences related to redeployment during the pandemic is essential for future surge planning.

Methods: A cross-sectional online survey consisting of single-choice and open-ended questions was conducted on a purposive sample of nurses (n=106) working in an acute hospital in New South Wales, Australia, from July to August 2020. Nurses who were redeployed to wards different from their regular workplaces were invited to participate in the survey. Areas of redeployment include various medical and surgical wards, intensive care units and the emergency department. Nurses' satisfaction was obtained through the survey question structured as a Likert scale ranging from very satisfied to very dissatisfied. Nurse experiences were captured through a single-choice question (positive or negative

experience) and open-ended questions. The single-choice questions were analysed by summarising participant responses, and open-ended questions were analysed using an iterative thematic analysis approach.

Results: A high proportion of nurses were either neutral (48.4%, n=45) or dissatisfied (44.1%, n=41) with redeployment, with only 7.5% (n=7) of nurses being satisfied. There was a mix of positive (43%, n=40) and negative (57%, n=53) redeployment experiences. Three main themes influence nurses' redeployment experience: "staff friendly and welcoming", "patient allocation", and "support".

Conclusion: Redeployment of healthcare workers during a pandemic is inevitable. This study highlighted that despite close to half of the redeployed nurses reporting a positive redeployment experience, only a few were satisfied with redeployment. This indicated that more work is required to support nurses during redeployment to increase satisfaction. Future workforce redeployment needs to consider healthcare workers' needs and must strive to improve satisfaction to build a sustainable and resilient health system.

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Implications for research, policy, and practice:

This study highlighted that although redeployment is challenging, staff can have a positive redeployment experience when supported. Elements that are associated with positive redeployment experience were explored in this study, which can inform policy and prepare nurses for future surge demand.

What is already known about the topic?

- Redeployment of nurses in the acute care sector during the COVID-19 pandemic is common.
- Both the COVID-19 pandemic and redeployment can be challenging and stressful experiences for nurses.
- There is a paucity of research examining the satisfaction and experiences of nurses working in the acute care sector during COVID-19 in Australia.

What this paper adds:

- This study provides evidence that many nurses working in the acute sector during COVID-19 in Australia had positive redeployment experiences. Despite this, very few were satisfied with redeployment.
- This study has identified essential factors to a positive redeployment experience.
- This study also highlighted the need to improve nurses' satisfaction with redeployment.

Keywords: COVID-19, nursing, redeployment, deployment, pandemic

INTRODUCTION

The COVID-19 pandemic has been associated with the rapid and prolonged increase in patients presenting to hospitals due to severe respiratory symptoms, with many requiring oxygen and some requiring ventilator assistance. The serious nature of COVID-19 infection was revealed in a meta-analysis, which indicated that 32% (95% CI: 26 to 38%) of patients with COVID-19 required Intensive Care Unit (ICU) admission.¹ Since the outbreak of COVID-19 in January 2020, along with its associated variants, more than 642 million people have been infected with COVID-19, and over six million deaths related to the viruses have been reported globally at the time of reporting.²

Many Australian hospitals, and hospitals in almost every country globally, have been forced to repurpose services and reallocate resources to ensure adequate care for the rapid fluctuations in the number of patients with COVID-19.³ These changes resulted in alterations in work allocation, with many health professionals, particularly nurses, redeployed to support the clinical demand associated with the COVID-19 pandemic surge.

BACKGROUND/LITERATURE REVIEW

Unlike other natural disasters, the COVID-19 pandemic affected all countries globally, adding an enormous and continued strain on healthcare systems. This required the implementation of restrictions to mitigate transmission and redeployment of resources to meet the demand for patient care.⁴ Given the World Health Organization emphasis that COVID-19 is an ongoing global health threat,⁵ it is important to understand nurses' satisfaction and experiences associated with redeployment, which is expected to be a prolonged requirement. This understanding is essential to ensure effective future redeployment and safe patient care.⁶

Prior to the COVID-19 pandemic, studies exploring nurses' experiences with redeployment were limited to short-term redeployment.^{7,8} A study in New York explored redeployment following a hurricane disaster and showed that more than 50% of redeployed nurses had an extremely stressful redeployment experience.⁷ The challenges of redeployment within this study included working in an unfamiliar environment with limited orientation and the uncertainty of their future after a natural disaster; all significantly impacted nurses' psychological wellbeing.⁷ In South Africa, a qualitative study involving ICU nurses who underwent short-term redeployment revealed that the majority of nurses expressed concern about their ability to care for patients in areas where they had limited education and training.⁸

Since the onset of the COVID-19 pandemic, several studies have explored nurses' experiences of redeployment to ICU. In a systematic review of 40 studies conducted in the first 18 months of the COVID-19 pandemic, only eight studies included the nursing profession, and none were conducted outside the United Kingdom and the United States.⁹ Although the COVID-19 pandemic is a global health issue, the challenges and experiences of redeployed nurses may differ globally. For example, an exploration of nurses' experiences in the first months of the pandemic in the United States (April–May 2020) identified that most redeployed nurses had a negative experience.¹⁰ The challenges related to their scope of practice, personal experiences with other nurses and healthcare professionals, working in a different environment, and limited resources.¹⁰ In contrast, a United Kingdom study found that nearly 50% of nurses were willing to be redeployed during COVID-19 despite facing challenges including poor communication regarding redeployment plans, personal feelings of anxiety and stress and lack of support from management.¹¹ An Australian study examining a cohort of

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allied health and nursing personnel redeployed to a contact tracing monitoring team revealed comparable outcomes.¹² The study indicated that while these individuals experienced a sense of collaboration, opportunities for professional development, and the fulfilment of making a meaningful impact during the pandemic, the process of redeployment also had a personal toll on them.¹² There have been limited explorations of Australian nurses' redeployment experience, particularly in acute hospitals during COVID-19. As hospitals within Australia continue to be impacted by COVID-19 restrictions understanding nurses' satisfaction and experiences of redeployment is critical in order to foster a positive work environment. This knowledge may further contribute to the development of future policies guiding pandemic response and disaster contingency planning.

OBJECTIVE

This study aimed to explore nurses' satisfaction and experiences of redeployment to inpatient medical/surgical wards and critical care units during COVID-19 in one regional major referral hospital in Australia.

METHODS

STUDY DESIGN

A descriptive, cross-sectional study using an online survey was conducted. As redeploying nurses was part of a health service strategy to meet the demand of COVID-19 patients, the survey was deemed and approved as a negligible risk research activity by Hunter New England Local Health District Human Research Ethics Committee (AU202107-03). The development of the manuscript followed the recommendations of the STROBE reporting guidelines.¹³

SETTING

This study was conducted in a large public, referral, teaching hospital located in a geographically dispersed region of New South Wales in Australia. This hospital is the largest hospital within the local health district, providing care to approximately 942,000 people, including 64,000 Aboriginal and Torres Strait Island Peoples living in metropolitan, regional, rural or remote areas. There are 18 inpatient wards, two intensive care units (adult and pediatric), an emergency department, a delivery suite and a mental health inpatient unit in this facility: a total of 796 beds.

PARTICIPANTS

Nurses working in medical and surgical wards with prior redeployment experience were invited to complete the survey. The survey link was emailed to all nurse managers in medical and surgical wards to distribute to their nursing staff. At the time of survey administration, there were approximately 600 nurses employed in this facility.

According to administrative records, about 30% of staff had been redeployed since the beginning of the COVID-19 pandemic in January-July 2020. Assuming a 30% non-response rate, approximately 126 nurses would be expected to complete the survey. Assuming 126 nurses would complete the survey with a 5% margin for error and a 95% confidence level, the sample size will need 95 respondents.

REDEPLOYMENT PROCESS

The hospital initiated the redeployment process in the early stages of the pandemic, in anticipation of an increase in COVID-19 cases and the need to accommodate critically ill patients. Two adult medical inpatient wards were specifically repurposed to provide care for patients exhibiting respiratory symptoms and suspected or confirmed cases of COVID-19, categorised as the 'red zone'. Nurses employed in these two inpatient wards, the red zone, who expressed personal health concerns about caring for COVID-19 patients were offered the option to be redeployed to other wards that are designed as "green zone". Meanwhile, staff members employed in the green zone were redeployed to the red zone to provide support in caring for COVID-19 patients. With an increasing number of patients in critical condition and requiring intensive care, along with sick leave and absences among critical care staff, additional staff members from the green zone were redeployed to adult ICU and emergency department.

To prepare for redeployment process, staff were asked to identify if they had previous experience or were willing to undertake training in critical care areas such as acute respiratory care, emergency department and ICU. A one day critical care training program, including skills such as venipuncture, low flow oxygen management and basic mechanical ventilation, was offered to nurses who were willing to be deployed to the red zone and critical care areas. For staff who were redeployed to green zones, there was no additional training provided. Most staff were allowed to either undertake redeployment or take paid leave entitlements, except when redeployment resulted from unexpected patient flow where prior notification was challenging. There was no specific model of care arrangement for this redeployment process.

THE SURVEY

The survey was developed collaboratively with an expert panel of clinical nurses, nurse managers, nurse educators and psychologists focused on staff experiences and factors that may influence redeployment satisfaction. The survey included 10 questions. The initial four questions identify demographic characteristics, including age, employment characteristics (classification, length of service and primary service of employment). This is followed by three questions concerning redeployment, the first reporting the length of time since redeployment. The second is a service evaluation,

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exploring nurse satisfaction of redeployment, obtained through the survey question structured as a Likert scale ranging from very satisfied to very dissatisfied. Nurse experiences were also captured through a single-choice question (positive or negative experience). Additionally, there were three open-ended questions that allowed respondents to elaborate on the reasons behind their ratings for their experiences and provide insights on both positive and negative aspects, along with suggestions to enhance their redeployment experience.

The survey was piloted on two nursing staff and two nurse educators to clarify and ascertain relevance. Based on the pilot feedback, an additional free-text question was added to collect suggestions to improve the redeployment experience. Pilot data were not included in the final survey responses.

DATA COLLECTION

Data from participants were collected via an anonymous online survey (SelectSurvey.NETTM V5.0) between July and August 2020 over six weeks. One reminder email was sent two weeks after the initial email. Consent was implied by survey completion, and survey responses were automatically saved in SelectSurvey, where only one project member had access to the data.

DATA ANALYSIS

Data were extracted from SelectSurvey online tool, and questions were analysed using Stata version 16 (Stata Corporation, College Station, Texas, USA). Descriptive statistics were used to describe, compare, and summarise participants' responses.

Open-ended responses were analysed using an iterative thematic analysis approach. This approach entails detailed readings of raw data to derive main concepts or themes.¹⁴ Cross-case comparison and mapping were applied to new emerging themes. To enhance the rigour of the analysis, two authors (GC & KC) regularly discussed each step of the analysis and themes. The summary of the themes and quotes was reviewed independently by two other authors (AM & BB).

RESULTS

Of 106 respondents, six indicated never being redeployed, and two did not provide data on their overall redeployment experience, leaving 98 respondents included in the analysis. Most respondents were Registered Nurses (85%), aged less than 40 years (62%), primarily employed with surgical services (66%) and with five or more years of experience in their current position (52%) (Table 1).

TABLE 1. DEMOGRAPHIC CHARACTERISTICS OF STUDY PARTICIPANTS

Variable	Number	Percentage
Classification		
Registered Nurse	90	85
Endorsed Enrolled Nurse*	15	14.1
Enrolled Nurse	0	0
Assistant in Nursing	1	0.9
Age		
20-29	32	30
30-39	34	32
40-49	23	22
50-59	15	14.1
>60	2	1.9
Primary place of employment		
Medical	36	34
Surgical	70	66
Years of current employment		
<12 months	18	17
1-3 years	16	15
3-5 years	17	16
5-10 years	26	25
>10 years	29	27
Redeployment		
<i>Time since last being redeployed</i>		
This month	26	26
1-6 months	55	56
6-12 months	10	10
>12 months	8	8.0
<i>Satisfaction with being redeployed</i>		
Very satisfied	2	2.2
Satisfied	5	5.3
Neutral	45	48.4
Dissatisfied	32	34.4
Very dissatisfied	9	9.7
<i>Redeployment experience</i>		
Positive	40	43
Negative	53	57

Note: * Endorsed Enrolled Nurses are Enrolled Nurses who completed additional training to administer medication under the supervision of Registered Nurses.

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NURSES' SATISFACTION AND EXPERIENCE OF REDEPLOYMENT

Most respondents (82%) were redeployed within the last six months. Only a few respondents (7.5%) were satisfied with redeployment, close to half (48.4%) did not have an opinion (neutral), and the remainder were dissatisfied (44.1%). The participants reported a mix of positive (43%) and negative (57%) redeployment experiences (Table 1).

FREE-TEXT COMMENTS

Within the open-ended sections, nurses had the opportunity to articulate their experiences with redeployment and express their perspectives on the key factors that influenced their redeployment experiences. A large proportion of participants provided open-ended responses relating positive experiences of redeployment ($n=63$, 64%), negative experiences ($n=70$, 71%) and suggestions ($n=62$, 63%). Three themes emerged from the qualitative feedback: “friendly and welcoming”, “patient allocation”, and “support”.

Theme 1. Friendly and welcoming

Most respondents described how the friendliness of the staff and the feeling of being welcomed into the team created a positive redeployment experience. One respondent indicated that she was very anxious initially, but with the support of the staff, she felt her redeployment experience was positive. Simple steps such as a quick orientation to the ward and team, checking in and having an access code for treatment rooms created a friendly and welcoming environment. The following quotes are examples of these elements.

“Being deployed can be stressful...what makes a redeployment positive is ward staff reaction, if they support you, introduce themselves and [provide] a quick “tour” of the ward, code for the medication room/staff toilet and the team leader checking you are going ok...” (RN, ID: 22)

“Sometimes it’s just a simple acknowledgment by those around you to make you feel part of the team” (RN, ID: 14)

Some participants described how they felt unwelcome on the ward and how this emotionally impacted them. Participants described feeling isolated or feeling like they were a burden and explored how these negative experiences affected their motivation to come to work.

“...did not feel welcome on the ward. I was not orientated to the ward...walked into the room where a patient was deceased, and [I was] left to attend care without help... being deployed to another ward is very hard on mental health, and anxiety builds, not wanting to come to work...” (RN, ID: 13)

Creating a friendly and welcoming environment is crucial not only for the well-being of the staff but also for indirectly influencing patient care. The quality of patient care was

found to be affected when staff who were redeployed didn’t feel welcomed by the team, resulting in the participants experiencing negative emotions.

“...as a junior staff, I feel it can be very dangerous for patients as we are expected to care for some sickest patients with minimum help...” (RN, ID: 84)

“...it is very stressful...staff were not friendly...I was not familiar with the specialty, and this ultimately affects patient standards of care and management...” (RN, ID: 95)

Theme 2. Allocation of patients

Patient allocation, which describes one nurse taking responsibility for the complete care of a group of patients and is one of the classic models of nursing care in Australia.¹⁵ Patient allocation was reported as an important factor that influenced the redeployment experience. Some respondents perceived patient allocation as how the team valued them, and when the allocation was perceived as “fair” or “adequate”, they felt they were respected. The perception of fair or adequate patient allocation appeared to be based on the respondent’s confidence and capability of managing the patients they were allocated.

“I felt [I was] treated equally and not given [patient] loads that are out of scope, they were appropriate for my experience...” (RN, ID: 29)

Many respondents reported they were given the “heaviest” patients, frequently described as having higher acuity or challenging behaviours. In this situation, they felt they were treated “unfairly” by the regular ward staff:

“...people who are redeployed are usually given the hardest/heaviest patient load...which is not always fair” (RN, ID: 104)

“I found that because I was not the regular staff, [I] was given the behavioural difficult or confused patients...” (RN, ID: 97)

Theme 3. Supports

Most respondents felt inadequately prepared and supported to care for patients with complex needs when redeployed. Many different supports were mentioned by respondents and can be categorised into personal level and organisational level factors. On a personal level, some individuals suggested that implementing a “buddy system” could facilitate a smoother transition into the team and enhance the support networks and overall experience of redeployed staff.

“...allocate a buddy (someone approachable that will help) to answer questions/show them around/help get to breaks/provide checks. Ask staff to be welcoming; no one likes getting deployed, nobody likes to integrate with a tight-knit tough group.” (RN, ID: 30).

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“Developing a buddy system between two units for one year... where staff can work on an “exchange program” for a short period & in the following year... this may go a long way to also improve networking and comradery across the hospital...” (RN, ID: 16)

At the organisational level, strategies to prepare and support redeployed nurses included the development of a structured orientation and a policy to guide the redeployment process for future workforce planning.

“Education [needs to be provided] to staff that nurses being deployed are to have an orientation and introduced to team leaders...etc.” (RN, ID: 94)

“Implementing a checklist for when a staff is deployed that includes orientation to ward, introduction to staff...”. (RN, ID: 15)

“Education about different specialties and skills from ward staff [would improve the experience of being deployed]” (RN, ID 81)

“A policy around the allocation of patients to deployed staff [would improve the experience of being deployed]” (RN, ID:56).

DISCUSSION

This cross-sectional study explored Australian nurses' satisfaction and experience of redeployment to multiple areas in one tertiary hospital during the early COVID-19 pandemic. Study findings provide valuable insights into the challenges nurses faced during redeployment and the support required to sustain the nursing workforce in future redeployment.

Interestingly, although many deployed nurses reported positive redeployment experiences, only 7.5% of redeployed nurses in this study were satisfied with their redeployment experience. This result was lower than anticipated, in contrast to findings in other similar studies. In Saudi Arabia, 33.6% of nursing staff were happy to be redeployed to ICU.¹⁶ An examination of 63 junior doctors' redeployment experience found that 76% were satisfied with their redeployment.¹⁷ The necessity of redeploying nurses to various wards during COVID-19 pandemic could be among the factors influencing reduced satisfaction within our cohort. Most prior studies exploring nurses' redeployment experience are qualitative^{10,11,12,18} and lack a quantitative measure of satisfaction. With the association between the level of satisfaction and absences and retention in nursing and the current nursing workforce shortage in Australia and globally,¹⁹⁻²¹ strategies must be put in place to address nurses' redeployment experience in Australia. Identifying challenges nurses face to improve satisfaction and support for each other in the nursing profession is therefore important.

In our study, we inquired about the factors that influenced the redeployment experience, both positive and negative. From the responses, several themes emerged, and it was unsurprising to find that feeling welcomed and supported were key factors contributing to a positive experience. These findings are consistent with existing literature that emphasises the significance of supportive communication and colleague relationships in providing support to redeployed nurses.¹¹ It is imperative to acknowledge that when an individual is redeployed to a new team, they can feel unsupported and undervalued due to uncertainty and team dynamics.²² Contemporary patient care is delivered in a team environment and can only be improved when the multidisciplinary team works effectively together.²³ A growing body of literature demonstrates the association between the quality of teamwork to the overall safety and excellence of healthcare, resulting in reduced clinical incidents, enhanced patient satisfaction and better patient outcomes.²⁴ Nurse managers should take note of these findings and recognise the importance of creating a positive redeployment environment that fosters a sense of welcome and belonging within the team. Such initiatives can potentially elevate staff satisfaction and enhance the overall quality of patient care.

Another key theme concerning the redeployment experience was patient allocation. Many respondents felt that they did not have the skills or capability to manage the patients they were allocated. Report of healthcare professionals working beyond scope of practice during the pandemic are noted within the literature.^{10,25} Clinical competence is a vital element of quality of care and patient safety²⁵ and a key to patient satisfaction.²⁷ Matching nurse skills with patient acuity have long been identified as one of the most critical risk management strategies to ensure patient safety.²⁸ Therefore, it is important to ensure that redeployed staff are provided training and education to maintain patient safety. The Australian Health Practitioner Regulation Agency (AHPRA) has recognised that not every nursing skill or competence is transferrable and issued a statement indicating that when the flexibility of nursing practice is required during the COVID-19 crisis, nurses must be working in the role that they have been educated and trained in and are competent in.²⁹ Therefore, strategies to deliver training and adequate patient allocation must be considered in redeployment processes to ensure patient safety.

To the best of our knowledge, this study is the first one that examined the nurses' satisfaction and experience of redeployment during the COVID-19 pandemic in the tertiary settings in Australia. The findings of this study provided insight into nurses' needs during redeployment, with identification of targeted strategies to improve nurse satisfaction, which is the key to successful redeployment. Limitations include the absence of data on gender and a sampling focus on nurses in medical and surgical wards only.

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Additionally, respondents' experiences were obtained from open-ended questions rather than interviews. Although open-ended questions allow all respondents to voice their opinions anonymously, the researchers cannot clarify responses with individual participants. Therefore, data can lack some key strengths of qualitative research, such as conceptual richness.³⁰ However, there were a high number of respondents who provided feedback through the open-ended questions. With some in-depth responses, the researchers are confident that the data can be used to corroborate and elaborate the findings from the closed questions and identify key themes relevant to the redeployment experience. Though number of responses was lower than originally anticipated, the high number of open text responses corroborated findings and identified key themes relevant to the redeployment experience. Replicating these results using multiple sites and larger sample sizes in future studies and using a longitudinal design to investigate strategies to improve nurses' satisfaction with deployment practices would be valuable.

CONCLUSION

Redeployment of significant nursing staff in a rapidly changing environment is a critical and massive task that needs to be planned early and communicated well. In this study, less than 10% of nursing staff redeployed were satisfied with their redeployment experience. We found that structured training, adequate support and a warm welcome from the team can create a positive redeployment experience, which may reduce staff dissatisfaction associated with redeployment. The COVID-19 pandemic has created an unprecedented demand for the healthcare workforce, particularly nursing. Future research is required to explore the ongoing strategies to improve nursing satisfaction with redeployment.

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