AJAN

AUSTRALIAN JOURNAL OF ADVANCED NURSING

VOLUME 40, ISSUE 3
JUNE – AUGUST 2023
ISSN 1447–4328
DOI 2023.403

*An international peer-reviewed journal of nursing and midwifery research and practice*

# IN THIS ISSUE



The *Australian Journal of Advanced Nursing* is the peer-reviewed scholarly journal of the Australian Nursing and Midwifery Federation (ANMF). The Mission of *AJAN* is to provide a forum to showcase and promote a wide variety of original research and scholarly work to inform and empower nurses, midwives, and other healthcare professionals to improve the health and wellbeing of all communities and to be prepared for the future.

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EDITORIAL

# Rising to the climate challenge: integrating climate action in the undergraduate curriculum

The climate emergency is at a critical point. The planet is no longer in equilibrium and cannot compensate for carbon emissions.[1] The Intergovernmental Panel on Climate Change identified the emerging impacts of climate change as a 'code red for humanity'.[2] The health impacts of climate change are already being experienced by communities, and the impact is expected to widen and escalate over time, making planetary health an emerging and urgent trend within healthcare. Nurses urgently need to learn how to care for communities that are affected by climate change.[3] Healthcare, as one of the largest emitting sectors, must act to improve planetary health.

The need for nurses to consider planetary health in their practice is recognised in the position statements on climate change and sustainability issued by the International Council of Nurses,[4] and the Australian College of Nursing.[5] Evidence suggests that emerging nurses support the inclusion of planetary health in their training.[6] For nursing educators, this could begin by increasing literacy in environmental sustainability and planetary health. Higher education institutions are ideally positioned to contribute to a healthier future by incorporating planetary health education in their curricula. Integrating planetary health education in the preregistration nursing programs meets the Standard 3 requirement of the Registered Nurse Accreditation Standards, set by the Australian Nursing and Midwifery Accreditation Council (ANMAC), which requires nursing curricula to reflect contemporary practice and respond to emerging trends.[7]

Australian nurses are underprepared to practice in this changing context, as currently no Australian undergraduate nursing programs include planetary health (climate change science and sustainability) as a stand-alone subject, and its focus across the wider nursing curriculum is sparse. This means current undergraduate nursing students are not being prepared to work effectively and safely in an environment where increasing effects of climate change are readily felt and further in a sector which must reduce its own carbon emissions. In this article, we propose a way forward that will ensure the nursing curriculum continues to adhere to ANMAC's standards for an education that responds to and reflects contemporary needs. We argue that planetary health must be incorporated into nursing education as a stand-alone subject for nursing students' whilst being meaningfully linked to health literacy and current graduate capabilities.

The content of a stand-alone subject would introduce basic concepts of the Earth's climate science into nursing curricula, along with strategies to assess climate information, responsibly communicate about climate issues, and make informed decisions about mitigation and adaptation.[8] The content would also equip nursing students with skills to make decisions in the context of sustainable healthcare, perhaps by considering issues such as energy conservation, reducing clinical waste, and improving the recycling of healthcare products. Importantly, empowering nursing students and nurses with combined health–sustainability literacy would create change makers able to influence decisions in policy and practice and limit the impact of climate change on the health of those they care for.[3] Nurses who are literate in environmental sustainability can then act to empower persons receiving care to also make environmental conscious health and wellbeing decisions.

Introducing a stand-alone planetary health subject may be seen as a challenge in an already crowded undergraduate nursing curriculum. However, the inclusion of stand-alone subjects is not new and has been implemented in the Australian nursing curriculum over the last decade with ANMAC regulated Indigenous Health as a compulsory and core subject in 2012. This has seen an inclusion by some Schools of Nursing to have a public health–aligned response that develops nursing students' understanding of how the climate emergency is impacting First Nation communities. For example, the health impacts being felt throughout the Torres Straits include increased rates of disease such as dengue, Ross River virus, and tuberculosis.[9] Further in 2021, ANMAC regulated the inclusion of Cultural Safety as a compulsory and core subject. This has seen some Schools of Nursing respond by including self-reflective practice on one's own values, beliefs, and attitudes and how these may impact on differing cultures such as LGBTIQA+ people. This demonstrates that when an issue is a core tenet of holistic nursing practice and global welfare that nursing curriculum can lead by inclusion of appropriate curricula.

We argue that including planetary health content as a stand-alone subject aligns with international educational practice. In November 2022, The University of Barcelona announced that all students will take a mandatory course on the climate change crisis commencing in 2024, a change that will effectively produce climate-literate nurses. Additionally, Harvard Medical School has launched a Climate Doctor of


https://doi.org/10.37464/2023.403.1266

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Medicine program which focuses on the health care effects of climate change and prepares a climate ready medical workforce. To achieve an Australian workforce who delivers sustainable planetary and human health care, an explicit link with the graduate capabilities of critical thinking and advocacy is also required. As a generic skill already embedded in nursing curricula, critical thinking could be contextualised to planetary health, reducing further pressure to overload the curriculum. For example, the well-established nursing practice partnership between critical thinking and quality evidence for problem solving could be applied to the challenging problem of the carbon footprint of the health system.[3,5]

When it comes to the planet's health and adapting to climate change impacts, individual action is not enough. We need nurses who are educated and informed about planetary health, ready to incorporate climate change awareness into their practice, and to influence future policy.[10] For this, planetary health education is essential.[11] Incorporating planetary health into the nursing curriculum, by linking it to health literacy and current graduate capabilities, and by teaching it as a stand-alone subject, is essential for training tomorrow's healthcare practitioners. We need nurses who understand the links between climate change and health and who are ready to respond appropriately to their patients' needs. We argue that planetary health education for nursing students must be formalised and extended. The current unregulated approach to planetary health within the nursing curriculum creates the risk that nursing education will become less relevant to the practice environment and will not fulfill the ANMAC requirements.

**Acknowledgement:** We acknowledge colleagues who have driven change in nursing education resulting in the inclusion of First Nations Australian health and Cultural Safety in nursing curricula. Their efforts demonstrate that change is possible at a curriculum level when an issue is a core tenet of holistic nursing practice and global welfare.

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Australian Journal of Advanced Nursing 40(3) • 2023.403.1129

# Can personal psychological resources reduce burnout and turnover in Australian hospital nurses?


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## ABSTRACT

**Objective:** To examine whether personal psychological resources safeguard hospital nurses against adverse workplace consequences, particularly job burnout and the desire to leave the profession.

**Background:** Nursing research has extensively documented the adverse effects of job burnout and staff turnover. With the current nursing shortage, it is imperative to identify resources and strategies that can mitigate adverse workplace outcomes. However, the role of personal psychological resources, or psychological capital, in aiding nurses to perform effectively in their work environment remains relatively unexplored.

**Study design and methods:** This study adopted a cross-sectional survey design. The survey assessed nurses' experienced burnout (MBI-HSS), psychological capital (PCQ-24), and intentions to leave nursing. Hospital nurses (n= 258) from six states of Australia responded to an online anonymous survey between June and November 2022.

**Results:** Respondents indicated a high degree of experienced burnout: 68.6% experienced high emotional exhaustion, 31.8% had high depersonalisation, and 31.8% had low personal accomplishment. Additionally, 38.8% had high intentions to leave the profession. Emotional exhaustion ($p<.001$, $b=.56$) and personal accomplishment ($p=.006$, $b=-.15$) were significant predictors of turnover intentions. Higher psychological capital was significantly associated with lower emotional exhaustion ($p<.001$, $b=-.42$), lower depersonalisation ($p<.001$, $b=-.29$), higher personal accomplishment ($p<.001$, $b=.60$), and lower turnover intentions ($p<.001$, $b=.44$).

**Discussion:** Much of the nursing burnout and intent to leave literature focuses on negative rather than positive aspects of the work environment. Positive responses to workplace stimuli promote positive attitudes such as empowerment, job satisfaction, and organisational commitment that have a tangible impact on personal and occupational wellbeing. This may explain why nurses with stronger personal psychological resources experienced less burnout and voiced fewer intentions to leave the profession.

**Conclusion:** The health and wellbeing of nurses should be a priority for healthcare organisations; the working conditions nurses face in Australian hospitals cause many to be negatively impacted by work stress.

**Implications for Research, Policy, and Practice:** Nurses would benefit from initiatives to enhance their psychological resources. Targeted interventions to develop psychological capital should be examined in a nursing population. This can change policy, thereby benefitting the healthcare system.




https://doi.org/10.37464/2023.403.1129

**What is already known about the topic?**

- Australia is currently facing a shortage of qualified nurses.
- Hospital nurses often experience job burnout and high levels of turnover due to the challenging nature of their work environment.
- Personal psychological resources have been linked to positive workplace outcomes, such as job satisfaction and organisational commitment, in various settings.

**What this paper adds:**

- It demonstrates that nurses possessing greater personal psychological resources experience lower levels of burnout and are less likely to consider leaving the profession.
- The paper suggests that implementing targeted interventions designed to enhance nurses' personal psychological resources could be a viable approach for mitigating burnout and turnover intentions (TI).

**Keywords:** Nursing; emotional exhaustion; intent to quit; psychological capital; depersonalisation; nurse retention

## BACKGROUND

Nursing faces a critical workforce shortage expected to worsen in the coming years, with fewer nurses entering the profession, poor retention rates, and many nurses nearing retirement age.[1,2] Recent data suggests that one-fifth of Australia's registered nurses intend to leave their current role within the next year.[3] This poses a significant threat to a healthcare system already strained by an ageing population, increasing rates of chronic disease, population growth, and the threat of public health emergencies like COVID-19.[4]

Australian hospital nurses consistently report excessive workloads, mandatory overtime, high-stress working environments, and low nurse-to-patient ratios that significantly increase the likelihood of psychological distress and burnout.[5-7] In daily practice, nurses are expected to handle significant emotional and physical demands in the form of aggressive and complex patients, excessive hours, mixed shifts, interpersonal conflicts, patient suffering, and lack of autonomy.[8] Despite their professional obligations, nurses can experience serious psychological impacts from their work.[9]

For many nurses, enduring persistent negative experiences in the workplace cause dissatisfaction with their job to reach a critical level.[10] Various factors can drive a nurse's intention to leave their profession; research suggests that demanding working environments, chronic work stress, and burnout are key reasons for nurse dropout.[11] Burnout is a gradual psychological response to prolonged interpersonal stressors in the workplace. It is characterised by three dimensions: emotional exhaustion, which manifests in mental and physical fatigue and leads employees to feel overextended at work. Depersonalisation or cynicism, refers to a detached response to other people and negative attitudes towards one's work and organisation. The third dimension is reduced personal accomplishment, representing a deterioration of personal efficacy and feelings of incompetence at work.[12,13]

Research on burnout in nurses has demonstrated positive impacts from organisational resources such as authentic leadership,[14] supervisor support,[15] direct communication, and managerial responsiveness.[16] Less is known about the role of personal psychological resources related to burnout and turnover in nurses. We, therefore, seek to build on findings indicating that personal resources like resilience and emotional intelligence are associated with lower levels of burnout in nurses.[17,18] Given the detrimental effects that burnout has on nurses' health, wellbeing, and retention, it is critically important that preventative resources and strategies continue to be identified.

Personal resources have been linked to resilience and an individual's "ability to successfully control and impact their environment, especially during challenging circumstances.[19](p632) These resources are fundamental to an individual's adaptability in an organisational context.[20] They represent an individual's ability to maintain confidence to take on challenging tasks, sustain positive attributions about succeeding now and in the future, persevere towards desired outcomes, and bounce back from adversity.[21]

Psychological Capital (PsyCap), a key concept in measuring personal resources, represents an individual's positive psychological state of development that comprises four personal resources: self-efficacy, hope, resilience, and optimism.[22] Research has shown that combining these resources has a synergistic effect and predicts job performance and satisfaction stronger than any of the personal resources individually.[23] Importantly, the PsyCap tool is state-like and thus open to development which is particularly advantageous in intense, unpredictable working environments.[24,25] PsyCap research has demonstrated that personal resources are important in supporting employees to meet work demands effectively.[23]

These personal psychological resources provide the emotional, cognitive, and motivational foundation for individuals to mitigate the impact of negative workplace experiences.[26] However, only limited evidence was identified

in an Australian nursing context. In a sample of Canadian nurses, PsyCap was negatively related to emotional exhaustion and cynicism,[14] as well as psychological distress.[27] We aim to investigate whether personal resources are associated with burnout and intention to leave the profession in Australian hospital nurses. We predict that nurses scoring high on burnout will be more likely to reveal intentions to leave. We further predict that nurses scoring high on personal resources (PsyCap) will score lower on burnout and intentions to leave.

## METHOD

### PARTICIPANTS

A convenience sample of Australian hospital nurses was recruited through social media posts, the Queensland Nurses & Midwives' Union newsletter, and direct email contact with nursing administrators who agreed to distribute the survey to hospital nurses. Eligible participants should meet the following criteria: (1) holding a tertiary qualification in nursing (e.g., bachelor's degree, diploma), (2) being employed as a nurse (enrolled nurse, registered nurse, clinical nurse, clinical nurse consultant) in an Australian hospital, (3) working 30 hours or more a week, and (4) having one or more years of nursing employment.

### MEASURES

Nurses were asked to provide demographic information, including their age, gender, nursing experience/time in the profession, state or territory of employment, and employment basis (hours worked per week).

*Burnout* was measured with the Maslach Burnout Inventory–Human Services Scale (MBI-HSS).[12] The MBI-HSS assesses burnout across three dimensions: emotional exhaustion, depersonalisation, and personal accomplishment. The MBI-HSS consists of 22 items across three subscales, with responses recorded on a 7-point response format. For this study, the word 'recipient' was exchanged for 'patient' to characterise a nursing-specific context. Items were posed as statements such as 'I feel frustrated by my work', 'I feel burned out from my work', and 'I don't really care what happens to some of my patients'. Participants responded by indicating the frequency in which they experience feelings related to each item from 0 (never) to 6 (every day). High scores on emotional exhaustion (>27), depersonalisation (>13), and a low score on personal accomplishment (<31) indicative of a high degree of experienced burnout, as suggested by Maslach and colleagues.[12] All MBI-HSS subscales have demonstrated acceptable internal consistency ('emotional exhaustion' $\alpha = .90$, 'depersonalisation' $\alpha = .79$, 'personal accomplishment' $\alpha = .71$).[12] A comprehensive overview of convergent and discriminant validity among human service professionals is provided by Maslach and colleagues.[12]

*Intentions to Leave the Profession* were measured using three items: (1) 'I think a lot about leaving the profession', (2) 'I am actively looking for another job outside the nursing profession', and (3) 'I will leave the nursing profession as soon as possible'.[28] Participants responded on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores on this measure indicated stronger intentions to leave the profession. This measure was specifically developed to assess turnover intentions in nurse participants.[28,29] Acceptable internal consistency has been demonstrated ($\alpha = .75–.83$).[28]

*Personal psychological resources* were measured with the Psychological Capital Questionnaire (PCQ-24).[24] The PCQ-24 consists of four subscales representing each component of Psychological Capital (PsyCap: hope, resilience, self-efficacy, optimism). Each subscale consists of six items measured using a 6-point Likert scale. Items were posed as statements such as 'I feel confident analysing a long-term problem to find a solution' and 'When I have a setback at work, I have trouble recovering from it, moving on'. Participants respond by indicating the strength of their agreement from 1 (Strongly Disagree) to 6 (Strongly Agree). Negatively worded items were reverse scored; scores from each subscale generated an overall PsyCap score. In previous studies, the PCQ-24 has demonstrated high internal consistency (Cronbach's $\alpha = .93$).[30] The initial validation study by Luthans and colleagues found that the PCQ-24 predicted relevant occupational outcomes better than any of its components.[24] The PCQ-24 has been used in studies with nurse participants.[14]

### PROCEDURE AND DESIGN

Human Research Ethics Committee at Southern Cross University approved this study (2022/074). A correlational cross-sectional design aimed to investigate hypothesised relationships through self-report quantitative measures. Qualtrics (www.qualtrics.com), an online survey platform, was used to design and distribute the anonymous online questionnaire and planned to be available from June to November 2022. The survey link would take potential participants directly to a participant information sheet which provide details of the study, ethics approval, and contact information. Informed consent was assumed for participants that elected to proceed with the survey. Upon survey completion, participants were offered the opportunity to enter their email if they wished to receive a summary of the research results and were thanked for their participation.

### STATISTICAL ANALYSES

Descriptive and inferential statistical analyses were conducted in SPSS version 28.0. Composite scores for all study variables were calculated as the total item scores in each sub-scale. To describe nurses' degree of burnout, total scores for each dimension were categorised as low, average, or high,

 https://doi.org/10.37464/2023.403.1129

as defined by Maslach and colleagues.[12] Turnover intentions scores were categorised as 'high' if the results exceeded a score of 10, indicating at least two non-neutral responses. Maslach and colleagues recommend that inferential statistical analysis be conducted on original numerical total scores for each burnout subscale.[12] A hierarchical multiple linear regression analysis was conducted to examine the extent to which each burnout dimension predicted turnover intentions. For this regression model, the demographic variables age, gender, and nursing experience served as control variables and were entered at Step 1. Predictor variables emotional exhaustion, depersonalisation, and personal accomplishment were entered simultaneously at Step 2. Finally, four hierarchical multiple linear regression analyses were conducted to determine PsyCap's relationship with each burnout dimension and turnover intentions. For each regression model, these demographic variables were also entered as control variables in Step 1; PsyCap was entered as the predictor variable in Step 2.

## RESULTS

### DEMOGRAPHIC INFORMATION

The sample consisted of 234 females (90.7%), 23 males (8.9%), and one not specified (0.4%). The participants were aged between 21 and 72 years ($M = 41.8$, SD=13.7) and, on average, had 17.3 years (SD=13.3) of nursing experience (range 1-55 years). Nurses from six states of Australia responded to the survey between June and November 2022 (Queensland = 213, New South Wales = 23, Victoria = 14, Western Australia = 2, Tasmania = 2, Northern Territory = 4).

### BURNOUT AND TURNOVER INTENTIONS

The survey data revealed that emotional exhaustion (EE) was highly prevalent in this sample of nurses: 68.6% of nurses scored above the 'high' EE cut-off point (>27) recommended by Maslach and colleagues.[12] Further, 31.8% of nurses scored 'high' for depersonalisation (DP) (>13), and 31.8% scored 'low' for personal accomplishment (PA) (<31). Further, 38.8% of hospital nurses had high intentions to leave the profession (score >10). All correlations were in the expected direction. Emotional exhaustion and depersonalisation positively correlated with the nurses' intention to leave the profession. In contrast, personal accomplishment was negatively correlated with the intention to leave, and positively correlated with psychological resources, see Table 1.

Missing values analysis indicated a small proportion of missing data (1.1%). Little's Missing Completely at Random test was significant, $\chi^2$ (1349) = 1567.91, $p = .000$, indicating data was not missing completely at random. However, subsequent analysis revealed no pattern for the missing data. To maintain statistical power, missing values (13.6%) were imputed through expectation-maximisation procedures in SPSS version 28. Reliability coefficients exceeded .70 for all study subscales indicating acceptable internal consistency (see Table 1).[31] Histograms, Q-Q plots, skewness, and kurtosis statistics were below an absolute value of one, indicating that data was normally distributed for all study variables.

A hierarchical multiple linear regression (MLR) analysis was conducted to investigate the relationship between nurses' burnout and intention to leave the profession. Demographic characteristics nursing experience, age, and gender were entered into the regression model at Step 1 to control for their potential influence on turnover intentions. No causal sequence was identified for the main predictors; therefore, EE, DP, and PA burnout dimensions entered simultaneously in Step 2.

Assumptions of MLR were evaluated before the interpretation of the overall model. No univariate outliers were identified as standardised residuals were all within ±3.29 *SD*s from the mean.

Step 1 in the model was not significant, $F(3,206) = 2.33$, $p = .076$, ($R2 = .03$). However, the inclusion of the burnout dimensions EE, DP, and PA in Step 2 accounted for an additional 42.4% of variance in turnover intentions, $DF(3,203) = 52.76$, $p < .001$. This model was significant (see Table 2), $F(6,203) = 28.42$, $p < .001$, and accounted for 44% of variance in turnover intentions with a large effect ($f^2 = .84$).[32] EE was the strongest predictor of turnover intentions in the overall model, $t(203) = 8.53$, $p < .001$ (b = .56), explaining 19.5% of unique variance. PA was also a significant predictor

**TABLE 1: MEANS, STANDARD DEVIATIONS, RANGE, CRONBACH'S ALPHA, AND BIVARIATE CORRELATIONS FOR EMOTIONAL EXHAUSTION (EE), DEPERSONALISATION (DP), PERSONAL ACCOMPLISHMENT (PA), PSYCHOLOGICAL CAPITAL QUESTIONNAIRE (PCQ-24), AND TURNOVER INTENTION (TI) (N = 258)**

| Variable | *M* | *SD* | Range | α | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|
| 1. MBI – EE | 32.2 | 12.2 | 0–54 | .90 | – | | | | |
| 2. MBI – DP | 9.7 | 7.1 | 0–30 | .79 | .57* | – | | | |
| 3. MBI – PA | 34.6 | 7.4 | 0–48 | .75 | –.27* | –.26* | – | | |
| 4. PCQ-24 | 96.3 | 14.7 | 24–144 | .88 | –.43* | –.27* | .58* | – | |
| 5. TI | 9.1 | 3.7 | 5–15 | .88 | .59* | .37* | –.32* | –.41* | – |

Note: * p<.001

## TABLE 2: PREDICTING TURNOVER INTENTIONS FROM EMOTIONAL EXHAUSTION, DEPERSONALISATION AND PERSONAL ACCOMPLISHMENT

| Predictor | *B* | *SE (B)* | β | 95% CI (*B*) [LL, UL] | $sr^2$ |
|---|---|---|---|---|---|
| **Step 1** | | | | | |
| Age | –.01 | .04 | .05 | [–.06, .09] | .00 |
| Gender | .65 | .90 | .05 | [–1.1, 2.4] | .00 |
| Experience | .03 | .04 | .13 | [–.04, .11] | .00 |
| **Step 2** | | | | | |
| Age | .03 | .03 | .10 | [–.03, .08] | .00 |
| Gender | –.05 | .68 | .00 | [–1.4, 1.3] | .00 |
| Experience | .02 | .03 | .07 | [–.04, .08] | .00 |
| MBI – EE | .17 | .02 | .56 | [.13, .21] | .20* |
| MBI – DP | .04 | .04 | .07 | [–.03, .12] | .00 |
| MBI – PA | –.08 | .03 | –.15 | [–.13, –.02] | .02* |

Note: Standardised (B) and Unstandardised (SE B), Regression Coefficients (b), Confidence Intervals (CI), and Squared Semi-Partial Correlations (sr2). *p<.05 **p<.001

## TABLE 3: PREDICTING EMOTIONAL EXHAUSTION, PERSONAL ACCOMPLISHMENT AND DEPERSONALISATION FROM PERSONAL RESOURCES (PCQ-24)

| Predictor | Emotional Exhaustion (EE) | | | Personal Accomplishment (PA) | | | Depersonalisation (DP) | | |
|---|---|---|---|---|---|---|---|---|---|
| | *B* [95% CI] | β | $sr^2$ | *B* [95% CI] | β | $sr^2$ | *B* [95% CI] | β | $sr^2$ |
| **Step 1** | | | | | | | | | |
| Age | –.06 [–.30, .19] | –.07 | .00 | –.01 [–.17, .14] | –.03 | .00 | –.12 [–.26, .02] | –.23 | .01 |
| Gender | 2.51 [–3.2, 8.3] | .06 | .00 | –3.0 [–6.6, .54] | –.12 | .01 | 1.2 [–2.0, 4.5] | .05 | .00 |
| Experience | .10 [–.15, .35] | .11 | .00 | .03 [–.13, .18] | .05 | .00 | –.03 [–.17, .12] | –.05 | .00 |
| **Step 2** | | | | | | | | | |
| Age | –.18 [–.40, .05] | –.20 | .01 | .09 [–.03, .22] | .17 | .01 | –.17 [–.30, –.03] | –.32 | .02* |
| Gender | .50 [–4.8, 5.8] | .12 | .00 | –1.2 [–4.1, 1.7] | –.05 | .00 | .42 [–2.7, 3.6] | .02 | .00 |
| Experience | .19 [–.04, .41] | .21 | .01 | –.05 [–.17, .08] | –.09 | .00 | .01 [–.13, .15] | .02 | .00 |
| PCQ–24 | –.35 [–.46, –.24] | –.42 | .17** | .31 [.25, .37] | .60 | .35** | –.14 [–.21, –.08] | –.29 | .08** |

Note: *p<.05, **p<.001

and explained 2.1% of unique variance, $t(203) = -2.80$, $p = .006$, (b = -.15). Nurses in this study who scored high for emotional exhaustion and low for personal accomplishment were more likely to have high turnover intentions.

## PERSONAL RESOURCES AND BURNOUT

Three hierarchical MLR analyses were conducted to investigate the relationship between nurses' psychological resources (PsyCap) and the three subscales measuring burnout. Demographic variables, age, gender, and experience were again entered at Step 1 of each hierarchical MLR to control for their potential influence on the outcome variable.

The first analysis was used to assess whether PsyCap was a significant predictor of EE. No univariate or multivariate outliers were identified; assumptions of normality, homoscedasticity, and multicollinearity were met. The Step 1 model was not significant, $F(3,206) = .591$, $p = .621$, ($r2 = .01$). After PsyCap was entered at Step 2, an additional 16.6% of variance in EE was explained, which according to Cohen is a medium effect ($f^2 = .21$).[32] The model was significant (see Table 3), $F(4,205) = 10.87$, $p < .001$ ($r2 = .18$). PsyCap was the only significant predictor of EE in the overall model, $t(205) = -6.43$, $p < .001$, (b = -.42). Nurses who had higher PsyCap scores had lower scores on emotional exhaustion in this study.

The second analysis was conducted with the burnout dimension PA as the outcome variable. The model at Step 1 was not significant, $F(3,206) = .97$, $p = .409$, ($r2 = .01$). In Step 2, the addition of PsyCap explained a further 34.1% of variance in PA, with a large effect ($f^2 = .55$).[32] The model was significant (see Table 3), $F(4,205) = 28.19$, $p < .001$, ($r2 = .34$). PsyCap was the only significant predictor in the overall model, $t(205) = 10.41$, $p < .001$, (b = .57). Nurses with higher PsyCap scores, scored higher on personal accomplishment.

**TABLE 4: PREDICTING TURNOVER INTENTIONS FROM PERSONAL RESOURCES (PCQ-24)**

| Predictor | *B* | *SE (B)* | β | 95% CI (*B*) [LL, UL] | $sr^2$ |
|---|---|---|---|---|---|
| **Step 1** | | | | | |
| Age | .01 | .04 | .05 | [–.06, .09] | .00 |
| Gender | .65 | .89 | .05 | [–1.1, 2.4] | .00 |
| Experience | .03 | .04 | .13 | [–.04, .11] | .00 |
| **Step 2** | | | | | |
| Age | –.02 | .04 | –.09 | [–.09, .04] | .00 |
| Gender | .00 | .81 | .00 | [–1.6, 1.6] | .00 |
| Experience | .06 | .04 | .23 | [–.01, .13] | .01 |
| PCQ–24 | –.11 | .02 | –.44 | [–.15, –.08] | .18* |

Note: Standardised (B) and Unstandardised (SE B), Regression Coefficients (b), Confidence Intervals (CI), and Squared Semi-Partial Correlations (sr2). *p<.001

The third analysis conducted with the burnout dimension DP as the outcome variable indicated that the model at Step 1 was significant (see Table 3), $F(3,206) = 5.56$, $p = .001$, and explained 7.5% of the variance in DP. Adding PsyCap in Step 2 explained a further 7.8% of variance. The model was significant and explained 15.3% of the variance in DP, $F(4,205) = 9.25$, $p < .001$, with a medium effect ($f^2 = .18$).[32] PsyCap was a significant predictor in the overall model, $t(205) = -4.34$, $p < .001$, (b = -.29), as was age, $t(205) = -2.40$, $p = .017$, (b = -.32), which explained 2.4% of unique variance. Nurses who had higher PsyCap scores and were older scored lower on depersonalisation.

### PERSONAL RESOURCES AND TURNOVER INTENTIONS

A fourth and final hierarchical MLR was used to examine the relationship between PsyCap and intentions to leave the profession. All assumptions were satisfied. At Step 1 the model was not significant, $F(3,206) = 2.32$, $p = .076$, ($r2 = .03$). When PsyCap was entered at Step 2 it explained an additional 18.2% of variance in turnover intentions, $DF(1,205) = 47.47$, $p < .001$. The model was significant with a medium effect size ($f^2 = .27$)[32], $F(4,205) = 14.01$, $p < .001$, ($r2 = .22$), see Table 4. PsyCap was the only significant predictor of turnover intentions in the overall model, $t(205) = -6.89$, $p < .001$, (b = -.44). Nurses who scored higher on PsyCap had lower intentions to leave the profession.

## DISCUSSION

The degree of burnout observed in this study was alarming, with 69% of hospital nurses reporting high levels on the subscale emotional exhaustion. Over one-third of the nurses (39%) seriously considered leaving their profession. These results correspond to a concerning trend in research, with various studies reporting severe burnout levels in Australian nurses.[7,17,33]

Hospital nursing is a complex and intense working environment where nurses are expected to handle significant physical, mental, and interpersonal demands.[34] The high-intensity hospital environments also offer little opportunity for nurses to recover from stressful events or situations, meaning workplace stressors often compound negative effects.[35] Consistent with Maslach and colleague's conceptualisation of burnout, emotional exhaustion was the principal symptom observed in this study.[13] However, depersonalisation and reduced personal accomplishment provide further insight into the various manifestations of burnout in the nursing workforce. Nurses can develop an indifference to patients and a cynical attitude because of overwhelming demands at work.[36] Considering the prevalence of emotional exhaustion, it is no surprise that many of these nurses' also distance themselves from their patients and develop negative attitudes towards their workplace. Similarly, overwhelming demands and exhaustion reduce a nurse's capacity to operate effectively in their work environment, which can significantly erode their sense of effectiveness and accomplishment.[13]

One interesting finding is that significantly fewer nurses indicated high experienced burnout on the depersonalisation and personal accomplishment dimensions compared to emotional exhaustion. This suggests that many nurses can maintain engagement and a sense of effectiveness while simultaneously experiencing exhaustion in the workplace. A possible explanation may be that nurses develop a strong interpersonal and physical skillset that allows them to continue working effectively and sustain engaging relationships with patients regardless of their emotional state.[37]

But it comes at a cost, with most hospital nurses experiencing at least one burnout symptom, as evidenced in this study. Facing many challenges in their working environment, and without intervention, these stressors will continue to play a central role in initiating burnout symptoms.

Nurses with high emotional exhaustion and low personal accomplishment had higher intentions to leave the profession, however, contrary to what we expected and previous research, depersonalisation did not significantly correlate with intent to leave. Prior research has consistently associated burnout with negative workplace outcomes like withdrawal, absenteeism, dissatisfaction, and low organisational commitment.[38] Therefore, the current findings corroborate existing evidence and offer a renewed perspective on the impact of burnout in the Australian nursing workforce. There was a strong association between emotional exhaustion and turnover intentions. Individuals experiencing exhaustion often seek to distance themselves emotionally and cognitively from their work.[13] Therefore, it is plausible that emotional exhaustion is a product of overload or distress in the workplace that prompts nurses to withdraw psychologically and potentially physically from their work.[38] Similarly, a lack of reward and a sense of inefficacy takes a substantial toll on nurses' motivation and self-esteem, directly impacting job satisfaction and their intention to stay.[35]

Our results indicate that stronger personal psychological resources predict lower burnout and turnover intentions in hospital nurses. Much of the nursing burnout and intent to leave literature focuses on negative aspects of the work environment. Less research has been focusing on positive factors, although authentic leadership,[14] supervisor support,[15] direct communication, and managerial responsiveness has shown that these can promote positive workplace outcomes for nurses.[16] For instance, nurses with high psychological capital are more likely to have confidence in their ability to solve problems and focus on positive aspects of their work environment.[14] Positive responses to workplace stimuli promote positive attitudes such as empowerment, job satisfaction, and organisational commitment that have a tangible impact on personal and occupational wellbeing.[21] This likely explains why nurses with higher psychological capital also have less intention to leave the profession.[39]

Enhancing personal psychological resources could play an important role in assisting nurses to operate effectively in the workplace. Thereby reducing the likelihood that they will experience burnout and develop turnover intentions. So far, a psychological capital micro-intervention and web-based training intervention have demonstrated effectiveness in increasing participants' psychological capital.[23,40] However, further development and testing of alternative delivery methods are required to determine the efficacy of current interventions.[21] Overall, the findings of this study show that personal psychological resources are an asset for nurses and should be supported by human resource interventions to combat negative workplace outcomes.

### LIMITATIONS

The cross-sectional correlational research design meant that causality could not be determined for significant relationships. A longitudinal design may assist in probing causal mechanisms and directional relationships between study variables. Future iterations of this research should also include additional demographic information, such as marital status, number of dependents, and income, that could potentially influence the main study variables in this study. Participants were recruited through social media, newsletter, and nursing administrators resulting in a convenience sample instead of randomly recruiting participants from the population of Australian nurses. The exclusive use of self-report measures also increased the risk of information bias through recall errors.

### IMPLICATIONS FOR RESEARCH, POLICY, AND PRACTICE

The results of this study indicate that burnout poses a significant threat to hospital nurses and the healthcare system. Future research should expand on these findings by exploring qualitative accounts of burnout experiences. A qualitative research design would offer an appropriate environment for nurses to describe the antecedents and consequences of their personal burnout experiences. It could also be an effective forum to explore nurse perspectives on strategies that could be implemented to mitigate burnout and inform policy. Nursing managers, hospital human resource departments, and healthcare organisations should prioritise the development of effective strategies to reduce burnout in nurses. The results also support theory and prior research that suggests that personal psychological resources play a protective role against negative workplace outcomes like burnout and turnover intentions. To date, there has only been marginal success in implementing targeted interventions to increase psychological capital. There is yet to be a study that explores workplace interventions to increase nurses' psychological capital. Supporting nurses to build their personal psychological resources could combat negative workplace outcomes; developing these resources would benefit the entire healthcare system and potentially change policy.

## CONCLUSION

The health and wellbeing of nurses should be a priority for healthcare organisations; the working conditions nurses face in Australian hospitals cause many to be impacted by work stress. Emotional exhaustion was highly evident in nurses who participated in this study, and many experienced severe feelings of depersonalisation and lack of accomplishment at work. As nurses who experienced high emotional exhaustion and low personal accomplishment had stronger intentions to leave the nursing profession, solutions to improve nurse

 https://doi.org/10.37464/2023.403.1129

retention should focus on reducing burnout and increase their psychological resources. Encouragingly, our results suggest that nurses with stronger personal resources (self-efficacy, hope, optimism, resilience) experience less burnout and have less intentions to leave the profession. Future research should investigate targeted interventions how to develop these personal resources, especially in the nursing population.

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RESEARCH ARTICLES

# The impact of using an academic electronic medical record program on first-year nursing students' confidence and skills in using E-documentation: a quasi-experimental study


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## ABSTRACT

**Objective:** To evaluate the impact of using an academic electronic medical record program on first-year nursing students' confidence and skill in E-documentation after their hospital clinical placement.

**Background:** Registered nurses are the largest user group of health information technology systems such as patient electronic medical records (eMR). As such, nurse undergraduate programs need to reflect contemporary practices and respond to emerging trends including digital technology, however integration of eMR learning has not occurred in many countries. To address this gap, a fit-for-purpose academic eMR simulation program was developed by nursing academics and a university Learning Design Department member.

**Study Design and Methods:** A quasi-experimental study design, with self-administered pre-test, post-test surveys, was used with a convenience sample of all first-year nursing students at one regional university in NSW Australia in 2019 and 2021.

**Results:** A total of 105 students completed the surveys (9.7% pre, and 7.4% post-test survey). Only 23% of respondents received training during hospital clinical placement on eMR and electronic observation charts. There was a significant increase in participant confidence and knowledge in documenting in electronic adult observational charts and notes after using the academic eMR program and attending clinical placement. Three themes emerged from the qualitative data: *preparation for practice; more exposure increases confidence;* and *we can't forget the patient.*

**Conclusion:** Students acknowledged the need for repeated practice using an academic eMR program in university learning environments to ensure they would be work-ready. The identified challenge was the communication barrier (computer on wheels) and

the potential negative impact on person-centred care and therapeutic communication.

**Implications for research, policy and practice:** Further research is required to determine whether repeated practice with electronic documentation is best placed within a curriculum to increase learner confidence. Simulations that incorporate workstations on wheels should be tested to determine best practice for therapeutic communication.

**What is already known about this topic?**
- Registered nurses are the largest user group of health information technology systems.
- Nursing undergraduate program needs to reflect contemporary practices including digital technologies.
- Integration of eMR education in undergraduate nursing programs has not occurred in many countries.

**What this paper adds:**
- Evaluation of a fit-for-purpose academic electronic medical record program integrated into an undergraduate nursing student's curriculum.
- There was a significant increase in participant confidence and knowledge in documenting in electronic adult observational charts and notes after using the academic eMR program.
- Digital technology education tailored for students of different age groups may be required.

**Keywords:** Electronic medical records, nursing undergraduate curriculum, confidence and skills

## OBJECTIVE

This study evaluated how an academic patient electronic medical record (AeMR) simulation program supports and impacts the development of first-year nursing student's knowledge and confidence for clinical experience.

## BACKGROUND

Patient electronic medical records (eMR) and electronic medication charts are entrenched in most public health systems in countries such as the United States, United Kingdom, Canada, and Australia.[1] Health information technology systems were initially introduced with the dual purpose of patient safety and cost saving, whilst eMR has also proven effective in predicting patient outcomes.[2] A feature of many eMR programs, for example, is being able to 'track' a patient's progress with inbuilt processes to 'trigger' alerts and escalate care requirements.[3] Registered nurses are the largest user group of health information technology systems and use programs such as eMR on a daily basis in clinical practice.[4] Despite broad adoption in clinical practice, academic eMR integration in Australian undergraduate nursing and midwifery programs has not occurred.[5] This delay in integration has resulted in a disconnect between higher education institutes' capacity and health services expectations of work-ready graduates.

Documentation is a key requirement of any health profession and is a skill that requires development and practice. Having exposure to the appropriate patient charts is considered a resource that can increase the authenticity of the simulation and assist students to prepare for the clinical environment.[6] Understandably, the traditional and long-standing approach to teaching students how to record patient care and progress is by using paper charts. These paper documents mimic or replicate those used in health facilities. Contemporary health services have moved on and no longer rely solely on paper-based documentation, so offering students rehearsal with paper-based only opportunities is limiting and does not offer a true representation of clinical practice. There is little published evidence, but it appears that Australian nursing students do not receive formal training in the use of eMR when commencing their clinical placement in hospitals but rather receive ad-hoc training by the ward nurse who is rushed and time-poor.[7] Given eMR is viewed as a critical component to delivering quality safe patient care, to educate students without access and the opportunity to familiarise themselves with technology is inadequate.[1]

Nursing undergraduate program content should align with contemporary practices in health and respond to emerging trends such as digital health technology.[8](8) Increasingly in most healthcare settings, digital technologies are utilised for their inherent links between staff education and patient safety.[9] It is not surprising then, that contemporary nursing program accreditation standards warrant student exposure to digital health content in (Australian) undergraduate curricula.[5,7,8]

International research has demonstrated that students who have experience using eMR in the university environment, or who have received education about their use report that the exposure provided the opportunity to realistically delivery of patient care.[10,11] In addition to this, students report improved attitudes to learning and confidence and exhibit enhanced digital capacity to retrieve and interpret patient information.[6,10-12] Contemporary nursing students have a distinct variability in digital literacy.[13]

There is no published studies exploring the Australian nursing students experience in using an academic eMR program in their education program and impact on their confidence and skills in electronic documentation after their clinical placement, thus this research attempts to fill this research knowledge gap.

## METHODS AND MATERIALS

### STUDY DESIGN AND SAMPLE

A quasi-experimental descriptive study design with self-administered pre-test, post-test surveys were used for this study. A quasi-experiment is a study where participants self-select to be included in research comparing the real-world effectiveness of the topic being researched.[14] A convenience sample of all first-year nursing students at one regional university in NSW Australia (three campuses) were invited to participate in 2019 (n=625) and 2021 (n=455). The inclusion criteria were first year nursing students enrolled in a second semester course that included a theoretical component and clinical practice placement, thus the only exclusion criteria were students not enrolled in a first-year second semester course that had a theoretical component and clinical practice placement.

The Academic eMR (AeMR) program was integrated into the first-year nursing clinical course in semester two 2019. Instructions on the AeMR commenced in week one and two tutorials with a case scenario; all students were provided with a weblink to the AeMR program. Students were instructed to use the AeMR on their own device (mobile, laptop, ipad) outside of class across the semester and as often as they wanted. Students were supplied with two links to the AeMR in their course material: 1) to access the AeMR program; and 2) a video on how to use the AeMR program. Regardless of study participation, all students were invited to use the AeMR program and practice documentation of patient care including charting vital signs (observations). The learning objectives in the course and support received were the same; the only difference was the optional use of AeMR program. All students received learning on paper-based documentation only in the compulsory simulated learning environments (SLEs).

The students were surveyed at two points during the semester: 1) at the beginning of the semester (Week Two); and 2) end of the semester- after 10 tutorials and clinical placements (Week 12). Participation had no impact on course completion or course grade. Surveys were not distributed during 2020 due to unpredictable disruption with campus learning and clinical placement due to Covid-19 pandemic. Students were not identified in the surveys, so it cannot be guaranteed that each survey had the same participants. Further information on the survey tools is in the Survey Tool section.

### RECRUITMENT AND DATA COLLECTION

After receiving university ethical approval (HREC 2019-0241), all eligible first-year nursing students were invited to voluntarily participate at the beginning of semester two via their student email address with the study information sheet which clearly explained the study purpose and when pre- and post-test questionnaires were to be completed. Also, there was an announcement posted to the course learning management site with the participant information sheet and a link to online anonymous pre-test online survey (SurveyMonkey®). Posters were displayed on campus explaining the research project in classrooms, toilets and library.

Near the end of the semester, after completing at least 10 tutorials and clinical placements, all eligible students received an email explaining the post-test survey with the study information sheet. Again, announcements were posted on the course LMS site as well as at the campus with the participant information sheet and link to the online anonymous post-test survey. This allowed any student who didn't participate in the initial survey to have the opportunity to provide feedback on using AeMR and the impact on their knowledge and confidence levels on using health eMR in clinical placement.

### EDUCATION INTERVENTION

In late 2018, a fit-for-purpose AeMR simulation program, was developed by a member of the university Learning Design and Teaching Innovation Department (AM). The development of the AeMR ran on an Agile/Prototype based approach cycling continuously between developer and academics. Prototype versions were used as staging points for discussion between the parties. The AeMR included three components: 1) An adult general observation chart (eObs) based on the standard adult observation charts used by most states in Australia; 2) patient medication chart; and 3) patient notes. The design and development approach of the AeMR was to create a stripped back simulation of a real work eMR software experience, whilst retaining a focus on modern user experience/user interface principles, accessibility, and on-demand learning.15 Particular focus was placed on the eObs chart portion of the application in which the user/student had the ability to input patient observation and generate a common format chart visualisation. With the idea being that the user/student could see how their digital input could reflect on the possible status of the patient and any deterioration.

The AeMR was built as a single page application using the Vue.js framework, working on top of the standard web technologies of HTML, CSS and JavaScript. With the user interface and experience being influenced by a variety of popular eMR software as well as anecdotal evidence taken within the NSW hospital environment. The idea behind the

visual design was to create a middle ground between the potential complexity of a full eMR software and a simpler web-based application. This would potentially mitigate overwhelming the user, whilst retaining similarities between the simulated experience and real world eMR software.

### SURVEY TOOL

The study surveys were developed based on the available literature,[5] and components from our previous study as there was not a survey scale or tool that met the full requirements of this study.[7] The pre-test questionnaire had two sections: A) demographic details (six questions); and B) 5-point likert-scale questions on the student's confidence and level of knowledge in using paper and electronic observation charts, MIMS (Monthly Index of Medical Specialties) and medical records (12 questions) and one open-ended text for any final comments.

The post-test questionnaire had four sections: A) demographic details [six questions]; B) use of AeMR and any EMR training [three closed and two open-ended questions]; C) 5-point Likert scale questions on the student's confidence and level of knowledge in using paper and electronic observation charts, MIMS and medical records [12 questions] and one open-ended question on student's views on the learning paper-based and electronic documentation; and D) 5-point likert scale face and content validity statements for the eObs chart and eMR. This paper will focus on section three: students' confidence, knowledge and views on electronic documentation and AeMR program.

### DATA ANALYSIS

Electronic responses were entered directly into SurveyMonkey® by the respondents. Survey data was then imported into SAS v9.4 for statistical analysis (SAS Institute, Cary, North Carolina, USA). Descriptive statistics were created to summarise the demographic information and responses to the pre and post surveys. Any incomplete surveys were not included in the final analysis. Categorical variables were summarised through frequencies and percentages [n (%)]. Numerical variables were summarised through median and interquartile range [Median ($Q_1$, $Q_3$)].

After visual verification that population characteristics were similar between the years, 2019-pre and 2021-pre were combined, and 2019-post and 2021-post were combined to achieve a pre and post comparison of self-reported confidence/knowledge in paper and electronic medical record related tasks. Furthermore, responses to the relevant items were dichotomised (Extremely/Very, Somewhat/Not so/Not at all). Differences in the proportions of the responses for the relevant items between the two-time points was examined using the Chi-Squared test. Levels of significance will be reported as $p< 0.05$.

A qualitative thematic approach was used to analyse the post-test open-ended question. The fundamental or generic qualitative method aims to discover and understand a phenomenon, or the perspectives of people, with themes generated from cumulative counts of like comments.[16] To establish reliability, two of the authors (LM, PI) first read through students' comments and reflected on them using margin notes, highlighting keywords and then counting the number of key findings to generate initial themes to compare so that the analysis was reflexive and interactive. To reach consensus, all authors met to refine and conceptualise the themes.

## RESULTS

When combining 2019 and 2021 participants, a total of 105 students participated in the pre-test survey and 80 students in the post-test survey, a response rate of 9.7% in the pre-test and 7.4% in the post-test which is reflective of low response rates surveying students with online questionnaires.[17] As shown in Table 1, participant ages ranged from 21-37 years of age (median 27-28 years), most were female (90% pre-test, and 89% post-test) and undertaking full-time study (88% pre-test, 91% post-test) which is consistent with the nursing student population at the university. It is interesting to note the increased percentage of respondents having an Assistant in Nursing (AIN) qualification from 16% in the pre-test early in the 2nd semester compared to 31% in the post-test which occurred late in the semester.

Only 23% (n=17) of student respondents had received preliminary training in a hospital during clinical placement on eMR and the use of eObs chart (31%, n=23). Over half (64%, n=48) of the student respondents had accessed the AeMR program, with the use ranging from one- twenty times (average four times) during the study timeframe. A total of 27 students had not accessed the AeMR program, of which 25 had not received any training at a hospital during clinical placement.

Comparing the pre and post responses, student respondents significantly increased levels of **confidence** in documenting observations/vital signs in the AeMR program, eObs chart and finding information about medications in the MIMs online (Table 2).

Student respondents significantly increased their **knowledge level** on documenting observations/vital signs in the patient eObs chart and in the patient electronic medical record and finding information about medications in MIMS online (Table 3)

 https://doi.org/10.37464/2023.403.1078

## TABLE 1: DEMOGRAPHIC INFORMATION OF PARTICIPANTS BY SURVEY

| Question | Response | 2019 Pre (*n* = 31) *n* (%) | 2021 Pre (*n* = 74) *n* (%) | Pre (*n* = 105) *n* (%) | 2019 Post (*n* = 44) *n* (%) | 2021 Post (*n* = 36) *n* (%) | Post (*n* = 80) *n* (%) |
|---|---|---|---|---|---|---|---|
| What are your qualifications? | AIN | 6 (19%) | 11 (15%) | **17 (16%)** | 10 (23%) | 15 (42%) | **25 (31%)** |
| | Enrolled Nurse | 1 (3.2%) | 3 (4.1%) | **4 (3.8%)** | 0 | 2 (5.6%) | **2 (2.5%)** |
| | Nil | 19 (6.1%) | 50 (68%) | **69 (66%)** | 24 (55%) | 13 (36%) | **37 (46%)** |
| | Other non-health related | 5 (16%) | 10 (14%) | **15 (14%)** | 10 (23%) | 6 (17%) | **16 (20%)** |
| What is your gender? | Female | 28 (90%) | 67 (91%) | **95 (90%)** | 38 (88%) | 32 (89%) | **70 (89%)** |
| | Male | 3 (9.7%) | 7 (9.5%) | **10 (9.5%)** | 5 (12%) | 4 (11%) | **9 (11%)** |
| | Missing | 0 | 0 | **0** | 1 | 0 | **1** |
| Which campus are you attending? | A | 17 (55%) | 51 (69%) | **68 (65%)** | 27 (61%) | 21 (60%) | **48 (61%)** |
| | B | 12 (39%) | 23 (31%) | **35 (33%)** | 17 (39%) | 14 (40%) | **31 (39%)** |
| | C | 2 (6.5%) | 0 | **2 (1.9%)** | 0 | 0 | **0** |
| | Missing | 0 | 0 | **0** | 0 | 1 | **1** |
| Domestic or International status | Domestic | 30 (97%) | 69 (93%) | **99 (94%)** | 43 (98%) | 35 (97%) | **78 (98%)** |
| | International | 1 (3.2%) | 5 (6.8%) | **6 (5.7%)** | 1 (2.3%) | 1 (2.8%) | **2 (2.5%)** |
| What is your current student load? | Full-time | 29 (94%) | 63 (85%) | **92 (88%)** | 41 (88%) | 32 (89%) | **73 (91%)** |
| | Part-time | 2 (6.5%) | 11 (15%) | **13 (12%)** | 3 (6.8%) | 4 (11%) | **7 (8.8%)** |
| What is your age group (years)? | Median (Q1, Q3) | 27 (21, 37) | 28 (21, 36) | **27 (21, 36)** | 28 (22, 36) | 27 (21, 37) | **28 (21, 37)** |

## TABLE 2: PRE AND POST-COMPARISON – SELF REPORTED CONFIDENCE IN ELECTRONIC DOCUMENTATION

| Question | Response | Pre *n* (%) | Post *n* (%) | *P*-value |
|---|---|---|---|---|
| How confident are you now documenting observations/vital signs in the patient electronic observation (eObs) chart? | Extremely/Very Confident | 16 (15%) | 25 (35%) | 0.002 |
| | Somewhat/not so/Not at all | 88 (85%) | 46 (65%) | |
| | Missing | 1 | 9 | |
| How confident are you now in finding information about medications in MIMs online? | Extremely/Very Confident | 22 (21%) | 32 (46%) | <0.001 |
| | Somewhat/not so/Not at all | 81 (79%) | 38 (54%) | |
| | Missing | 2 | 10 | |
| How confident are you now documenting in the patient electronic medical records (EMR)? | Extremely/Very Confident | 7 (6.7%) | 18 (25%) | <0.001 |
| | Somewhat/not so/Not at all | 97 (93%) | 53 (75%) | |
| | Missing | 1 | 9 | |

## TABLE 3: PRE AND POST TEST COMPARATION ON SELF-REPORTED KNOWLEDGE OF ELECTRONIC DOCUMENTATION

| Question | Response | Pre *n* (%) | Post *n* (%) | *P*-value |
|---|---|---|---|---|
| What is your current knowledge level on documenting observations/vital signs in the patient eObs chart? | Extremely/Very knowledgeable | 17 (17%) | 24 (34%) | 0.013 |
| | Somewhat/not so/Not at all | 86 (83%) | 47 (66%) | |
| | Missing | | | |
| What is your current knowledge level on finding information about medications in MIMs online? | Extremely/Very knowledgeable | 16 (16%) | 32 (45%) | <0.001 |
| | Somewhat/not so/Not at all | 87 (84%) | 39 (55%) | |
| | Missing | 2 | 9 | |
| What is your current knowledge level on documenting in the patient electronic medical records | Extremely/Very knowledgeable | 7 (6.8% | 15 (21%) | 0.005 |
| | Somewhat/not so/Not at all | 96 (93%) | 56 (79%) | |
| | Missing | 2 | 9 | |

### THEMES

The final open-ended question asked participants to provide comments on learning to use paper-based and electronic documentation. A total of 21 participants provided comments and were positive when reflecting on their preparation for documentation (n=14, 2019; n=7 2021). Three themes emerged from the data: preparation for practice, more exposure increases confidence, and we can't forget the patient.

#### 1. Preparation for practice

Some students appreciated that they have been exposed to both paper and electronic versions of documentation and related this directly to being workplace ready due to this being *very relevant* to our industry (Student A). As one student commented the dual exposure was important

> "as you will likely encounter both forms of documenting in your nursing career and that being flexible and being able to work with either paper based or electronic based systems is an invaluable skill" (Student B).

Ultimately with a preference for electronic records, another student suggested

> "that it is useful to learn paper-based documentation for familiarisation of content but in reality, electronic documentation is more appropriate for being prepared for placement and career" (Student F).

#### 2. More exposure increases confidence

Several students recommended an increase in use and thus exposure to the electronic medical records program in their university courses. There was a suggestion to provide ongoing access to the eMR program

> "throughout every tutorial… using only here and there, you can forget how to use or where to find information on eMR" (Student D).

Furthering this another suggestion that if eMR was embedded into the simulated learning environment, this would be a way to "bridging the gap to build confidence" (Student G). Ultimately, Student C stated that because the eMR program "closely reflects what I used on my clinical placement in the hospital system… I was more confident."

#### *3. We can't forget the patient*

It was recognised that healthcare services are "moving towards a paperless society and that using eMR would also be beneficial for the environment and long-term costs" (Student H). Another student however raised a potential drawback of the electronic system when used at the bedside

> "A lot of the time the nurse is talking to the patient but appears to show no interest or genuine care because they are typing along at the same time and never really looking at the patient" (Student I).

In light of this potential drawback, there was a request for education that would address this

> "huge communication barrier and learning how to operate it and be mindful of the nurse-patient relationship would be so incredibly beneficial" (Student I).

## DISCUSSION

This is the first study undertaken using an AeMR program specifically designed for Australian nursing students. There was an increase in confidence and knowledge when accessing eObs and eMR and online MIMS across all student age groups. This is a plausible if not predictable finding – with access comes increased self-efficacy. Despite this improvement though, the overall confidence and knowledge levels across all age groups were still perceived as lacking. Whilst clinical placement provides an opportunity to utilise technology, there is a lack of assurance that student users can operate the digital platform adequately. Such that, their reported diminished confidence levels and knowledge about the digital health system may suggest they are not job ready. This aligns with conclusions in the international literature suggesting a need to improve the readiness to practice for new nursing graduates.[18]

A clear finding from this research is a large percentage of students had not received preliminary training during hospital clinical placement on eMR and eObs charts. This lack of education is confounded by the fact that nearly a quarter of participants (24%) had not received any hospital training, not accessed and used the AeMR program. Undergraduate nurse education is committed to educate nurses who can confidently and accurately utilise digital health systems to provide evidence-based, safe, person-centred, quality care.[19] It has been identified in international literature that nursing students require time to process and assimilate all that is learnt so they can exercise judgement and clinical reasoning when undertaking clinical experiences/placements.[5] As eMR is used in many hospitals it is imperative that health professionals, such as nurses, that are using the program need to receive education.

The question is who should provide this education? Whilst the university has the initial responsibility for preparation of student nurses there should be a shared responsibility across the tertiary education system and the healthcare sector in conjunction with professional bodies.[20] Healthcare organisations use specific eMR programs and healthcare staff require training/education to familiarise themselves in these programs, so it would be beneficial to the organisations to provide education/training to nursing students who will be expected to be proficient in using the eMR program. However, students upon registration may choose to travel and work in different regions and states with different health organisations and different eMR programs. For this

reason, international studies have recommended that each university have an AeMR program for undergraduate nursing students to practice in accessing and entering data, using meaningful real-life scenarios scaffolded over the three-year program in a safe simulated environment.[7,21,22]

The study findings revealed student's level of concern about developing a relationship with a patient whilst using a computer at the bedside. The international literature has identified that electronic documentation at the bedside can be a barrier for nurses in providing person-centred care, building positive nurse-patient relationships,[23-25] and effective patient communication.[26] Some considerations proposed by nurses include being aware to balance technology, touch and caring; and recognising the triad relationship between nurse, patient and computer,[24] but more research is needed to develop effective strategies and focused education.

### LIMITATIONS

A recognised limitation is the small number of first-year students who completed the surveys. Other studies have also shown low responses when recruiting students to online surveys.[17] However, respondents' demographics are reflective of students age and gender undertaking nursing undergraduate programs and participating in an online survey.[27] The combined data provides insight into the importance of introducing eMR education in undergraduate nursing curriculum.

## CONCLUSION AND IMPLICATIONS FOR RESEARCH, POLICY AND PRACTICE

As nursing clinical practice shifts to electronic record keeping worldwide, this study showcases the urgent need to integrate education on eMR in undergraduate nursing curriculum, supplemented with training by healthcare organisations during clinical placements. Further development and incorporation of eMR in all case-based and practice scenarios in the university simulation environment is a key recommendation as it is now considered the norm in clinical practice. Thus, students will be work-ready to enter the workforce as more confident and skilled in E-documentation.

**Acknowledgement**: For analysis - statisticians Jason Dizon and Kerrin Palazzi, CReDITSS team, Hunter Medical Research Institute Newcastle, NSW. Australia

**Funding Support**: This work was supported by the University of Newcastle School of Nursing and Midwifery under Seed Grant (no number) for data analysis.

**Declaration of conflicting Interest:** The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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RESEARCH ARTICLES

# 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.

**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

 https://doi.org/10.37464/2023.403.1047

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,

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 |
| 5-10years | 26 | 25 |
| >10 years | 29 | 27 |
| **Redeployment** | | |
| *Time since last being redeployed* | | |
| This month | 26 | 26 |
| 1-6 months | 55 | 56 |
| 6-12 months | 10 | 10 |
| >12 months | 8 | 8.0 |
| *Satisfaction with being redeployed* | | |
| Very satisfied | 2 | 2.2 |
| Satisfied | 5 | 5.3 |
| Neutral | 45 | 48.4 |
| Dissatisfied | 32 | 34.4 |
| Very dissatisfied | 9 | 9.7 |
| *Redeployment experience* | | |
| 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.

## 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).

> "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 absentees 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 safety[25] 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.

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.

**Acknowledgment:** The authors would like to acknowledge the nurses at John Hunter Hospital who participated in the study.

**Funding Support**: NA

**Conflict of Interest Statement:** None.

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REVIEWS AND DISCUSSION PAPERS

# Do contemporary patient assessment requirements align with expert nursing practice?


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## ABSTRACT

**Objective:** This paper discusses contemporary patient assessment requirements and how they articulate with expert nursing practice.

**Background:** Contemporary patient assessment requirements are intended to standardise the conduct, collection and documentation of patient needs and risks. Current assessment requirements are designed to be applied uniformly for both expert and novice nurses' alike to ensure consistency in the process and documentation of assessment. The requirements for patient assessment have grown in complexity over time but there is a paucity of evidence that considers how those requirements impact the work of expert nurses.

**Discussion:** This discussion paper reflects on individual aspects of these issues such as how experts develop their practice, the elements of assessment requirements, how and why assessment requirements have changed over time.

Expert nurses develop practice over time that is shaped by exposure to a wide range of clinical scenarios and learning experiences. Expert practice is partly defined by an ability to quickly identify key elements of a patient's condition based on past experiences where the expert has learnt to recognise and predict patterns of care needs.

The literature identifies a number of risks inherent with current assessment requirements, many of which are poorly recognised. Disproportionate focus on documentation compliance can reframe nurses' practice away from assessing patient needs towards the process of assessment documentation instead. A lack of flexibility in assessment practice risks reducing the expert nurses' ability to respond to the individual needs of a patient and tailor care uniquely designed for their needs. Repetition and duplication of data collection unintentionally embedded within the assessment process, risks impacting the efficiency of practice and serves to increase expert nurses' frustration with the process. The complexity of assessment documentation was also seen to hinder the process of informing clinical judgement and may cloud the nurse's ability to recognise risks not specifically included in the mandated assessment tools.

**Implications for research, policy and practice:** This discussion highlights specific elements of expert practice and compares that to contemporary assessment requirements.

Further research is needed to specifically measure the time impact of current assessment requirements on nurses. Feedback from expert nurses regarding the value of current requirements and what changes would positively impact their practice and

satisfaction levels is needed. This would assist in refining assessment requirements to ensure that current requirements suit nurse's practice, ensure the efficiency of expert nursing practice, maximise nursing satisfaction, and limit loss of nurses from the profession while maintaining safety of practice.

**What is known about the topic?**

- The purpose and process of patient assessment has been thoroughly investigated over time.
- There is a significant body of knowledge and evidence that supports the use of standardised patient assessment documents.
- The value and nature of expert nurse practice has been widely explored in existing literature.

**What this paper adds:**

- Recognition that unintended risks in contemporary assessment requirements such as duplication and complexity of data collection has the potential to reduce the efficiency of nursing practice.
- Acknowledgement that assessment requirements are seen by some expert nurses as impacting safety, are burdensome and have the potential to reduce nursing satisfaction and retention.
- Recognition that a disproportionate focus on assessment documentation compliance has the potential to shifts nurses' priorities away from the purpose of assessment onto the process instead.

**Keywords:** Nursing assessment; expert practice; documentation.

## BACKGROUND

Developing a clearer understanding of the skills and knowledge that expert nurses utilise to conduct patient assessments can be used to ensure that contemporary policies that guide assessment requirements maximise the efficiency of care delivery. This is a key consideration in times of limited resources and nursing workforce shortages to maximise nursing retention and improve staff satisfaction.[1-3] This discussion paper seeks to develop an insight into patient assessment practices of expert nurses and identify if current assessment requirements assist or hamper that practice. Assessment requirements here refers to guidance documents that outline what assessment tools and processes nurses are required to follow when conducting and documenting patient assessment. Typically this includes a range of individual assessment tools (either hard copy or online) such as falls risk tool, pressure injury risk tool etc. that must be completed at certain points of a patients care journey. The types of tools used and their frequency will vary depending on the institution, but it is not unusual that a suite of assessment tools must be completed when a patient arrives in that setting (i.e. admission) and then ongoing throughout their stay. The assessment requirements are applied equally to all nurses despite their level of expertise or experience for the purpose of ensuring consistency in the process of assessment. Conducting assessments and then documenting the results can be time consuming, often requiring collection and documentation of duplicate data and can impact the efficiency of the admission assessment process.[4] Nurses also report that the complexity of assessment requirements and the time it takes to conduct assessments has become frustrating, taking time away from other elements of care delivery, increasing the risk of missed care.[5,6] Other authors have suggested that overly burdensome documentation can also reduce patient satisfaction levels.[7]

The following examines how individual nurses develop expertise and apply that in their practice over time. Embedded within those discussions is a historical context to the way in which nursing practice and patient assessment requirements have changed over time and how that has impacted the practice of nursing experts.

There is consideration of the nuanced ways in which expert nurses develop their approach to assessment that, once made more overt, can be used to consider redefining practice requirements with the potential to improve nursing satisfaction, efficiencies in practice and improve patient outcomes.

### DEVELOPMENT OF EXPERTISE IN NURSING

Understanding the way in which an expert nurse manages problems or assesses their patients' needs, highlights areas of contemporary assessment requirements that may conflict with their practice.

The literature lacks a clear consensus that defines an 'expert nurse'. Much of the literature defines what expert practice looks like but there is little that describes the expert themselves. Some researchers have sought to identify individual nurse factors that contribute to expertise or other contextual factors such as experience, education and the practice environment.[8] Other authors describe the characteristics of expert nurses in their ability to quickly identify the salient issues in a situation to form a quick 'reading' of what is occurring.[9] What distinguishes an expert is their response to a situation, especially if urgent. Their actions are much more fluid and they do not see individual problems in a detached way that need solutions, instead, their response is in attunement of the situation that does not involve a fully conscious deliberation of individual responses.[9] There are also elements of an ability to be predictive of patient needs, based on reflections of previous

experiences, they are more likely to have higher education levels and experience, although experience is not solely predictive of expertise.[8,10]

Identification of individual expert nurses may be difficult to specifically define but it's in observation of their practice where that label is then often applied by others.

Authors who have explored and explained expert nursing practice generally consider the development of expert practice at a broad level without consideration of specific elements like patient assessment.[9,11-13] Much of the literature regarding the development of expert nursing practice can be found between the 1980s and the mid-2000s but this has reduced significantly since. The profession may have felt that the conceptual elements of expert practice were well defined by that time, so the need to continue that focus diminished. Conversely, during the same period, the complexity of patient assessment requirements have increased significantly, so there is value now in considering how, and if, expert practice articulates with those contemporary assessment requirements.

Much has been documented about how nurses develop competence in practice as they become more experienced, which then influences the effectiveness of patient assessment.[14-16] One such author who considered this concept was Patricia Benner who applied the Dreyfus' model of skill acquisition in the 1980s and identified the development of nurses' practice over time from a novice to an expert.[11] Development of expertise results from, exposure to a variety of experiences that offer insight into what occurs during different clinical situations, and a precise identification of what is important within those situations. Within that description by Benner was a focus on some elements of the expert nurses' patient assessment practice. There is a reflective nature to the approach by the expert nurse, who views the patient as an individual, with unique needs and so the expert nurse may go beyond the prescribed assessment process, take short cuts, to tailor their practice to deliver individualised care based on the context of that specific situation.

Expert nurses feel able to identify patient needs quickly and may take these short cuts to deliver care in a manner that they believe is more efficient. There are competing opinions about the value and safety of these short cuts, or workarounds, in the literature and some authors have identified and measured the associated risks.[17,18] The reasons expert nurses use for workarounds (nursing practices outside of prescribed processes) includes saving time, perceived improved patient care, and enhancement of work processes.[19] This is often in response to what nurses see as barriers to efficient care that either they cannot or don't have the time to rectify. These perceived barriers include policies, regulations, protocols, work process design, technology and people. While the use of workarounds have the potential for poor outcomes, they do exist and understanding how, when and why expert nurses use them is important. An insight into why they occur will likely assist in identifying what in the current design of policies, governing assessment practice requirements, is perceived by nurses as hampering practice and reducing efficiency.

Part of the reason for a growing frustration and a disconnect between requirements and practice is the increasing number of structured assessment tools, potentially creating a perception by some nurses that the patient assessment process has become too rigid, time consuming, frustrating and unhelpful. Some nurses may sense that they are unable to effectively prioritise and focus their energies on other elements of practice that they see as having more practical value.[20,21] There is a risk of a disproportionate emphasis on completion of those assessment tools, potentially at the expense of other elements of care delivery. If the process of assessment is time consuming, there is further potential to detract from planning and implementing care driven by the assessment process rather than completion of a genuine assessment of the patient.[22] So the nurses' priorities may become directed at the process of completing the assessment requirements correctly rather than framing their practice based on the purpose of that assessment.

Nurses may dismiss completion of assessment tools if they do not believe the process holds value for informing their assessment of the patient, that instead detracts from care delivery. This is more likely for the expert nurse who is able to make rapid and well informed decisions about the patients' needs without being guided by the assessment tools. The literature suggests that it is common for expert nurses to alter the way they assess over time but the individual may not fully recognise how this develops. One reason may be that nurses can struggle to articulate their practice and identify tacit elements within that practice.[23]

A certain level of reflection is critical in the development of expertise and distinguishes expert nurses from others.[11] For the expert nurse, there may be a sense of comfort in the manner in which they practice, where they are able to make quick conclusions about what is occurring in a particular situation, assess that situation and make decisions about what is required to ensure patient safety without needing the assessment tools to direct or inform that knowledge.

Benner et al. discussed this notion as 'global sets' and Redley et al. as 'global triggers', where the nurse is able to quickly identify key elements of the patient's needs based on a range of patterns seen in previous experiences.[5,9]

It is acknowledged that there is variation between the way expert and novice nurses practice and conduct assessments and the conceptual and actual frameworks they use varies and is influenced by experience, context, and reflection.[24] While expert nurses may incorporate global triggers in their practice, they may not be overtly aware that this is what they are actually doing.

## ASSESSMENT PRACTICES OF EXPERT NURSES

The approach to patient assessment varies between nurses with different levels of expertise and experience. The way an expert nurse assesses is likely reflective of, and influenced by, a combination of factors- their initial nursing education, previous care experiences, informal and formal learning activities and exposure to a wide range of clinical scenarios and patient conditions throughout clinical practice.[11] Expert nurses make rapid decisions that are based on key elements of a patient's status and needs and while this may appear abbreviated, it does not necessarily mean that the assessment is inaccurate or ineffective.[25] The way in which data about the patient is collected and used to make decisions, may not strictly follow the prescribed formulaic methods dictated by assessment requirements.

Mangus and Mahajan describe how clinicians develop this ability based on intuitive reasoning and decisional shortcuts or *Heuristics*.[26] These are based on the individuals' previous experiences which have been used to create patterns of decision making. While they identify that heuristics allow decisions to be made efficiently, quickly, and generally accurately, they acknowledge that there is a danger that decisions made quickly, risk being inaccurate or subject to bias.[26] They describe a process of decision making (assessment) that is reflective of a 'Dual Process Theory' that describes human reasoning and decision making (assessment then intervention) based on the use of two interrelated systems used by the individual's brain. System 1, the *Intuitive system*, is based on recognition of patterns of previous experiences/outcomes and is more subconscious in nature while system 2, the *Analytical system*, involves a slower and more deliberate consideration of a problem or situation.[26,27] The literature identifies a variety of views on this concept including a significant risk of bias in system 1 decision making leading to premature decisions regarding diagnosis and assessment but also identifies potential for improvement in efficiencies of care delivery.[26-28] While the distinction between the two systems is useful to understand the conceptual way expert nurses' assessment practice occurs, the reality is more complex and less accurately described along those two delineated lines.[27,28]

Over time, as an individual expert nurse is exposed to a wider range of clinical scenarios and situations, they develop a broad base of experiences and outcomes that act to strengthen their ability to make quick and accurate decisions in the future.[26]

The expert practitioner will make decisions quickly, based on first impressions or 'thin slice' sampling. While there is a risk in isolated use of the system 1 approach influenced by certain biases of the individual, it can be strengthened by the repetitive use of system 2 over time, that actually leads to more accurate system 1 responses.[29] For example, the expert nurse who has seen a wide range of certain scenarios over time may have employed a more logical or analytical approach in dealing with those previous situations, especially if they were complex and challenging, which then in turn equips them to be more reflexive in their response to similar situations in the future. Hence, the nurse is more likely to develop expertise over time if they use a combination of both approaches and reflect on their practices and experiences.

While these systems and concepts may appear nebulous, it is demonstrative of the way expert nurses have developed their assessment practice over time and articulating this more clearly provides the opportunity to better nurture and support expert assessment practice to provide effective and efficient healthcare delivery.

An example of this approach that can more clearly differentiate expert practice, is assessment of a patient's pain needs, where the patient is unable to report their pain needs due to the presence of dementia or delirium. Many institutions utilise a specific tool to guide nurses in this assessment. It is likely that the expert nurse will observe the patient first, be aware of any injuries or sources of pain, watch for behavioural patterns that may indicate pain, engage with the patient and very quickly make a decision regarding the pain likely being experienced by that person. They do not use the tool as a guide to conduct the assessment, instead the tool is used as a means of documenting the assessment they have already constructed internally. These decisions and approaches are based on patterns identified across a wide range of previous experiences with patients in similar situations. This process may take a matter of seconds and the nurse may not even be fully aware of the way they are formulating that assessment. It may occur without purposeful thought as that nurse has learnt to do this over time (using a combination of a system 2 then system 1 approach). If required, they will then adapt and document that assessment into the prescribed assessment tool. The important distinction here is that the expert nurse naturally felt confident in conducting a pain assessment, without the use of the prescribed tool, and added detail into the tool after their assessment had already been completed, they did not need to be guided by that tool to assess the patient. The tool was used by the expert as a medium to document the assessment, not as a resource to guide the assessment.

At first glance this distinction may seem inconsequential, but it demonstrates a key difference in the way an expert approaches assessment practice. This is reflective of a sophistication of their practice, where the expert has a natural confidence to conduct patient assessments in an abbreviated and informal manner (Heuristics), while still having certainty in the best outcome for that patient in that situation.

## PATIENT ASSESSMENT

Understanding the broad role, value and function of patient assessment is essential in developing an appreciation for not only how nurses learn to assess but also the significant role assessment plays in developing and planning nursing care delivery. Assessment has long been acknowledged as an integral part of a nurse's ability to plan and provide appropriate and effective care.[30] Effective assessment provides a platform for nurses to identify patient specific needs, prioritise actions and then plan and implement care.[30] Patient assessment processes vary depending on the setting and type of care required. In the acute setting, it is generally conducted by nurses on admission when they first come into contact with a patient through a formalised, admission type process, then on a continual basis throughout any episode of care. Assessment or 'diagnosis related nursing practice' is essentially a mental process that involves a series of cognitive activities and is the first step in the nursing process.[31]

Lee et al. (2006) suggested that "It is apparent that despite the substantial volume of research literature in the field of decision-making, clinical judgement, diagnostic reasoning, and nursing intuition, the distinctive process that nurses engage in when diagnosing the clinical condition of patients … still remains largely undefined, under documented, and essentially invisible".[32(p63)] The same may still be true today. Gaps exist in the profession's understanding of the complexities of nursing practice and this is no different for patient assessment. Much of the existing literature discusses the process, the value, specific elements and the impact of assessment but fails to consider if that practice is supported or is at odds with current patient assessment requirements.

Nursing assessment is not a static process that occurs at any one specific time, its focus is partly driven by the prediction of needs and importantly, is not solely information gathering. It is a cognitive process that may involve some element of intuition and is influenced by some internally driven information based on the individual nurse conducting the assessment.[12] An appreciation of the nuances of assessment can therefore be used to better align patient assessment requirements to that practice.

## HISTORICAL DEVELOPMENTS IN ASSESSMENT PRACTICE

Throughout the early stages of the 21st century a culture of safety and quality became more prominent within healthcare, with the purpose of minimising risk and reducing harm.[33] Risk mitigation is an essential component of healthcare systems and is focussed on risks related to complex systems, workload related clinician errors, poor knowledge and clinicians who deviate from safe operating procedures.[34] Literature that considers risk mitigation such as Hughes state that organisations must design systems "…to ameliorate the effects of whatever human error occurs…" and that "…because of the fallibility of the human condition, working conditions can be changed so that the potential of errors is reduced and the effect of errors that do occur is contained".[34(p8)] While this is partly true, it has been suggested that the evolutionary nature of healthcare delivery has unwittingly contributed to a system of patient safety that has not been designed in a calculated manner but has instead come into existence in a piecemeal fashion. While each element within this piecemeal approach makes a positive contribution to safety and care delivery, the resulting complexity increases multiple interactions within practice that can obscure the underlying system designed to ensure that safe practice occurs.[33] This concept can be applied to assessment requirements, while intended to ensure rigor of practice and patient safety, it may actually reduce safety due to the arbitrary nature of how those requirements have grown over time that has resulted in a complex system that has created unintended consequences.

In contemporary healthcare, the process of patient assessment includes a requirement to complete an increasing number of standardised assessment tools.[22,35] As new tools are added over time, patient assessment requirements have become more complex. Beckwith et al. identified that genuine assessment is complex and involves processes of induction, deduction, analytic reasoning linked with intuition and practical, theoretical and experiential knowledge.[36] They go on to identify that there is often confusion regarding the scope and sophistication of assessment when compared to formal or informal assessment and screening.

While the change in assessment requirements is rightly designed to strengthen patient safety, limit errors and improve the delivery of safe care, there may have been an unintended effect of altering the way in which nurses conduct and also interpret the purpose and process of patient assessment.

Hollnagel, Wears and Braithwaite identify that things (practice) in healthcare generally 'go right' not because people always behave as they are required, but because they can, and do, adjust their practice to the specific context of a situation.[37] They continue by saying that as the complexity of healthcare delivery increases, the ability to vary individual practice becomes increasingly important, and that flexibility is more likely to achieve acceptable performance and outcomes. Benner identified that nursing is faced with two potentially conflicting mandates, providing individualised care and limiting errors by minimising variations.[25] This is the challenge for the expert nurse who must consider the disjuncture between notions of standardisation versus individual care. Hollnagel, Wears and Braithwaite suggest that there is a need to consider the benefits of flexibility of practice requirements while at the same time ensuring that elements of practice that require a more structured or traditional approach to safety, be maintained, allowing flexibility where appropriate or able.[37]

So, in essence, while useful in intent, any rigidity of patient assessment requirements may actually restrict the ability to tailor individualised care by not accommodating some level of flexibility.

### STRUCTURED ASSESSMENT TOOLS

These are tools such as the Braden Scale to assess pressure injury risk. Contemporary patient assessment requirements include a range of these tools to ensure all elements of patient needs are assessed. This may then be framed as conducting an admission or completing the daily assessment of patient needs. The tools are designed to ensure uniformity of how assessment is conducted and documented, and the purpose is to ensure a minimum level of practice is achieved that maintains patient safety.[38] The uniformity is helpful for nurses at the beginning of their careers who may benefit from that prescriptive direction.

It has been acknowledged that these formal assessments are not always completed however and there is evidence that staff can become overwhelmed by the number and the complexity of tools.[22,39] As patient assessment requirements become more prescriptive there is a risk that the development and application of critical thinking skills in nurses may be diluted or lost. Echoing this potential risk, Barbara Braden, reflected on the development of the Braden Scale 25 years later and suggested that tools such as the Braden Scale should be used in combination with nursing judgement and that the score should only be one element used to determine risk.[40] On reflection of the tool as a predictive measure, she acknowledged that each subsection should be used to identify particular elements of risk, that those patients with a low risk may still require interventions and that it is essential that nursing judgement be used to determine the intensity of the preventative measures.[40]

Some institutions use compliance with assessment documentation to drive financial rewards, so the institution is financially remunerated, and therefore motivated, to achieve higher levels of assessment documentation.[41] There is limited evidence of the effectiveness of these 'pay for performance' programs.[41] If documentation compliance is the sole measure being assessed, then the primary effect may be limited to improvement of documentation compliance at the expense of ensuring that care is designed and delivered to meet individual patient needs.

There is a potential serious flaw in the assumption that completion of the prescribed assessment tools, measured as compliance with assessment documentation, will result in the delivery of high quality care. If the complexity of assessment documentation is excessive, time consuming and repetitive, this may also lead to clinical frustration, use of short cuts, shift of focus to compliance with documentation rather than using that information to inform care needs and therefore interventions.

Individually these tools are valuable, but over time as the number and frequency of the use of these tools has increased, the overall effectiveness and suitability of assessment requirements has suffered. There is value in considering the burden of assessment requirements and documentation, especially for nurses with varying levels of expertise.

## CONCLUSION

Contemporary patient assessment requirements have grown in complexity over time, resulting in an increased burden on nurses, due to increasing numbers of individual assessment items and duplication of data collection. Existing requirements are not designed for flexibility in how assessments are documented for nurses with varying levels of expertise. Standardisation and increasing complexity of assessment requirements have occurred in response to a perceived need to maintain patient safety. While this safety consideration is essential, changes over time have resulted in a number of unintended consequences that have not been predicted, recognised or measured.

These unintended consequences are poorly recognised in both practice and the literature and there is a risk that continual reliance on complex assessment processes and documentation will overwhelm nurses and detract from the provision of effective care delivery and use of critical thinking skills.

The primary intent of this discussion paper is to explore the issues identified above and offer them for consideration by the nursing profession and provide some initial suggestions for practice, policy and future research.

## IMPLICATIONS FOR PRACTICE, POLICY AND FUTURE RESEARCH

Consideration of these issues is key to redefining nursing practice as it moves into the 3rd decade of the 21st century, especially where there are significant challenges regarding resource availability. There is potential to reconsider nursing approach to assessment documentation and the burden/focus it may place on nurses and look for alternatives that can ensure both safety within practice and satisfaction by nurses. Measurement of the time it takes nurses to conduct patient assessments and any associated effect on the delivery of care is missing in the literature. Establishing the impact of those requirements is essential to determine the value of current assessment requirements against the unintended consequences of current practice that have led to undue burden of assessment related documentation.

Further research is needed that examines how the current assessment requirements impact nursing care delivery but also how nurses perceive the value of those requirements, for both expert and non-expert nurses.

There is also a need to consider the direction of nursing education and practice, in regard to patient assessment and refocussing the profession towards genuine assessment practices while at the same time ensuring patient safety is maintained. Essential to this consideration is the notion of the tacit elements of expert practice and how that can be recognised and then embedded into patient assessment requirements.

It is essential to acknowledge that any allowance of flexibility in assessment documentation practices may be met by significant resistance by some. The prime concern is likely to be a reduction in patient safety through variability in documentation standards but evidence that allays those concerns may be generated by research specifically designed to consider and measure this practice.

**Acknowledgments:** Nil acknowledgements to add.

**Funding support:** Nil funding to declare.

**Declaration of conflicting interests:** Nil conflicts of interest to declare.

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# ERRATUM/CORRIGENDUM

## Corrigendum to 'Understanding COPD Emergency Department presentations: using thematic analysis to explore the voices of patients, nurses, and doctors on the lived experience of managing COPD' [*Australian Journal of Advanced Nursing*, volume 40, issue 1 (2022), DOI 10.37464/2023.401.195]

Following publication of this article the authors notified the editorial team that an author who had facilitated data collection and contributed to an original version of the manuscript had unintentionally been omitted from the author list. The authors confirmed that this oversight occurred following a change in corresponding author and associated responsibilities and have endorsed the subsequent amendment to the author list.

### CORRIGENDUM

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### ORIGINAL ARTICLE

DOI: https://doi.org/10.37464/2023.401.195