ORIGINAL RESEARCH

Is COVID-19 the straw that broke the back of the emergency nursing workforce?

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Abstract

Objectives: To explore the intentions of Australian emergency nurses to remain in or leave emergency nursing after the first year of the SARS-CoV-2 (COVID-19) pandemic.

Methods: Sub-study of a survey of Australian emergency nurses about the impact of COVID-19 on their work, life and career. This sub-study focused on future career intentions, especially intentions to remain in or leave emergency nursing.

Results: There were 398 eligible responses. 48.2% of respondents reported that they intended to leave emergency nursing within 5 years. Nurses in EDs who received COVID positive patients were more likely to express an intention to leave ED nursing ($P = 0.016$). Having directly cared for a COVID positive patient was not statistically associated with intention to leave ED nursing ($P = 0.17$). Excluding nurses aged >60 years, there was no statistical difference in expressed intention to leave ED nursing between age groups ($P = 0.32$), nurses with/without a higher qualification ($P = 0.32$) or number of years in ED nursing ($P = 0.54$). Intention to leave emergency nursing was associated with not feeling more connected to their emergency nursing colleagues ($P = 0.03$), the broader ED team ($P = 0.008$) and their organisation ($P = 0.03$) since the onset of the pandemic.

Conclusion: The data suggest that approximately 1 year after the onset of the COVID-19 pandemic in Australia, a high proportion of ED nurses intend to leave ED nursing within 5 years, which will exacerbate pre-existing shortages. Active strategies to address this are urgently needed.

Key words: COVID, emergency nursing, workforce.

Introduction

It is widely known that there is a shortage of emergency nurses globally – Australia included.1 This shortage will be exacerbated if EDs do not retain nurses. There is no available data on the rate of emergency nurse turnover in Australia. That said, data from Australian medical and surgical wards indicate an annual turnover rate of 15.1%, with inter-state variation between 12.6% and 16.7%.2,3 Reasons for leaving ED nursing have previously been found to include issues with the working environment (increasing presentations, more complex patients, occupational violence and aggression, over-crowding), leadership (management style, performance target focus) and lack of appropriate support systems.1

Feeling undervalued and disempowered were also factors.4

The SARS-CoV-2 (COVID-19) pandemic has challenged emergency nursing further. There were rapid and repeated process changes, the requirement to work in personal protective equipment (PPE), reduced contact with patients and their families due to PPE and visitor/carer restrictions in ED and reduced contact with colleagues due to PPE and social distancing requirements.

There were also changes in leadership processes with leaders often being more remote from front-line workers. Usual support systems were reduced due to lockdowns and social distancing requirements. There was also a reasonable fear of exposure to the virus leading to serious personal illness or taking the virus home to family and friends, especially those who were vulnerable due to age or pre-existing illness. These added issues have the potential to increase the proportion of nurses leaving emergency nursing with impacts on...
delivery of care and added pressure on those remaining.

The aim of this sub-study was to explore emergency nurses’ intentions regarding remaining in emergency nursing over the next 5 years.

**Methods**

This was a voluntary, online survey of a convenience sample of Australian emergency nurses, focused on their experience of the pandemic and its influence on their work and career. This open survey was developed iteratively and piloted on a small number of emergency nurses before dissemination.

The survey was undertaken via REDCAPS™. This specialised research data collection portal provides date and time stamps for all responses and checks completeness. There were 69 items in six sections over 10 pages – participant characteristics, life at home, the work environment, nursing practice, career intentions and perceptions of nursing – with some adaptive questioning and free text options. The survey instrument is attached as an on-line appendix. No incentives were offered. There was no formal review step, but participants could go back to alter previous responses. All responses were non-identifiable. Registration was not required. IP address checks were not performed, consistent with the anonymous nature of the survey and the ethics approval conditions.

Data collected included participant characteristics, information on changes to home and work responsibilities, perceptions of the work environment, connectedness to the ED team and the broader employing organisation, education and training needs, future career plans and perceptions of how emergency nursing was valued in the community. Partially completed surveys were included in the analysis of questions which were answered. No statistical correction was undertaken.

Snowball sampling was used. The survey was disseminated (with reminders) via social media (Facebook® and Twitter®), email invitations by the College of Emergency Nursing Australasia (CENA) and direct contact with nurse unit managers and ED research leaders. The invitation asked recipients to forward the survey to emergency nursing colleagues. The survey period was 15 February to 28 March 2021. This period was almost a year from the start of the pandemic and followed lockdowns in several regions, including a 112-day lockdown in Melbourne that ended in

| Characteristic                              | Sample responding re career intentions (n = 398) | Whole sample (n = 526) |
|---------------------------------------------|--------------------------------------------------|------------------------|
| **Age band (n, %)**                         |                                                  |                        |
| 20–29                                       | 114 (28.6%)                                      | 157 (29.8%)            |
| 30–39                                       | 127 (31.9%)                                      | 170 (32.3%)            |
| 40–49                                       | 88 (22.1%)                                       | 102 (19.4%)            |
| 50–59                                       | 58 (14.6%)                                       | 81 (15.4%)             |
| >60                                         | 11 (2.8%)                                        | 16 (3.0%)              |
| **Female sex (n, %)**                       |                                                  |                        |
| 346 (86.9%)                                 | 455 (86.5%)                                      |                        |
| **Location of practice – metropolitan (n, %)** |                                                  |                        |
| 239 (60.1%)                                 | 331 (62.9%)                                      |                        |
| **Public hospital (n, %)**                  |                                                  |                        |
| 369 (92.7%)                                 | 491 (93.3%)                                      |                        |
| **ED treated COVID-19 patients (n, %)**      |                                                  |                        |
| 345 (86.7%)                                 | 402 (87.2%)                                      |                        |
| **State or territory (n, %)**               |                                                  |                        |
| VIC                                         | 208 (52.3%)                                      | 277 (52.7%)            |
| NSW                                         | 89 (22.4%)                                       | 120 (22.8%)            |
| Queensland                                  | 38 (9.5%)                                        | 48 (9.1%)              |
| Western Australia                           | 23 (5.8%)                                        | 26 (4.9%)              |
| South Australia                             | 23 (5.8%)                                        | 29 (5.5%)              |
| Tasmania                                    | 9 (2.3%)                                         | 11 (2.1%)              |
| Northern Territory                          | 5 (1.3%)                                         | 12 (2.3%)              |
| ACT                                         | 3 (0.8%)                                         | 3 (0.6%)               |
| **Respondent directly cared for a COVID-19 infected patient (n, %)** | 213 (53.5%)                                      | 247 (55.3%)            |

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October 2020. It was during a period of almost zero community transmission after Melbourne’s so-called second wave. Vaccination of ED staff commenced during the study period. It should be noted that there is no reliable data on the total number of nurses working in ED, either full or part-time, so the denominator for the survey is unknown.

Analyses are descriptive and comparison of proportions was conducted using χ²-test (Analyse-It v5.80, Leeds, UK). The study was approved by Western Health Low Risk Ethics Panel (QA 2020.106). Participation provided implied consent.

**Results**

There were 537 log-ins to the survey of whom 528 answered some or all questions (98.3%). Of the 528 that entered some data, 392 were complete (74.2%). 398 answered the questions relating to future career plans (75.4%). Characteristics of the overall sample and this subgroup are shown in Table 1.

Overall, 48.2% of respondents (192/398) reported that they were likely to leave emergency nursing within 5 years. 20.6% (82/398) indicated that they intended to leave the nursing profession within 5 years. Excluding nurses aged >60 years due to the potential influence of retirement, there was no statistical

| TABLE 2. Proportion intending to leave emergency nursing (excluding age >60 years) |
|-----------------------------------------------|
| **Characteristic (n = 387)** | Leave ED nursing | | | |
| | Yes (n = 182) | No (n = 205) | **P-value** |
| **Age band (n, %)** | | | |
| 20–29 | 55 (30.2%) | 59 (28.8%) | 0.32 |
| 30–39 | 60 (33.1%) | 67 (32.7%) | |
| 40–49 | 33 (19.2%) | 53 (25.8%) | |
| 50–59 | 32 (17.5%) | 26 (12.7%) | |
| **Years in ED nursing (n, %)** | | | |
| 0–5 | 68 (37.6%) | 93 | 0.54 (missing data = 1) |
| 6–10 | 51 (28.2%) | 51 | |
| 11–15 | 29 (16.0%) | 33 | |
| 16–20 | 19 (10.5%) | 17 | |
| >20 | 14 (7.7%) | 11 | |
| **Higher degree in nursing (postgraduate certificate/diploma, master degree, PhD)** | | | |
| No | 70 (38.6%) | 69 (33.7%) | 0.32 |
| Yes | 112 (61.8%) | 136 (66.3%) | |
| **ED treated COVID patients** | | | |
| No | 16 (8.8%) | 35 (17.1%) | 0.016 |
| Yes | 166 (91.2%) | 170 (82.9%) | |
| **Directly treated COVID patients** | | | |
| No | 77 (42.3%) | 101 (49.3%) | 0.17 |
| Yes | 105 (57.7%) | 104 (50.7%) | |
| **Feel increased connectedness to ED nursing team (agree or strongly agree)** | | | |
| No | 89 | 77 | 0.03 |
| Yes | 93 | 128 | |
| **Feel increased connectedness to broader ED team (agree or strongly agree)** | | | |
| No | 108 | 93 | 0.008 |
| Yes | 74 | 112 | |
| **Feel increased connectedness to organisation (agree or strongly agree)** | | | |
| No | 154 | 155 | 0.03 |
| Yes | 28 | 50 | |

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difference in expressed intention to leave ED nursing between age groups ($P = 0.32$), nurses with/without a higher qualification ($P = 0.32$) or number of years in ED nursing ($P = 0.54$) (Table 2). Importantly, 48% of ED nurses aged 20–29 and 47% aged 30–39 indicated an intention to leave emergency nursing. Nurses in EDs who received COVID positive patients were more likely to express an intention to leave ED nursing ($P = 0.016$). Having directly cared for a COVID positive patient was not statistically associated with intention to leave ED nursing ($P = 0.17$) (Table 2).

Of the 182 ED nurses aged under 60 expressing an intention to leave ED nursing within 5 years, 37 reported intending to leave nursing for a new occupation (20.3%), 39 reported intending to move to another area of nursing (including education or public health) (21.4%) and four intended to retire (2.2%). Those expressing an intention of leaving emergency nursing reported not feeling more connected to their emergency nursing colleagues ($P = 0.03$), the broader ED team ($P = 0.008$) or their organisation ($P = 0.03$) since the onset of the pandemic.

Intention to leave ED nursing was not statistically associated with perception by nurses about community respect or value for ED nurses since the onset of the pandemic ($P = 0.42$ and 0.48, respectively) or community fear that ED nurses might spread infection into the community ($P = 0.33$). Intention to leave ED nursing was statistically associated with lower pride in being an ED nurse ($P = 0.014$).

Discussion

Before the COVID-19 pandemic there was a shortage of emergency nurses globally. Our data suggests that a year after the onset of the pandemic a concerningly high proportion of ED nurses in Australia intend to leave emergency nursing. Importantly, this is across all age, training and experience groups and independent of whether the respondent nurse directly cared for COVID-19 cases. The potential loss of ED nurses with specialist postgraduate training is particularly concerning.

Interpreting our results requires an understanding of the context in which the survey was conducted — in particular, its timing in relation to the pandemic’s progression in Australia. The survey was conducted in a period of very low or no cases numbers in Australia and about 3 months after the extended lockdown in Melbourne had been lifted. Australia had recorded >1000 deaths in total and hospitals had not been overwhelmed with COVID cases. The threat of work-acquired infection was very low, as was the number of seriously ill or dying patients. Unlike other countries with high COVID case numbers, ED workloads were similar to or less than pre-pandemic levels. It was also approximately 1 year into the pandemic and vaccination of healthcare workers was imminent. That the proportion of nurses expressing intention to leave ED nursing was so high, even in this low-risk environment, suggests that these sentiments are not due to acute workload issues or COVID-related compassion fatigue and that simply waiting for the pandemic to improve is not likely to resolve the issue. However, when added to the known job satisfaction threats including occupational violence, ED overcrowding and access block, the impacts of the pandemic may have been the last straw for some nurses.

There is no published data about the pre-pandemic turnover of ED nurses. Data from research on non-critical care area annual nurse turnover reports rates of about 15% annually. Comparing this to the proportion of ED nurses expressing intention to leave ED nursing is difficult because both the time frame and intention versus action are different. While it is acknowledged that the present study does not prove an increase in intention to leave ED nursing since the onset of the COVID-19 pandemic, it does point to low job satisfaction and a real threat to the future ED nursing workforce.

It is notable that expressed intention to leave ED nursing was not statistically different between age or years of experience groups or between ED nurses with and without a postgraduate qualification in ED nursing. Previous research has suggested that specialist emergency nurse training enhances retention. Longer work experience has also been shown to increase resilience of ED workers.

Our findings suggest that it is not simply less experienced nurses deciding not to continue in ED nursing, but that experienced and highly trained ED nurses are also at risk. If the expressed intentions were followed through the loss of expertise would be a serious threat to quality of care in ED and not readily replaced.

The impact of connectedness at work on intention to remain in emergency nursing is important. Between-colleague connectedness has been reduced by PPE and physical distancing requirements. Non-clinical meetings largely went on-line and social interactions were severely constrained. Not all of this will return to pre-pandemic norms. Directed and strategic interventions to improve connectedness could assist retention of emergency nurses. Hogan emphasises the importance of line managers promoting a positive workplace culture (including appropriate recognition), the availability of expanded career opportunities and staff well-being activities as key strategic organisational interventions to retain nurses.

In addition to known stressors of ED nursing, the pandemic added direct concern for the health of nurses and their families. It also caused rapid change without the opportunity for collaborative implementation processes, changed the working environment significantly and interrupted usual support systems. All these have negative impacts on job satisfaction which correlates with staff retention. The consequence, high staff turnover, has been shown to negatively impact quality of care and patient outcomes. To maintain and improve quality of care in ED, urgent action is needed to address this looming emergency nursing crisis.

There are some limitations of this study which should be considered when interpreting its results. The denominator for the survey is unknown. The CENA membership is approximately 1500, but it is...
known that not all ED nurses are members (personal communication, Julia Morphet, Executive Director CENA). Government agencies do not collect this data. The response rate to this survey was sub-optimal. Response rates to on-line surveys have been reported to be lower than what would previously have been considered acceptable from surveys administered by more traditional means. Reasons for non-response have been reported to be survey fatigue, lack of time, not considering themselves eligible, not seeing a benefit from participating and concerns regarding privacy. In addition, this survey was conducted at a discrete point in time. Attitudes to work and intention to leave ED nursing may be dynamic, both over time and in response to the progress of the pandemic.

Conclusion
These data suggest that the complex impacts of COVID-19 pandemic in Australia have had a negative impact on ED nursing workforce retention which will exacerbate pre-existing shortages.

Competing interests
AMK is a member of the editorial board of Emergency Medicine Australasia.

Data availability statement
Data may be available for sharing on request, subject to HREC approval.

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